Board of Education

5 Minortown Road ~ Woodbury, CT 06798
www.ctreg14.org

Mission: The mission of Connecticut Region 14 Schools is to educate all students to their highest level of academic potential and to teach them the skills and knowledge to become capable, creative, collaborative lifelong learners and responsible members of the world community.

Board of Education Goals:
Academic Performance - The district will strive to improve academic performance for all students on multiple assessment indicators and the staff will be committed to continuous improvement.
Communication - Region 14 will develop partnerships with all stakeholders in the school community to highlight the exemplary programs the district offers
Safety - Region 14 will provide safe and secure facilities equipped with technology, enabling a 21st century learning environment that supports the values of the district
Budget - Region 14 will prepare a budget that meets the needs of every student and communicates the needs and priorities of Region 14 in a clear and concise manner.

A G E N D A

Regular Meeting of the Region 14 Board of Education
Monday, September 8, 2025; 6:00 p.m.
Mitchell Elementary School
Flanders Room

I. Call to Order.....Chris Matta

II. Pledge of Allegiance.....Chris Matta

III. Introductions.....Chris Matta

IV. Moment of Silence (Andrew Tammero).....Chris Matta

V. Approval of Minutes (Action Anticipated).....Chris Matta
   A. Regular Meeting, Monday, July 14, 2025

VI. Superintendent's Report
   A. Connecticut High School Coaches' Association Boys' Tennis Coach of the Year
   B. NAAE CT Teacher's Turn the Key Professional Development Scholarship Recipient
   C. CAAE Ideas Unlimited Award Recipient
   D. Nonnewaug High School NEASC Accreditation Update
   E. Personnel Report
   F. Increase Agriscience Funding Strategies

VII. Committee Reports

A. Curriculum Committee

1. On a recommendation by the Curriculum Committee to accept/approve the following curricula (Action Anticipated):
   a. AP/UConn Environmental Science
   b. Physics
   c. English 11: Surviving the Journey – A Literary Perspective
   d. Building Bridges B
   e. Marketing I
   f. UConn ECE Personal Finance
   g. AP French
   h. Culinary Arts I
   i. Culinary Arts II
   j. Farm to Table
   k. Leadership Development
   l. Animal Assisted Therapy
   m. 7th Grade Science

2. On a recommendation by the Curriculum Committee to accept/approving the following course proposal (Action Anticipated):
   a. Dual Credit French 4 through ECSU

B. Policy Committee

1. On a recommendation by the Policy Committee to accept/approve the following policy: (First Read, No Action Anticipated)
   a. Policy 5131.911 Connecticut School Climate Policy

VIII. Board Chair's Comments

IX. Privilege of the floor

The Board of Education will recognize citizens of Bethlehem and Woodbury, any parent/guardian of a child enrolled in the Region 14 School District, or any current employee of the Region 14 School District who are asked to state their name and town of residence and to please limit comments to three (3) minutes. Up to 21 minutes of statements per topic are allowed. All comments should be addressed to the Board of Education Chair. Decorum will be enforced.

X. Old Business

XI. New Business

A. Resolution for Webster Bank (Action Anticipated)
Move to adopt a resolution for Webster Bank, NA to authorize the removal of James Crocker and to add Tikva Rose to the Webster, NA Bank Pension Account.

B. Reserve Fund for Educational Expenditures (Action Anticipated)
Move that the District deposit an estimated balance/surplus funds from the District's 2024-2025 operating budget ($100,000) as a supplemental appropriation into the District's 'Reserve Fund for Educational Expenditures', for special education purposes in accordance with Connecticut General Statutes Section 10-51(d)(2), as amended"

XII. Other Business

XIII. Adjournment

Minutes
Regular Meeting of the Region 14 Board of Education
Monday, July 14, 2025 at 6:00 p.m.
Flanders Room
Mitchell Elementary School

Present:
Jim Crocker
Chris Matta
Carol Ann Brown (via phone)
Alice Jones
Caren Lipinski
Michael Carbonneau
Tikva Rose

Absent:
Christopher Griffin

Also Present:
Brian Murphy, Superintendent
Tina Tanguay, Director of Finance and Operations
Patricia Paige, Recording Clerk

Call to Order
Superintendent Murphy called the meeting to order at 6:01 p.m.

Pledge of Allegiance/Introductions
The Pledge of Allegiance was recited and acquaintances were made

Election of Chairperson
Superintendent Murphy called for nominations for Board Chairperson

A motion was made by Jim Crocker and seconded by Caren Lipinski to nominate Chris Matta to serve as Chairperson; no other nominations were cast; a rollcall vote was taken; all were in favor of the appointment of Chris Matta; Mr. Matta will serve as Chairperson.

Election of Board Officers
Vice Chairperson

Board Chairman Chris Matta called for nominations for Vice Chairperson

A motion was made by Chris Matta and seconded by Caren Lipinski to nominate Alice Jones as Vice Chairperson; no other nominations were cast; a rollcall vote was taken; all were in favor of the appointment of Ms. Jones; Ms. Jones will serve as Vice Chairman.

Secretary
A motion was made by Chris Matta and seconded by Jim Crocker to nominate Carol Ann Brown to serve as Secretary; no other nominations were cast; a rollcall vote was taken; all were in favor of the appointment of Carol Ann Brown; Ms. Brown will serve as Secretary.

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The Regional School District 14 Board of Education does not discriminate on the basis of race, color, religion, marital status, national/ethnic origin, age, sex, gender identity or expression, sexual orientation, or disability in its programs, activities, and employment practices as set forth in compliance with the Office of Civil Rights, Title VI, Title IX, and Section 504. Any person having inquiries concerning Regional School District 14 Public Schools' compliance with Section 504, Title VI or Title IX should contact Dina Ericson, Director of Student Services, Regional School District 14, 5 Minortown Road, PO Box 469, Woodbury, CT 06798 (203) 263-6356

Treasurer
A motion was made by Chris Matta and seconded by Caren Lipinski to nominate Chris Griffin to serve as Treasurer;

A second motion was made by Tikva Rose and seconded by Chris Matta to nominate herself to serve as Treasurer; no other nominations were cast; a rollcall vote was taken; all were in favor of the appointment of Ms. Rose; Ms. Rose will serve as Treasurer.

Assistant Secretary/Treasurer
A motion was made by Chris Matta and seconded by Michael Carbonneau to nominate Caren Lipinski to serve as Assistant Secretary/Treasurer; no other nominations were cast; a rollcall vote was taken; all were in favor of the appointment of Ms. Lipinski; Ms. Lipinski will serve as Assistant Secretary/Treasurer.

Board Appointments

A. Board Clerk
A motion was made by Chris Matta and seconded by Jim Crocker to accept/approve the appointment of Patricia Paige as Board Clerk; all in favor; none opposed; motion carried unanimously.

B. District's Physician
A motion was made by Chris Matta and seconded by Jim Crocker to accept/approve the appointment of Andrea Needleman, MD, Health as the School District's Physician; Tikva Rose abstained, the remainder were in favor; motion carried.

C. District's Dentist
A motion was made by Chris Matta and seconded by Alice Jones to accept/approve the appointment of James Bauer, DMD, as the School District's Dentist; all in favor; none opposed; motion carried unanimously.

Approval of Minutes

Special Meeting of the Board of Education dated Friday, May 9, 2025
A motion was made Chris Matta and seconded by Jim Crocker to accept/approve the minutes as presented, Caren Lipinski abstained, motion carried.

Regular Meeting of the Board of Education dated Monday, June 2, 2025
A motion was made by Chris Matta and seconded by Jim Crocker to accept/approve the minutes as presented, all in favor, none opposed, motion carried unanimously.

District Meeting (budget) of the Board of Education dated Monday, June 9, 2025
A motion was made by Chris Matta and seconded by Jim Crocker to accept/approve the minutes as presented, Tikva Rose and Caren Lipinski abstained, motion carried.

Superintendent's Report

A. Nonnewaug Athletic Club (NAC) McEneaney/Condon Ironman Awards
Tim Drakeley and John Dominello of the Nonnewaug Athletic Club presented the McEneaney/Condon Ironman Awards to Lincoln Nichols – Basketball; Kelly Farrell - Field Hockey; RJ Barksdale – Football.

The NHS Athletic Club has been awarding the Nonnewaug Ironman Award for 17 years. Several years ago, the name of the award was changed to the Kyle McEneaney/Shane

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Condon Ironman Award in honor of two hard-working, three-sport athletes that played at Nonnewaug and have since passed away. The award is given to those athletes that show true grit throughout their respective seasons.

B. American Sign Language Course Update
The sole teacher of the ASL course left during the school year and has been very difficult to replace. The plan moving forward is to phase out ASL I at this time. Those students who have signed up have been moved, depending on their preference, to a Spanish or French class. Students in ASL II or III will continue forward with the Posner LLC. Program with the ECE option for ASL III.

Committee Reports

Policy Committee

On a recommendation by the Policy Committee to accept/approve the following policy, Second Read, Action Anticipated.

1. Policy 6141.3273/4118.53/4218.53 Generative AI (Artificial Intelligence)

A motion was made by Chris Matta and seconded by Caren Lipinski to accept/approve the policy as presented, all in favor, none opposed, motion carried unanimously.

Board Chair Comments

Newly appointment Chairman, Chris Matta, thanked and acknowledged Jim Crocker for his service to the board noting some of his accomplishments during his tenure as Chairman.

Privilege of the Floor

There were no partakers

Old Business

There was no Old Business

New Business

A. Discussion and possible action on ratification of proposed collective bargaining agreement between the Regional School District No. 14 Board of Education and the Nonnewaug Administrators' Group covering the period of July 2026 through June 30, 2029. (Executive Session Anticipated)

Executive Session

A motion was made by Chris Matta and seconded by Jim Crocker to enter into Executive Session for the discussion and possible action on the ratification of proposed collective bargaining agreement between the Regional School District No. 14 Board of Education and the Nonnewaug Administrators' Group covering the period of July 2026 through June 30, 2029, Superintendent Murphy and Director of Finance and Operations Tina Tanguay were invited into the executive session at 6:24 p.m.

Public Session

The Board returned to Public Session at 6:42 p.m.

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Motions

Chris Matta moved that the Board of Education ratify the proposed collective bargaining agreement between the Regional School District No. 14 Board of Education and the Nonnewaug Administrators' Group covering the period of July 1, 2026 through June 30, 2029, seconded by Jim Crocker, all in favor, none opposed, motion carried unanimously.

Chris Matta moved that the Board of Education authorize the Chairman to sign said agreement, subject to any further legal review, seconded by Jim Crocker, all in favor, none opposed, motion carried unanimously.

Other Business

There was no Other Business

Adjournment

A motion was made by Chris Matta and seconded by Jim Crocker to adjourn the meeting at 6:45 p.m. all in favor, none opposed, motion carried unanimously.

Respectfully Submitted,



Patricia Paige
Board Clerk

Recorded and filed subject to Board of Education approval by: Patricia Paige, Board Clerk

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Region 14/New Staff
2025/2026

District Wide	
Renee Harris	Coordinator of Student Services
Bethlehem Elementary School	
Ariel Cerruto	Occupational Therapist (BES/WMS)
Errica Johnson	Library Media Specialist (P/T)
Mitchell Elementary School	
Isabella Bova	Paraeducator
Gianna Perugini	Integrated Pre-K 4 Teacher
Brianna Pogorzelski	Paraeducator
Karley Schaeffer	Paraeducator
Woodbury Middle School	
Richard Feeney	Building Substitute
Beth Hoyt	RBT/IA
Joanne Manley-Moore	Cafeteria Aide
Karen Metz	Paraeducator
Sarah Morawski	Paraeducator
Kristin Pannozzo	Special Education Teacher
Jesse Smolover	Visual Arts Teacher
Alketa Tahirllari	General Cafeteria Aide
Darah Zapotocki	General Cafeteria Worker
Nonnewaug High School	
Rudian Bardhollari	Special Education Teacher
Allison Buckley	Lab Tech
Danielle Carroccio	Math Teacher
Marisa Christoff	Dean
Bailey Herron	Student Teacher
Joseph LaFlamme	Vo/Ag Teacher
Sean McGee	Athletic Director
Tyler O'Shea	Paraeducator
Rebecca Pope	Physics Teacher
Central Office	
Jennifer Sestilli	Payroll and Benefits Coordinator

AP/ECE ENVIRONMENTAL SCIENCE CURRICULUM



Grade Level(s): 11-12

Curriculum Author(s): Kathleen Yocis

Course Description: *The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships within the natural world. Students cultivate their understanding of the interrelationships of the natural world through inquiry-based lab investigations and field work as they explore concepts like the four Big Ideas; energy transfer, interactions between earth systems, interactions between different species and the environment, and sustainability.The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography.*

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner Attribute and Indicator**
Unit 1: The Living World: Ecosystems (4 weeks)	What is environmental science and why is it important?	Ecosystems are the result of biotic and abiotic interactions.	TCC1(9-12); CCE1(9-12); TCC4(9-12)
Unit 2: The Living World: Biodiversity (3-4 weeks)	How do scientists define biodiversity at different scales and how biodiversity at each scale affects responses to environmental stressors?	Ecosystems have structure and diversity that change over time.	CCE1(9-12); CCE4(9-12); TCC1(9-12); TCC2(9-12)
Unit 3: Populations (3-4 weeks)	How do populations change over time in reaction to a variety of ecosystem factors, including the impacts of and differences between generalist and specialist species and how each excels in specific types of habitats?	Populations change over time in reaction to a variety of factors.	TCC4(9-12); CCE2(9-12)
Unit 4: Earth Systems and Resources (3-4 weeks)	How does the scale of the biosphere affect the various systems of the Earth, including the different layers inside our planet, the formation of soils, the compositions of our atmosphere, and the global patterns of air circulation that drives global weather?	Earth's systems interact, resulting in a state of balance over time.	TCC1(9-12); TCC3(9-12); CCE2(9-12); DE2(9-12)
Unit 5: Land and Water Use (4-5 weeks)	How are public lands used and misused and how can sustainability practices improve	When humans use natural resources, they alter natural systems.	TCC1(9-12); TCC3(9-12); CCE2(9-12); CCE4(9-12)

	our ecological footprint?		
Unit 6: Energy Resources and Consumption (3-4 weeks)	What are the energy resources that we currently use and their environmental impact and how can conservation and efficiency help reduce energy use?	Humans use energy from a variety of sources, resulting in positive and negative consequences.	TCC1(9-12); TCC3(9-12); TCC4(9-12); TI4(9-12)
Unit 7: Atmospheric Pollution (3-4 weeks)	What are air pollutants and how can they affect the environment and overall health?	Human activities have physical, chemical, and biological consequences for the atmosphere.	TCC1(9-12); TCC4(9-12); CCE1(9-12); CCE4(9-12)
Unit 8: Aquatic and Terrestrial Pollution (3-4 weeks)	How can we determine the impacts of aquatic and terrestrial pollutants on the environment and human health?	Human activities, including the use of resources, have physical, chemical, and biological consequences for ecosystems.	TCC1(9-12); CCE2(9-12); TCC3(9-12)
Unit 9: Global Change (3-4 weeks)	How have humans altered the world's atmosphere and climate and what are the underlying causes of these changes?	Local and regional human activities can have impacts at the global level.	AA4(9-12); TCC1(9-12); CCE2(9-12); TCC3(9-12)
Post AP Exam - ECE Final Unit	How can we be more aware of our impact on the environment and make changes in our daily lives to improve our ecological footprint?	Our daily activities have an environmental impact and we need to recognize this and work at adjusting our behavior to help conserve our ecosystem.	AA4(9-12); TCC1(9-12); CCE2(9-12); TCC3(9-12)

Unit 1 - The Living World: Ecosystems

Desired Results

Established Goals:

Common Core State Standards:

RI.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
MP.4: Model with mathematics
W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
HSS-1C.B.6: Evaluate reports based on data.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information

NGSS Standards:

HS-LS2-4: Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
HS-LS2-5: Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
HS-LS2-6: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing the conditions may result in a new ecosystem.
HS-LS4-5: Evaluate the evidence supporting claims that changes in the environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
HS-ESS2-6: Develop a quantitative model to describe the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions. (*Nitrogen cycle STEM Study)*
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions. *(ScrAPEbook article reviews-run various times of the year)*
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life. (*Nitrogen cycle STEM Study)*
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression. (*Legislation Presentations run throughout year assigned in Unit#1)*

CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias. (*Legislation Presentations run throughout year assigned in Unit#1)*

Understandings: Students will understand that...

- The availability of resources is a fundamental driver of species interactions in ecosystems, influencing competition, predation, mutualism, disease dynamics, community structure, and overall ecosystem functioning.
- Terrestrial biomes are large-scale ecological communities characterized by distinct climates, vegetation types, and adapted organisms. They are primarily classified based on climate (temperature and precipitation) and vegetation structure.
- Aquatic biomes encompass diverse ecosystems based on their physical characteristics, including salinity, depth, temperature, and flow.
- The carbon cycle is a dynamic process where carbon moves through these interconnected reservoirs, driven by biological, geological, and physical processes. Human activities, particularly the burning of fossil fuels and deforestation, have significantly altered the carbon cycle, leading to increased CO2 levels in the atmosphere and contributing to global climate change.
- The nitrogen cycle describes the movement of nitrogen through various reservoirs on Earth, involving both biotic (living organisms) and abiotic (non-living) processes. Nitrogen is essential for the synthesis of proteins and nucleic acids in living organisms and plays a critical role in ecosystem functioning.
- The phosphorus cycle describes the movement of phosphorus through the Earth's lithosphere, hydrosphere, and biosphere. Phosphorus is an essential element for life, being a key component of DNA, RNA, ATP (energy currency of cells), and phospholipids (cell membranes). Unlike carbon and nitrogen, phosphorus does not have a significant atmospheric component and primarily cycles through terrestrial and aquatic ecosystems.
- The hydrologic cycle, also known as the water cycle, describes

Essential Questions:

- How does the availability of resources influence species interactions?
- Describe the global distribution and principal environmental aspects of terrestrial biomes.
- Describe the global distribution and principal environmental aspects of aquatic biomes.
- Explain the steps and reservoir interactions in the carbon cycle.
- Explain the steps and reservoir interactions in the nitrogen cycle.
- Explain the steps and reservoir interactions in the phosphorus cycle.
- Explain the steps and reservoir interactions in the hydrologic cycle.
- How is solar energy acquired and transferred by living organisms?
- How does energy flow and matter cycle through trophic levels?
- How does the energy decrease as it flows through ecosystems?
- Describe food chains and food webs, and their constituent members by trophic level.

the continuous movement of water on, above, and below the surface of the Earth. It involves various processes that cycle water between different reservoirs, driven primarily by solar energy. ● Solar energy acquisition through photosynthesis is fundamental to life on Earth, supporting biological processes and sustaining ecosystems. ● Energy flows and matter cycles through trophic levels and is crucial for ecosystem management, conservation, and understanding the impacts of human activities on natural systems. Maintaining balanced nutrient cycling and energy flow supports biodiversity and ecosystem resilience in the face of environmental changes. ● Energy decreases as it flows through ecosystems primarily due to inefficiencies in energy conversion, metabolic processes, heat loss, and inefficiencies in energy transfer between trophic levels. ● Food chains and webs provide essential frameworks for understanding the complex interactions and energy flow within ecosystems, highlighting the interconnectedness of organisms and the importance of maintaining balanced trophic relationships for ecosystem health and stability.	
Students will know... ● How to define the field of environmental science and discuss its importance. ● Ways in which humans have altered and continue to alter our environment. ● The scientific method and its application to the study of environmental problems. ● The components and states of matter. ● Human beings depend on sustainable practice. ● Ecosystem boundaries are not clearly defined. ● Photosynthesis captures energy and respiration releases energy. ● Energy captured by producers moves through many trophic levels.	**Students will be able to...** ● Measure sustainability using the ecological footprint. ● Describe some of the unique challenges and limitations of environmental science. ● Describe key environmental indicators that help us evaluate the health of the planet. ● Define systems within the context of environmental science. ● Define sustainability and explain how it can be measured using the ecological footprint. ● Explain the concept of ecosystem boundaries. ● Describe the processes of photosynthesis and cellular respiration. ● Distinguish among the trophic levels that exist in food chains and food webs.

• Some ecosystems are more productive than others. • The efficiency of energy transfer affects the energy present in each trophic level. • The hydrologic cycle moves water through the biosphere. • The carbon cycle moves carbon between air, water and land. • The nitrogen cycle includes many chemical transformations. • The phosphorus cycle moves between land and water. • Calcium, magnesium, potassium and sulfur also cycle in ecosystems. • Earth's atmosphere is composed of layers. • The amount of solar energy reaching the Earth varies with location. • Earth's tilt causes seasonal changes in the climate. • Terrestrial biomes are defined by the dominant plant growth forms. • Climate diagrams illustrate patterns of annual temperature and precipitation. • Terrestrial biomes range from tundra to tropical forests. • Freshwater biomes have low salinity. • Marine biomes have high salinity.	• Quantify ecosystem productivity. • Explain energy transfer efficiency and trophic pyramids. • Describe how water cycles within ecosystems. • Explain how carbon cycles within ecosystems. • Describe how nitrogen cycles within ecosystems. • Explain how phosphorus cycles within ecosystems. • Discuss the movement of calcium, magnesium, potassium and sulfur within ecosystems. • Identify the five layers of the atmosphere. • Discuss the factors that cause unequal heating of the Earth. • Describe how the Earth's tilt affects seasonal differences in temperatures. • Explain how we define terrestrial biomes. • Interpret climate diagrams. • Identify the nine terrestrial biomes. • Identify the major freshwater biomes. • Identify the major marine biomes.
Key Vocabulary: *Ecosystem, environmentalism, biotic, abiotic, environmental indicator, habitat, niche, predator, prey, symbiotic interactions, competitive interactions, mutualism, commensalism, parasitism, limiting resource, intraspecific competition, interspecific competition, competitive exclusion principle, keystone species, indicator species, range of tolerance, invasive species, resource partitioning, trophic cascade, biodiversity, photosynthesis, cellular respiration, herbivores, omnivores, carnivores, detritivores, decomposers, biomass, consumers, heterotrophs, autotrophs, food chain, food web, food pyramid, atmosphere, biosphere, hydrosphere, lithosphere, source, sink, transpiration, reservoirs, aquifers, urban island heat, carbon cycle, enteric digestion, anthropogenic, vector-borne disease, fracking, nitrogen fixation, ammonification, nitrification, assimilation, denitrification, tilling, nitrogen cycle, phosphorus cycle, eutrophication, photochemical smog, dead zone, biome, tropical rainforest, savannah (tropical grassland), desert, temperate rainforest, temperate grasslands, temperate deciduous forest, coniferous forest (taiga), chaparral, tundra, primary productivity, net primary productivity, gross primary productivity, marsh, swamp, bog, estuary, intertidal, mangroves, watershed, salinity, saltwater intrusion, intertidal zone, pelagic zone, hydrothermal vent, abyssal zone, coral bleaching, bycatch, ocean acidification*	

Assessment Evidence	
Performance Tasks: ● Barnacle Lab & keystone species investigation ● Pond Food Web Activity ● The Water Cycle Lab ● The Carbon Cycle Drawing ● Nitrogen Cycle game and review. ● Phosphorus Cycle diagram ● Human Impact on Aquatic Ecosystems Project	**Other Evidence:** ● Introduction to ecology worksheet ● Fill-in notes ● Biomes of the World Guide ● AP weekly Quizzes ● Study Guide ● AP sample FRQs and MCQs

Learning Plan

VOL Common Assessments:
THINK CRITICALLY AND CREATIVELY
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
- Biomes of the World Project

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
- Owl Pellet Lab

TCC4: Transfer new learning and skills to other contexts and settings beyond the classroom.
- Owl Pellet Lab

COLLABORATE AND COMMUNICATE EFFECTIVELY
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
- Biome Project: Use discussion and debate to determine what qualities fit specific biomes

Teacher Resources:
College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019
UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu

Unit 2 - The Living World: Biodiversity

Desired Results

Established Goals:

Common Core State Standards:

RI.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
MP.4: Model with mathematics
W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
HSS-1C.B.6: Evaluate reports based on data.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information
HSN-Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

NGSS Standards:

HS-LS2-2: Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
HS-LS2-6: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing the conditions may result in a new ecosystem.
HS-LS4-5: Evaluate the evidence supporting claims that changes in the environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.
HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.
HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.
HS-LS4-3. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.
HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions. *(Parking Lot Diversity Lab & Ecosystems Services Project)*
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions. *(Ecosystems Services Project)*
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
TI3(9-12): I can formulate and investigate probing questions to further my learning. *(Ecosystems Services Project)*

Understandings: Students will understand that...

- Biodiversity in an ecosystem includes genetic, species, and habitat diversity and the more genetically diverse a population is, the better it can respond to environmental stressors.
- There are four categories of ecosystem services: provisioning, regulating, cultural, and supporting. Human activities can disrupt these services, potentially resulting in economic and ecological consequences.
- Island biogeography is the study of the ecological relationships and distribution of organisms on islands, and many island species have evolved to be specialists versus generalists because of the limited resources, such as food and territory, on most islands; therefore, invasive species can have an adverse effect on these ecosystems.
- Ecological tolerance refers to the range of conditions, such as temperature, salinity, flow rate, and sunlight that an organism can endure before injury or death results.
- Natural disruptions to ecosystems have environmental consequences that may, for a given occurrence, be as great as, or greater than, many human-made disruptions.
- Organisms adapt to their environment over time, both in short- and long-term scales, via incremental changes at the genetic level.
- Succession in a disturbed ecosystem will affect the total biomass, species richness, and net productivity over time.

Essential Questions:

- What are the levels of biodiversity and their importance to ecosystems?
- What are the results of human disruptions to ecosystem services?
- What is the role of island biogeography in evolution?
- What is ecological tolerance?
- How can natural disruptions, both short and long-term, impact an ecosystem?
- How can organisms adapt to their environment?
- What is the effect of ecological succession on ecosystems?

Students will know...

- It is difficult to estimate the number of species on Earth.
- We can measure biodiversity in terms of species richness and species evenness.

Students will be able to...

- Understand how we estimate the number of species living on Earth.
- Quantify biodiversity.

• Genetic diversity is created through mutation and recombination. • Evolution can occur through artificial selection. • Evolution can occur through natural selection. • Evolution can also occur through random processes. • Speciation can be allopatric or sympatric. • The pace of evolution depends on several factors. • Every species has a niche. • Environmental change can alter species distribution. • Environmental change can cause species extinctions.	• Identify the processes that cause genetic diversity. • Explain how evolution can occur through artificial selection. • Explain how evolution can occur through natural selection. • Explain how evolution can occur through random processes. • Explain the process of allopatric and sympatric speciation. • Understand the factors that affect the pace of evolution. • Explain the difference between the fundamental and realized niche. • Describe how environmental change can alter species distributions. • Describe how environmental change can cause species extinctions.

Key Vocabulary: Biodiversity, genetic diversity, population bottleneck, species diversity, habitat diversity, specialists, generalists, ecosystem diversity, species richness, species evenness,ecosystem services, provision, aquaculture, island biogeography, species-area curve, ecological tolerance, realized niche, geographic range, mass extinction, periodic disruption, episodic disruption, random disruption, resistance, resilience, intermediate disturbance hypothesis, evolution, microevolution, macroevolution, evolution by artificial selection, evolution by natural selection, fitness, adaptation, evolution by random processes, allopatric speciation, sympatric speciation, genetically modified organisms, ecological succession, primary succession, pioneer species, secondary succession, climax community, keystone species, indicator species, endemic species, biodiversity hotspots.

Assessment Evidence

Performance Tasks: • Parking Lot diversity Lab • Ecosystem services project • Island Biogeography Lab • Human Impact on Biodiversity Activity • Galapagos Finch Beak Lab	**Other Evidence:** • Fill-in notes • Ecological Succession Activity • AP weekly Quizzes • Study Guide • AP sample FRQs and MCQs

Learning Plan

VOL Common Assessments:
THINK CRITICALLY AND CREATIVELY
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

- Parking Lot Diversity Lab

TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

- Parking Lot Diversity Lab
- Ecosystem Services Project

TAKE INITIATIVE

TI2(9-12): I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.

- Legislation Presentation Project

COLLABORATE AND COMMUNICATE EFFECTIVELY

CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.

- Legislation Presentation Project

CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

- Legislation Presentation Project

Teacher Resources:

College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019
UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu

Unit 3 - Populations

Desired Results

Established Goals:

Common Core State Standards:

RI.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
MP.4: Model with mathematics
W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
HSS-1C.B.6: Evaluate reports based on data.

RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information

NGSS Standards:

HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.

HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.

HS-ESS3-3. Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life

Understandings: Students will understand that...

- Specialist species tend to be advantaged in habitats that remain constant, while generalist species tend to be advantaged in habitats that are changing.
- A survivorship curve is a line that displays the relative survival rates of a cohort—a group of individuals of the same age—in a population, from birth to the maximum age reached by any one cohort member. There are Type I, Type II, and Type III curves
- Each environment has a carrying capacity, the maximum number of individuals that can be supported sustainably. This capacity is influenced by the availability of resources and the presence of limiting factors.
- Human activities, including habitat destruction, pollution, and climate change, can profoundly affect populations and communities, leading to biodiversity loss and altered ecosystem functions.
- Total fertility rate (TFR) is affected by the age at which females have their first child, educational opportunities for females, access to family planning, and government acts and policies.
- Populations can grow exponentially under ideal conditions with unlimited resources, leading to rapid increases in population

Essential Questions:

- Identify differences between generalist and specialist species.
- Explain survivorship curves.
- What are the key factors that determine the carrying capacity of an environment for a given species?
- How do changes in population and community ecology affect ecosystem services that are vital to human well-being?
- Explain factors that affect total fertility rate in human populations.
- How do different population growth models (e.g., exponential, logistic) describe the growth patterns of populations, and what factors influence these models?
- How can population pyramids be used to analyze the age distribution and growth trends of a population?
- What are the implications of different age structures (e.g., youthful, stable, declining) for a population's future growth and socio-economic development?
- How do birth rates, death rates, and migration patterns influence population growth and the shape of population pyramids?
- How do environmental conditions influence whether a species is K-selected or r-selected?

size. Populations often exhibit logistic growth when resources are limited, leading to a leveling off of growth as the population reaches the environment's carrying capacity. ● Population pyramids provide a visual representation of the age and sex distribution of a population, allowing for analysis of current demographics and predictions of future trends. ● These rates directly influence population growth and the shape of population pyramids. High birth rates can lead to a youthful population structure, while high death rates can cause a decline in population size. ● Major events like wars, pandemics, and economic shifts can cause significant changes in population growth patterns and demographic structures. ● K-selected species are often found in stable environments where competition and resource availability are constant, allowing them to invest in long-term survival. In contrast, r-selected species thrive in unstable or unpredictable environments where rapid reproduction can exploit temporary opportunities.	
Students will know... ● Nature exists at several levels of complexity. ● Populations have distinctive characteristics. ● Population size is affected by density-dependent and density-independent factors. ● The exponential growth model describes populations that continuously increase. ● The logistic growth model describes populations that experience a carrying capacity. ● Species have different reproductive strategies and distinct survivorship curves. ● K-selected species are often found in stable environments and r-selected species thrive in unstable or unpredictable environments. ● Population pyramids provide a visual representation of the age and sex distribution of a population, allowing for analysis of current demographics and predictions of future trends.	**Students will be able to...** ● Explain how nature exists at several levels of complexity. ● Discuss characteristics of populations. ● Contrast the effects of density-dependent and density-independent factors on population growth. ● Explain the exponential growth models of populations, which produces a J-shaped curve. ● Describe how the logistic growth model incorporates a carrying capacity and produces an S-shaped curve. ● Compare reproductive strategies and survivorship curves of different species. ● Explain the difference between K-selected and r-selected species. ● Explain how population pyramids can be used to analyze the age distribution and growth trends of a population?

Key Vocabulary: *Population growth rate (intrinsic growth rate), biotic potential, K-selected species, carrying capacity, r-selected species, overshoot, dieback, survivorship curve (Types I, II & III), density-dependent factor, density-independent factor, population growth model, fecundity, exponential growth model, J-shaped curve, logistic growth model, S-shaped curve, limiting resource, demography, demographer, immigration, emigration, crude birth rate (CBR), crude death rate (CDR), net migration rate, life expectancy, infant mortality, child mortality, environmental justice, age structure diagram, population pyramid, developing countries, developed countries, population momentum, total fertility rate (FTR), family planning, replacement-level fertility, doubling time, Rule of 70, Theory of demographic transition, IPAT equation*

Assessment Evidence

Performance Tasks:

- Introduction to Population Lab
- Population Growth Activity Lab
- Humans Come and Humans Go: Population Math Practice
- Cemetery Lab
- A Tale of Two Countries Online Exploration Lab

Other Evidence:

- Fill-in notes
- Population Ecology
- AP weekly Quizzes
- Study Guide
- AP sample FRQs and MCQs

Learning Plan

VOL Common Assessments:
THINK CRITICALLY AND CREATIVELY
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

- Bubble Survivorship Lab

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

- ScrAPESbook Article Review
- Bubble Survivorship Lab

CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

- Humans Come & Humans Go Math Practice

Teacher Resources:
College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019
UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu

Unit 4 - Earth Systems and Resources

Desired Results

Established Goals:

Common Core State Standards:

RI.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
MP.4: Model with mathematics
W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
HSS-1C.B.6: Evaluate reports based on data.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information

NGSS Standards:

HS-ESS1-5. Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.
HS-ESS2-1. Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.
HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.
HS-ESS2-3. Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.
HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.

Vision of A Learner Attributes: Students will be able to independently use their learning to...
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
DE2(9-12): I can honor my own feelings and show empathy toward others through my actions.

Understandings: Students will understand that...	**Essential Questions:**
● Maps that show the global distribution of plate boundaries can be used to determine the location of volcanoes, island arcs,	● What are the geological changes and events that occur at convergent, divergent, and transform plate boundaries?

earthquakes, hot spots, and faults. ● Soils are formed when parent material is weathered, transported, and deposited. Soils are generally categorized by horizons based on their composition and organic material. ● Water holding capacity—the total amount of water soil can hold—varies with different soil types. Water retention contributes to land productivity and fertility of soils. ● The layers of the atmosphere are based on temperature gradients and include the troposphere, stratosphere, mesosphere, thermosphere, and exosphere. ● Global wind patterns primarily result from the most intense solar radiation arriving at the equator, resulting in density differences and the Coriolis effect. ● Characteristics of a given watershed include its area, length, slope, soil, vegetation types, and divides with adjoining watersheds. ● Incoming solar radiation (insolation) is the Earth's main source of energy and is dependent on season and latitude. ● Weather and climate are affected not only by the sun's energy but by geologic and geographic factors, such as mountains and ocean temperature. ● El Niño and La Niña are phenomena associated with changing ocean surface temperatures in the Pacific Ocean. These phenomena can cause global changes to rainfall, wind, and ocean circulation patterns.	● What are the characteristics and formation of soil? ● What are some similarities and differences between properties of different soil types? ● What is the structure and composition of the Earth's atmosphere? ● How can environmental factors result in atmospheric circulation? ● What are the characteristics of a watershed? ● How does the sun's energy affect the Earth's surface? ● How does the Earth's geography affect weather and climate? ● What are the environmental changes and effects that result from El Niño or La Niña events (El Niño–Southern Oscillation)?
Students will know... ● The availability of Earth's resources was determined when the planet was formed. ● The theory of plate tectonics describes the movement of the lithosphere. ● The rock cycle recycles scarce minerals and elements. ● The processes of weathering and erosion contribute to the recycling of elements. ● Soil links the rock cycle and the biosphere. ● The distribution of mineral resources on Earth has social and	**Students will be able to...** ● Describe the formation of Earth and the distribution of critical elements in Earth. ● Define the theory of plate tectonics and discuss its relevance to the study of the environment. ● Describe the rock cycle and discuss its importance in environmental science. ● Understand how weathering and erosion occur and how they contribute to element cycling and soil formation. ● Explain how soil forms and describe its characteristics.

environmental consequences. ● Watersheds are characterized by their area, length, slope, soils, and vegetation. ● Humans impact watersheds by altering water flow and inputting excess nutrients and soil. ● Solar radiation varies due to the Earth's curvature and tilted axis. ● The atmosphere is dominated by nitrogen and oxygen gasses. ● Air circulates in the atmosphere as a result of changing density, water vapor capacity, and temperature. ● Atmospheric convection currents are driven by solar radiation at the equator. ● The Earth's rotation causes the Coriolis effect, which deflects global wind patterns. ● Ocean currents are driven by unequal heating, gravity, wind, salinity, and the location of continents. ● Rain shadows cause mountains to be dry on one side. ● The El Nino-Southern Oscillation is caused by a shit in prevailing winds and ocean currents that alters global weather.	● Describe how humans extract elements and minerals and the social and environmental consequences of these activities. ● Describe the characteristics of a watershed. ● Explain the impacts that humans have on watersheds. ● Explain why the amount of solar radiation varies at latitudes and the seasons. ● Identify the major gasses and layers in Earth's atmosphere. ● Describe how the properties of air determine patterns of air circulation. ● Explain what drives convection currents. ● Explain how the Coriolis effect alters global wind directions. ● Describe how ocean circulation affects weather and global climates. ● Explain how mountains interrupt ocean airflow to cause rain shadows. ● Identify the causes and consequences of El Nino and La Nina events.
Key Vocabulary: *Core, mantle, magma, asthenosphere, lithosphere, plate tectonics, earthquake, hot spot, volcano, tsunami, divergent boundary, seafloor spreading, convergent boundary, subduction, island arc, collision zone, transform boundary, fault, igneous rock, sedimentary rock, metamorphic rock, rock cycle, physical weathering, chemical weathering, acid rain, erosion, parent material, horizon, O horizon, humus, A-horizon (topsoil), E-horizon, B-horizon, C-horizon, porosity, water holding capacity, permeability, cation exchange capacity (CEC), base saturation, watershed, insolation, albedo, troposphere, stratosphere, ozone, mesosphere, thermosphere, exosphere, saturation point, adiabatic cooling, adiabatic heating, latent heat release, atmospheric convection current, Hadley cell, intertropical convergence zone, polar cell, Ferrell cell, Coriolis effect, Gyre, upwelling, Thermohaline circulation, rain shadow, El Nino-Southern Oscillation (ENSO), La Nina, carbon sequestration, aqueducts*	
Assessment Evidence	
Performance Tasks: ● Tectonic Plate Activity ● Soil Lab ● Earth Rotation Lab	**Other Evidence:** ● Quizzes ● Formative assessments - exit slips, classwork ● Class Discussion

• Albedo effect Lab • Soil Salinization Lab • Ecological Footprint Lab	

Learning Plan

VOL Common Assessments:
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
- Soil Lab

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
- Albedo Effect Lab

CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
- Measuring Your Ecological Footprint

DE2(9-12): I can honor my own feelings and show empathy toward others through my actions.
- Measuring Your Ecological Footprint

Teacher Resources:
College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019
UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu

Unit 5 - Land and Water Use

Desired Results

Established Goals:

Common Core State Standards:

RI.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
MP.4: Model with mathematics
W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
WHST.9-12.1 Write arguments focused on discipline-specific content.
WHST.9-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

NGSS Standards:

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems
HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
HS-ESS2-7. Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
CCE4: Express ideas in a variety of ways, according to context, purpose, and audience.

Understandings: Students will understand that...

- The tragedy of the commons suggests that individuals will use shared resources in their own self-interest rather than in keeping

Essential Questions:

- What is the concept of the tragedy of the commons?
- What is the effect of clearcutting on forests?

with the common good, thereby depleting the resources. ● Clearcutting can be economically advantageous but leads to soil erosion, increased soil and stream temperatures, and flooding. ● The Green Revolution started a shift to new agricultural strategies and practices in order to increase food production, with both positive and negative results. Some of these strategies and methods are mechanization, genetically modified organisms (GMOs), fertilization, irrigation, and the use of pesticides. ● Agricultural practices that can cause environmental damage include tilling, slash and-burn farming, and the use of fertilizers. ● Types of irrigation include drip irrigation, flood irrigation, furrow irrigation, drip irrigation, and spray irrigation. ● Waterlogging occurs when too much water is left to sit in the soil, which raises the water table of groundwater and inhibits plants' ability to absorb oxygen through their roots. ● One consequence of using common pest-control methods such as pesticides, herbicides, fungicides, rodenticides, and insecticides is that organisms can become resistant to them through artificial selection. Pest control decreases crop damage by pests and increases crop yields. ● Methods of meat production include concentrated animal feeding operations (CAFOs), also called feedlots, and free-range grazing. ● Meat production is less efficient than agriculture; it takes approximately 20 times more land to produce the same amount of calories from meat as from plants. ● Overfishing has led to the extreme scarcity of some fish species, which can lessen biodiversity in aquatic systems and harm people who depend on fishing for food and commerce. ● As the more accessible ores are mined to depletion, mining operations are forced to access lower grade ores. Accessing these ores requires increased use of resources that can cause increased waste and pollution. ● Mining wastes include the soil and rocks that are moved to gain access to the ore and the waste, called slag and tailings that remain when the minerals have been removed from the ore. Mining helps to provide low cost energy and material necessary	● What are some changes in agricultural practices? ● What are some agricultural practices that cause environmental damage? ● What are the different methods of irrigation? ● What are the benefits and drawbacks of different methods of irrigation? ● What are the benefits and drawbacks of different methods of pest control? ● What are the different methods of meat production? ● What are the benefits and drawbacks of different methods of meat production? ● What are the causes of and problems related to overfishing? ● What natural resources are extracted through mining? ● What are the ecological and economic impacts of natural resource extraction through mining? ● What are the effects of urbanization on the environment? ● What is measured in an ecological footprint? ● What is the concept of sustainability? ● What are some methods for mitigating problems related to urban runoff? ● What is integrated pest management? ● What are the benefits and drawbacks of integrated pest management (IPM)? ● What are sustainable agricultural and food production practices? ● What are the benefits and drawbacks of aquaculture? ● What are the methods for mitigating human impact on forests?

to make products. The mining of coal can destroy habitats, contaminate groundwater, and release dust particles and methane. ● Urbanization can lead to depletion of resources and saltwater intrusion in the hydrologic cycle. ● Ecological footprints compare resource demands and waste production required for an individual or a society. ● Sustainable yield is the amount of a renewable resource that can be taken without reducing the available supply. ● Methods to increase water infiltration include replacing traditional pavement with permeable pavement, planting trees, increased use of public transportation, and building up, not out. ● Integrated pest management (IPM) is a combination of methods used to effectively control pest species while minimizing the disruption to the environment. These methods include biological, physical, and limited chemical methods such as biocontrol, intercropping, crop rotation, and natural predators of the pests. ● The use of integrated pest management (IPM) reduces the risk that pesticides pose to wildlife, water supplies, and human health. ● The goal of soil conservation is to prevent soil erosion. Different methods of soil conservation include contour plowing, windbreaks, perennial crops, terracing, no-till agriculture, and strip cropping. ● Aquaculture has expanded because it is highly efficient, requires only small areas of water, and requires little fuel. ● Some of the methods for mitigating deforestation include reforestation, using and buying wood harvested by ecologically sustainable forestry techniques, and reusing wood.	
Students will know... ● The Tragedy of Commons describes the harm that can occur to public and shared resources. ● Land management differs in rangeland and forest land management. ● Clear-cutting can adversely impact soils, streams, and	**Students will be able to...** ● Explain the Tragedy of the Commons ● Describe rangeland and forest land management. ● Explain the environmental impact of clear-cutting. ● Describe the changes in agricultural practices that have occurred throughout human civilization.

atmospheric carbon dioxide concentrations. ● Agriculture has undergone a number of transformations over time. ● The Green Revolution led to a greater food production. ● The Green Revolution led to advances in mechanization, fertilization, irrigation, and the use of pesticides. ● Genetic engineering and the introduction of genetically modified organisms are revolutionizing agriculture. ● Mechanization results in the energy subsidy in agriculture. ● Plowing and tilling reverse succession and mobilize organic matter. ● Slash-and-burn farming causes short term gains and long term losses. ● Fertilizer use affects the soil and water. ● Groundwater and surface water are used for irrigation. ● Crop irrigation can be done by furrow, flood, spray, and drip irrigation. ● There are major adverse consequences of irrigation. ● Pesticides reduce pests but have some adverse consequences. ● Organisms can become pesticide resistant. ● Concentrated animal feeding operations and free-range grazing each have their advantages and disadvantages. ● Harvesting fish can result in fishery decline. ● The distribution of mineral resources on Earth has social and environmental consequences. ● Mining impacts our ecosystems and human safety. ● Urbanization is an increase in population density that has many environmental implications. ● A variety of methods can reduce urban runoff. ● The ecological footprint is an environmental impact assessment tool. ● The carbon footprint calculates carbon dioxide emitted into the atmosphere. ● Sustainability is a comprehensive assessment of the environment that includes five global-scale indicators. ● Integrated pest management increases agricultural output while minimizing environmental harm.	● Explain changes that developed as a result of the Green Revolution. ● Identify the benefits and consequences of Green Revolution innovations. ● Identify specific benefits and consequences of GMOs ● Describe the resulting efficiency and fossil fuel impacts of mechanizations. ● Explain how plowing and tilling interfere with the natural progression of ecosystems. ● Identify the consequences of slash-and-burn farming. ● Describe the effects of fertilizer use. ● Describe the sources and locations of water used for irrigation. ● Explain the different types of irrigation. ● Describe how irrigation can cause waterlogging, salinization, and aquifer depletion. ● Identify the advantages and consequences of pest control methods. ● Describe pesticide resistance and the impacts of genetic engineering on crops. ● Describe the benefits and consequences of different meat production methods. ● Describe the cause and consequences of overfishing. ● Describe how natural resources are extracted from the Earth through mining. ● Identify the ecological and economic impacts of mining. ● Explain urbanization and its effects on the environment. ● Describe the methods used to reduce urban runoff. ● Explain the ecological footprint, how to calculate it, and what it tells us. ● Describe the carbon footprint and how it differs from the ecological footprint. ● Explain sustainability and describe some environmental indicators of sustainability. ● Describe the goals and techniques of integrated pest management (IPM). ● Explain the objectives of sustainable agricultural practices. ● Explain the environmental benefits and consequences of

● Sustainable agriculture reduces environmental impact. ● Sustainable forestry will minimize the effects of logging.	aquaculture. ● Describe the methods of reducing human impact on forest tree removal.
Key Vocabulary: *Tragedy of the Commons, externality, rangelands, forest, clear-cutting, selective cutting, ecologically sustainable forestry, tree plantation, Endangered Species Act, subsistence farming, agribusiness, Green Revolution, Economics of scale, organic fertilizer, synthetic fertilizer, waterlogging, salinization, pesticide, insecticide, herbicide, broad-spectrum pesticide, selective pesticide, monocropping, energy subsidy, plowing, tilling, Slash-and-burn agriculture, aquifer, unconfined aquifer, confined aquifer, water table, groundwater recharge, spring, artesian well, water footprint, furrow irrigation, flood irrigation, spray irrigation, drip irrigation, cone of depression, fungicide, rodenticide, persistent pesticides, nonpersistent pesticides, Integrated Pest Management (IPM), pesticide resistance, Concentrated animal feeding operation (CAFO), manure lagoon, free range grazing, nomadic grazing, overgrazing, desertification, fishery, fishery collapse, bycatch, crustal abundance, ore, metal, reserve, strip mining, mine tailings, open-pit mining, mountaintop removal, placer mining, subsurface mining, urbanization, urban area, suburbs, exurbs, saltwater intrusion, impervious surface, urban sprawl, urban blight, Sense of place, urban runoff, ecological footprint, carbon footprint, sustainability, sustainable development, maximum sustainable yield (MSY), environmental indicators, anthropogenic, crop rotation, intercropping, biocontrol, natural predators, sustainable agriculture, soil conservation, agroforestry, windbreaks, strip cropping, contour plowing, terracing, perennial plants, no-till agriculture, green manure, limestone, rotational grazing, organic agriculture, Delaney Clause, reforestation, sustainable forestry, prescribed burn.*	
Assessment Evidence	
Performance Tasks: ● Forestry Management WebQuest ● Cookie Mining Lab ● Urbanization & Sustainable Urban Planning ● Eating at a Lower Trophic Level	**Other Evidence:** ● Origin of Food
Learning Plan	
VOL Common Assessments: TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions. ● Soil Salinization Lab TCC3(9-12): I can integrate relevant information to produce multiple valid solutions. ● Cookie Mining Lab CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success. ● APES Impact Poster Project	

CCE4: Express ideas in a variety of ways, according to context, purpose, and audience. ● APES Impact Poster Project
Teacher Resources: *College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science* *Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019* *UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu*

Unit 6 - Energy Resources and Consumption

Desired Results

Established Goals:

Common Core State Standards:
MP.4: Model with mathematics
MP.2 Reason abstractly and quantitatively.
HSN-Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
WHST.9-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.
HSN-Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
NGSS Standards:
HS-PS3-2. Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).
HS-PS3-3. Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.
HS-PS4-5. Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.
HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.
HS-LS2-4. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
HS-LS2-5. Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
HS-ESS3-2. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

Vision of A Learner Attributes: Students will be able to independently use their learning to...
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.

Understandings: Students will understand that...	Essential Questions:
• Nonrenewable energy sources are those that exist in a fixed amount and involve energy transformation that cannot be easily replaced, but renewable sources can be replenished. • Availability, price, and governmental regulations influence which energy sources people use and how they use them. • The most common fuel types are fossil fuels such as natural gas, peat, coal and wood. • The global distribution of natural energy resources, such as ores, coal, crude oil, and gas, is not uniform and depends on regions' geologic history. • Humans use a variety of methods to extract fossil fuels from the earth for energy generation which has an environmental impact. • Nuclear power is generated through fission, where atoms of Uranium-235, which are stored in fuel rods, are split into smaller parts after being struck by a neutron. • Three Mile Island, Chernobyl, and Fukushima are three cases where accidents or natural disasters led to the release of radiation. These releases have had short- and long-term impacts on the environment. • Burning of biomass produces heat for energy at a relatively low cost, but it also produces carbon dioxide, carbon monoxide, nitrogen oxides, particulates, and volatile organic compounds. • Photovoltaic solar cells capture light energy from the sun and transform it directly into electrical energy. Solar energy systems have low environmental impact and produce clean energy, but they can be expensive. • Moving water can be used to spin a turbine, but construction of the power plants can be expensive, and there may be a loss of or change in habitats. • Geothermal energy is obtained by using the heat stored in the Earth's interior to heat up water, which is brought back to the surface as steam to use for energy. This is often cost prohibitive or not accessible and may produce hydrogen sulfide. • Hydrogen fuel cells use hydrogen as fuel, combining the hydrogen and oxygen in the air to form water and release energy (electricity) in the process, but can be too expensive and	• What are the differences between nonrenewable and renewable energy sources? • What are some trends in energy consumption? • What are some different types of fuels and their uses? • Where do natural energy resources occur? • What are the uses and methods of fossil fuels in power generation and how do they affect the environment? • How is nuclear energy used in power generation? • What are the effects of the use of nuclear energy on the environment? • What are the effects of the use of biomass in power generation on the environment? • How is solar energy used in power generation and what are the effects on the environment? • How is hydroelectricity used in power generation and what are the effects on the environment? • How is geothermal energy used in power generation and what are the effects on the environment? • How are hydrogen fuel cells used in power generation and what are the effects on the environment? • How is wind used in power generation and what are the effects on the environment? • What are some methods for conserving energy?

hydrogen can be dangerous. ● Wind turbines use the kinetic energy of moving air to spin a turbine, which in turn converts the mechanical energy of the turbine into electricity, but they may disrupt birds habitat and can cause noise pollution. ● Methods for conserving energy on a large scale include improving fuel economy for vehicles, using BEVs (battery electric vehicles) and hybrid vehicles, using public transportation, and implementing green building design features.	
Students will know... ● Nonrenewable energy resources are finite and renewable energy resources are infinite. ● Trends in energy use are changing around the world and in the U.S. ● We can use less energy through conservation and increased efficiency. ● The Sun is the ultimate source of many of the fuels that we use. ● Each fuel has specific optimal applications. ● Fossil fuels have specialized uses for motor vehicles and electricity. ● Generation and cogeneration convert fuels to electricity. ● Fossil fuel and ore distribution around the globe depends on the geology of the region. ● Fossil fuels have many advantages and disadvantages. ● Fuel is converted to electricity and releases carbon dioxide and heat energy. ● Nuclear reactors use fission to generate electricity which does not produce carbon dioxide but the small amount of nuclear waste that is generated needs to be stored and any accident in the reactor could be devastating. ● Biomass energy resources are derived from biological material and can displace fossil fuels. ● The energy of the Sun can be captured passively and actively. ● The kinetic energy of water can generate electricity but there are consequences. ● Geothermal energy is using the Earth's internal heat and	**Students will be able to...** ● Describe nonrenewable and renewable energy resource characteristics. ● Describe the trends of energy use worldwide and in the United States. ● Explain the importance of energy efficiency and conservation. ● Explain the role of the Sun in fuel sources. ● Describe major fuel types and how they are used. ● Identify other uses of fossil fuel. ● Describe electricity generation and cogeneration. ● Explain why fossil fuels and ores are found only in certain locations. ● Describe the advantages and disadvantages of fossil fuels including oil extraction and fracking. ● Describe how fossil fuels are used for electricity generation. ● Explain how nuclear energy is used to generate energy and identify some advantages and disadvantages of its use. ● Explain the positive and negative consequences of biomass energy resources. ● Describe the various types of solar energy systems. ● Explain how hydroelectric power is generated and describe its environmental effects. ● Explain how humans harness geothermal energy. ● Describe the hydrogen fuel cell and its potential for providing electricity. ● Describe the benefits and impacts of wind energy. ● Explain the methods of conserving energy.

transferring it to water to use for heating or electricity generation. ● Hydrogen fuel cells use hydrogen as an energy source and are almost pollution free. ● Wind energy is the most rapidly growing source of electricity. ● We can use less, and use different technologies to conserve energy.	

Key Vocabulary: *Fossil fuels, nonrenewable energy resource, renewable energy resource, potentially renewable, nondepletable, commercial energy resources, subsistence energy resources, energy intensity, fossil fuel combustion, Hubbert curve, Peak oil, energy conservation, energy efficiency, energy return on energy investment (EROEI), biofuel, modern carbon, fossil carbon, carbon neutral, coal, peat, lignite, bituminous coal, anthracite, natural gas, crude oil, tar sands, energy carrier, combined cycle, capacity, capacity factor, cogeneration, fracking, Volatile organic compounds (VOCs), turbine, electrical grid, energy quality, nuclear power, radioactivity, fission, fuel rod, control rod, radioactive decay, half-life, radioactive waste, Becquerel (Bq), curie, biomass, charcoal, particulates, carbon monoxide, nitrogen oxides, carbon dioxide, biofuel, ethanol, biodiesel, passive solar, active solar energy, photovoltaic solar cells, hydroelectricity, water impoundment, run-of-the-river, tidal energy, siltation, geothermal energy, ground source heat pump, fuel cells, electrolysis, wind energy, wind turbine, phantom loads, peak demand, passive solar design, thermal mass smart grid, oxygenated fuel, cellulosic ethanol*

Assessment Evidence

Performance Tasks:	**Other Evidence:**
● Personal Energy Use Audit ● Nuclear Decay Lab ● Ohmani Energy Project	● Energy Math Practice ● Carbon Neutrality Game ● Radioactive Wolves Case

Learning Plan

VOL Common Assessments:
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
- Ohmani Energy Project

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
- Personal Energy Use Audit

TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.
- Personal Energy Use Audit

Teacher Resources: *College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science* *Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019* *UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu*

Unit 7 - Atmospheric Pollution

Desired Results

Established Goals:

Common Core State Standards:

MP.4: Model with mathematics
MP.2 Reason abstractly and quantitatively.
HSN-Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.
HSN-Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

NGSS Standards:

HS-LS2-5. Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

Vision of A Learner Attributes: Students will be able to independently use their learning to...
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.

Understandings: Students will understand that...	**Essential Questions:**

• The combustion of fossil fuels releases air pollutants into the atmosphere. Air pollutants can be primary or secondary pollutants. • Many environmental factors affect the formation of photochemical smog, which is when nitrogen oxides and volatile organic hydrocarbons react with heat and sunlight to produce a variety of pollutants. • During a thermal inversion, the normal temperature gradient in the atmosphere is altered as the air temperature at the Earth's surface is cooler than the air at higher altitudes and it may trap pollution close to the ground, especially smog and particulates. • CO2 appears naturally in the atmosphere from sources such as respiration, decomposition, and volcanic eruptions. • Indoor air pollutants can be classified as particulates, natural source pollutants, or human-made indoor air pollutants. • Methods to reduce air pollutants include regulatory practices, conservation practices, and alternative fuels. • Acid rain and deposition is due to nitrogen oxides and sulfur oxides from anthropogenic and natural sources in the atmosphere and can lead to the acidification of soils and bodies of water and corrosion of human-made structures. • Noise pollution is sound at levels high enough to cause physiological stress and the effects of noise pollution on animals in ecological systems include stress, the masking of sounds used to communicate or hunt, damaged hearing, and causing changes to migratory routes.	• What are the sources and effects of air pollutants? • What are the causes and effects of photochemical smog and methods to reduce it? • What is thermal inversion and its relationship with pollution? • What are some natural sources of CO2 and particulates? • What are indoor air pollutants? • How can air pollutants be reduced at the source? • What is acid rain and what are the effects of acid deposition on the environment? • What human activities result in noise pollution and how do they affect the environment?
Students will know... • Air pollution sources are widespread and their effects vary. • Primary (originates at source) and secondary (have been transformed to pollutants by another resource) pollutants have decreased over time. • Photochemical smog is a complex combination of compounds and it can be reduced by decreasing emissions of its precursors. • Thermal inversions trap air pollutants close to the Earth's surface. • Volcanoes, forest fires, respiration, and decomposition are	**Students will be able to...** • Identify the sources and effects of major air pollutants. • Describe primary and secondary pollutants and how they change over time. • Explain photochemical smog and how to reduce it. • Describe thermal inversions and how they relate to air pollution. • Describe the natural sources of particulates and CO_2 • Identify the major indoor air pollutants and where they come from. • Describe indoor air pollution differences in the developing and

natural processes responsible for particulate emissions and carbon dioxide. ● Indoor air pollutants come from natural, human-made, and combustion sources. ● Indoor air pollution in the developing world comes mostly from indoor combustion while in the developed world tightly sealed buildings and VOCs are a bigger problem. ● Air pollution can be controlled by prevention, conservation, fuel switching, and regulatory practices. ● Control devices convert pollutants to less harmful compounds or remove them from the exhaust stream. ● Acid rain is acidified precipitation derived from air pollutants, which adversely affects terrestrial and aquatic systems and buildings. ● Noise pollution in the air can affect human health and behavior; noise pollution in water may interfere with animal communication.	developed world. ● Explain how air pollutants can be reduced. ● Describe the various air pollution control devices and how they are used. ● Describe acid rain and its effects. ● Explain the sources and effects of noise pollution.
Key Vocabulary: *Air pollution, sulfur dioxide, haze, photochemical oxidant, smog, lead, hydrocarbons, primary pollutant, secondary pollutant, photochemical smog (brown smog L.A.), sulfurous smog (gray smog), evaporate, sublimate, formaldehyde, thermal inversion, inversion layer, PM_{10}, $PM_{2.5}$, indoor air pollutants, asbestos, radon-222, Sick building syndrome, vapor recovery nozzle, catalytic converter, scrubber, electrostatic precipitator, pH, acid, base, acid rain, noise pollution, decibel A scale (dbA).*	
Assessment Evidence	
Performance Tasks: ● Airborne Particulate Lab ● Photochemical Smog & Thermal Inversion Lab ● Car Use Audit	**Other Evidence:** ● Open Note AP Quiz ● Practice Math for AP Test ● FRQ practice and corrections
Learning Plan	
VOL Common Assessments: TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.	

- Photochemical Smog & Thermal Inversion Lab

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

- Airborne Particulate Lab

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

- Photochemical Smog & Thermal Inversion Lab
- Airborne Particulate Lab

CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

- Car Use Audit

CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.

- Car Use Audit

Teacher Resources:

College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
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Unit 8 - Aquatic and Terrestrial Pollution

Desired Results

Established Goals:

Common Core State Standards:

RI.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
MP.4: Model with mathematics
W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
WHST.9-12.1 Write arguments focused on discipline-specific content.
WHST.9-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

NGSS Standards:

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems
HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
HS-ESS2-7. Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...	**Essential Questions:**
● A point source refers to a single, identifiable source of a pollutant, and nonpoint sources of pollution are diffused and can therefore be difficult to identify.	● What are the differences between point and nonpoint sources of pollution? ● What are the impacts of human activities on aquatic

• Organisms have a range of tolerance for various pollutants. Organisms have an optimum range for each factor where they can maintain homeostasis. Outside of this range, organisms may experience physiological stress, limited growth, reduced reproduction, and in extreme cases, death. • Endocrine disruptors are chemicals that can interfere with the endocrine system of animals and they can lead to birth defects, developmental disorders, and gender imbalances in fish and other species. • Threats to wetlands and mangroves include commercial development, dam construction, overfishing, and pollutants from agriculture and industrial waste. • The increase in nutrients in eutrophic aquatic environments causes an algal bloom. When the algal bloom dies, microbes digest the algae, along with the oxygen in the water, leading to a decrease in the dissolved oxygen levels in the water • Thermal pollution occurs when heat released into the water produces negative effects to the organisms in that ecosystem. • Persistent organic pollutants (POPs) do not easily break down in the environment because they are synthetic, carbon-based molecules (such as DDT and PCBs). • Bioaccumulation is the selective absorption and concentration of elements or compounds by cells in a living organism, and biomagnification is the increase in concentration of substances per unit of body tissue that occurs in successively higher trophic levels of a food chain or in a food web. • Solid waste is any discarded material that is not a liquid or gas and factors in landfill decomposition include the composition of the trash and conditions needed for microbial decomposition of the waste. • Recycling is a process by which certain solid waste materials are processed and converted into new products. • Prior to discharge, the treated water is exposed to one or more disinfectants (usually, chlorine, ozone, or UV light) to kill bacteria. • Lethal dose 50% (LD50) is the dose of a chemical that is lethal to 50% of the population of a particular species.	ecosystems? • What are endocrine disruptors and what are the effects of endocrine disruptors on ecosystems? • What are the impacts of human activity on wetlands and mangroves? • What are the environmental effects of excessive use of fertilizers and detergents on aquatic ecosystems? • What are the effects of thermal pollution on aquatic ecosystems? • What are the effects of persistent organic pollutants (POPs) on ecosystems? • What are bioaccumulation and biomagnification? • What are solid waste disposal methods and what are the effects of solid waste disposal methods? • What are some changes to current practices that could reduce the amount of generated waste and their associated benefits and drawbacks? • What are the best practices in sewage treatment? • What is the lethal dose 50% (LD50)? • What are dose response curves? • What are some sources of human health issues that are linked to pollution? • How do human pathogens cycle through the environment?

• A dose response curve describes the effect on an organism or mortality rate in a population based on the dose of a particular toxin or drug. • It can be difficult to establish a cause and effect between pollutants and human health issues because humans experience exposure to a variety of chemicals and pollutants. • Pathogens adapt to take advantage of new opportunities to infect and spread through human populations.	
Students will know... • Point sources of pollution have single locations while nonpoint sources have diffuse locations. • Organisms differ in their tolerance to various pollutants. • Chemical pollutants include heavy metals and synthetic compounds that are produced naturally and by human activities. • Chemical pollutant impacts can be categorized as neurotoxins, carcinogens, teratogens, allergens, or endocrine disruptors. • Oil pollution comes from multiple sources. • Humans are altering the availability of water by controlling its movements and they are converting some salt water into fresh water by desalination. • Humans are impacting wetlands and mangroves through development, dams, overfishing and pollutants. • Aquatic systems are being harmed by eutrophication and sediment inputs. • Thermal pollution comes from warming water bodies while noise pollution comes from human sounds. • Some chemicals can persist in nature and harm ecosystems for years. • Concentrations of chemicals experienced by organisms depend on routes of exposure and solubility. • Bioaccumulation and biomagnification can dramatically increase the concentration of a chemical in organisms by storing them in fat. • Solid waste pollution has increased over time from residences, businesses, industries, and agricultural activities. • Landfills are the primary destination for municipal solid waste.	**Students will be able to...** • Identify the difference between point and nonpoint sources of pollution. • Explain why species differ in their tolerance of pollutants. • Identify the major groups of chemical pollutants and where they come from. • Describe the impacts of chemical pollutants. • Identify the source of oil pollutants. • Describe the human impacts on water availability. • Explain the human impacts on wetlands and mangroves. • Explain the causes and consequences of eutrophication and sediments. • Describe the sources of thermal and noise pollution. • Describe how persistent organic pollutants affect ecosystems. • Explain how routes of exposure and solubility determine the concentrations of chemicals that organisms experience. • Explain how bioaccumulation and biomagnification can increase concentrations of chemicals in organisms. • Describe how solid waste production has changed over time and identify the sources. • Explain how landfills are used to dispose of municipal solid waste. • Describe how incineration is used to dispose of municipal solid waste. • Explain why some municipal solid waste does not got to landfills or incinerators. • Identify how hazardous waste is safely disposed of. • Describe the three R's that divert materials from the waste

• Incinerators reduce solid waste by burning it. • A lot of solid waste ends up in the ocean. • Hazardous waste requires proper handling and disposal. • The three R's: reduce, reuse, recycle. • Composting reduces food and yard trimmings in the waste stream and enhances soil quality. • New ways to think about municipal solid waste. • Wastewater pollution is caused by oxygen demand, nutrient release, and disease-causing organisms. • We have modern technologies used to treat wastewater. • Scientists can determine the concentrations of chemicals that harm organisms by using dose-response curves. • We can estimate potential harm by using risk assessment, risk acceptance and risk management. • Worldwide standards of risk are guided by two different philosophies. • We can establish cause and effect between pollutants and human health using retrospective and prospective studies. • Human diseases can be infectious or noninfectious. • Many pathogens have been historically important. • Emergent infectious diseases pose new risks to humans. • Laws exist to protect human health from pollutants and pathogens.	stream. • Explain how composting reduces materials entering the waste stream. • Explain how life-cycle analysis and integrated waste management reduce municipal solid waste. • Describe the three major problems caused by wastewater pollution. • Explain how we treat wastewater to prevent pollution. • Explain how dose-response curves are used to estimate lethal doses of chemicals. • Identify how we estimate potential harm of chemicals in the environment. • Describe the major philosophies of regulating chemicals in the environment. • Describe how we establish cause and effect between pollutants and human health. • Describe the different types of human diseases. • Identify historic human pathogens that have cycled through the environment. • Identify the major emergent infectious diseases in humans. • Identify the laws that protect human health from pollutants and pathogens.
Key Vocabulary: *Point source, nonpoint source, homeostasis, polychlorinated biphenyls (PCBs), neurotoxin, carcinogen, mutagen, teratogen, allergen, endocrine disruptor, wastewater, levee, dikes, dam, reservoir, fish ladder, desalination, distillation, reverse osmosis, eutrophication, oxygen sag curve, thermal pollution, thermal shock, persistence, persistence organic pollutants (POPs), route of exposure, solubility, bioaccumulation, biomagnification, solid waste, municipal solid waste (MSW), waste stream, leachate, sanitary landfill, tipping fee, incineration, ash, waste-to-energy, hazardous waste, Superfund Act, Brownfields, Reduce, Reuse, Recycle, source reduction, closed-loop recycling, open-loop recycling, composting, life-cycle analysis (cradle-to-grave), integrated waste management, biochemical oxygen demand (BOD), cultural eutrophication, fecal coliform bacteria, septic system, septic tank, sludge, septage, leach field, dose-response study, acute study, chronic study, LD_{50}, sublethal effect, ED_{50}, no-observed-effect level (NOEL), environmental hazard, Innocent-until-proven-guilty, precautionary principle, Stockholm convention, REACH, retrospective study, prospective study, synergistic interaction, disease, infectious disease, acute disease, chronic disease, epidemic, pandemic, dysentery, plague, malaria, tuberculosis, emergent infectious disease, Acquired Immune Deficiency Syndrome, Human Immunodeficiency Virus, Ebola hemorrhagic fever, Mad Cow disease, prion, swine flu, bird flu, severe acute respiratory syndrome (SARS), MERS-CoV, SARS-CoV-2, West Nile virus, Lyme disease, Zika virus disease, Clean Water Act, Dafe Drinking Water Act, Maximum contaminant level (MCL).*	

Assessment Evidence

Performance Tasks:	**Other Evidence:**
● *Oil Spill Lab* ● *Biomagnification Lab* ● *Water Quality Lab*	● LD50 Lab ● Waste-free World: The Story of Stuff ● Wastewater Treatment Activity or visit

Learning Plan

VOL Common Assessments:
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
- Oil Spill Lab

TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
- Water Quality Lab

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
- Biomagnification Lab

CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
- Biomagnification Lab

Teacher Resources:
College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
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Unit 9 - Global Change

Desired Results

Established Goals:
Common Core State Standards:
MP.4: Model with mathematics
MP.2 Reason abstractly and quantitatively.
HSN-Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. (
NGSS Standards:
HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.
HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

Vision of A Learner Attributes: Students will be able to independently use their learning to...
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- The stratospheric ozone layer is important to the evolution of life on Earth and the continued health and survival of life on Earth because a decrease in stratospheric ozone increases the UV rays that reach the Earth's surface..
- Ozone depletion can be mitigated by replacing ozone-depleting chemicals with substitutes that do not deplete the ozone layer. Hydrofluorocarbons (HFCs) are one such replacement, but some are strong greenhouse gasses.

Essential Questions:

- Why is stratospheric ozone important to life on Earth?
- What are chemicals used to substitute for chlorofluorocarbons (CFCs)?
- What are greenhouse gasses and the sources and potency of them?
- What are the threats to human health and the environment posed by an increase in greenhouse gasses?
- How can changes in climate cause both short- and long term,

• The principal greenhouse gasses are carbon dioxide, methane, water vapor, nitrous oxide, and chlorofluorocarbons (CFCs). Carbon dioxide is used as a reference point for the comparison of different greenhouse gasses. • Global climate change, caused by excess greenhouse gases in the atmosphere, can lead to a variety of environmental problems including rising sea levels resulting from melting ice sheets and ocean water expansion, and disease vectors spreading from the tropics toward the poles. These problems can lead to changes in population dynamics and population movements in response. • Effects of climate change include rising temperatures, melting permafrost and sea ice, rising sea levels, and displacement of coastal populations. • Ocean warming is caused by the increase in greenhouse gasses in the atmosphere and can affect marine species in a variety of ways, including loss of habitat, and metabolic and reproductive changes. • Ocean acidification is the decrease in pH of the oceans, primarily due to increased CO2 concentrations in the atmosphere, and can be expressed as chemical equations. • Invasive species are often generalist, r-selected species and therefore may outcompete native species for resources and they can be controlled through a variety of human interventions. • A variety of factors can lead to a species becoming threatened with extinction, such as being extensively hunted, having limited diet, being outcompeted by invasive species, or having specific and limited habitat requirements. Strategies to protect animal populations include criminalizing poaching, protecting animal habitats, and legislation. • Global climate change can cause habitat loss via changes in temperature, precipitation, and sea level rise. Some ways humans can mitigate the impact of loss of biodiversity include creating protected areas, use of habitat corridors, promoting sustainable land use practices, and restoring lost habitats.	impact ecosystems? • What are the causes and effects of ocean warming? • What are the causes and effects of ocean acidification? • What are the environmental problems associated with invasive species and strategies to control them? • How do species become endangered and what are strategies used to combat the problem? • How are human activities affecting biodiversity and what are some strategies to combat the problem?
Students will know... • Stratospheric ozone is beneficial to the health and survival of life	**Students will be able to...** • Explain how stratospheric ozone forms and the benefits it

on Earth. ● Humans have depleted the ozone layer through the use of CFCs. ● Nations around the world have agreed to reduce CFC production to reduce ozone depletion. ● Global change includes global climate change and global warming. ● Solar radiation and greenhouse gasses make our planet warm. ● Sources of greenhouse gasses are both natural and anthropogenic. ● CO_2 concentrations have increased for the past 7 decades. ● Global temperatures and greenhouse gasses have dramatically increased over the past two centuries. ● Global climate change is causing ice to melt and sea levels to rise. ● Global climate change is affecting the timing and performance of plants and animals. ● Ocean warming is affecting a variety of marine species. ● Increasing CO_2 concentrations are causing ocean acidification. ● International agreements include the Kyoto Protocol and the Paris Agreement. ● Invasive species can negatively impact native species, ecosystems, and human activities. ● Plants and animals are becoming endangered due to human activities. ● Human activities are causing declines in genetic biodiversity. ● Declining biodiversity has a wide variety of causes. ● To conserve biodiversity, we need to reduce threats.	provides. ● Identify the cause of depleted stratospheric ozone. ● Describe efforts made to reduce ozone depletion. ● Describe how we can distinguish between global change, global climate change, and global warming. ● Explain the process underlying the greenhouse effect. ● Identify the sources of greenhouse gasses. ● Explain how CO_2 concentrations have changed over the past 7 decades. ● Describe how temperatures and greenhouse gasses have varied historically. ● Describe how global climate change has affected the environment. ● Explain how global climate change is affecting populations. ● Describe how ocean warming is altering ocean ecosystems. ● Explain how climate change affects ocean pH. ● Explain the international agreements on global climate change. ● Identify the threats posed by invasive species. ● Describe why species are becoming endangered. ● Identify how human activities are affecting genetic biodiversity. ● Explain the causes of declining biodiversity. ● Identify how we can conserve biodiversity.
Key Vocabulary: *Chlorofluorocarbons (CFCs), Montreal Protocol, Global change, global climate change, Greenhouse effect, Greenhouse warming potential (GWP), ocean acidification, Kyoto Protocol, Paris Climate Agreement, Endangered species, Lacey Act, Marine Mammal Protection Act, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*	
Assessment Evidence	
Performance Tasks:	**Other Evidence:**

• Exploration of Coral Bleaching STEM Activity • Stratospheric Ozone Activity	• Endangered Species Project • Infectious Disease Pamphlet

Learning Plan

VOL Common Assessments:
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.
- Exploration of Coral Bleaching STEM Activity

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
- Stratospheric Ozone Activity

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
- Exploration of Coral Bleaching STEM Activity

Teacher Resources:
College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019
UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu

Post AP exam - ECE Final Unit

Desired Results - Students will recognize the benefits and consequences of human activity on the environment.

Established Goals:

Common Core State Standards:

RI.9-10.1: Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
MP.4: Model with mathematics
W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
HSN-Q.A.2: Define appropriate quantities for the purpose of descriptive modeling.
HSS-1C.B.6: Evaluate reports based on data.
RST.11-12.8: Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information

NGSS Standards:

HS-LS2-4: Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
HS-LS2-6: Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing the conditions may result in a new ecosystem.
HS-LS4-5: Evaluate the evidence supporting claims that changes in the environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

Vision of A Learner Attributes: Students will be able to independently use their learning to...
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...	**Essential Questions:**
• Invasive species are located in Connecticut and are out-competing some native species. • Infectious diseases are becoming more prevalent due to climate	• Is there a local impact from invasive species? • What are some infectious diseases and how does the environment affect the overall impact of them?

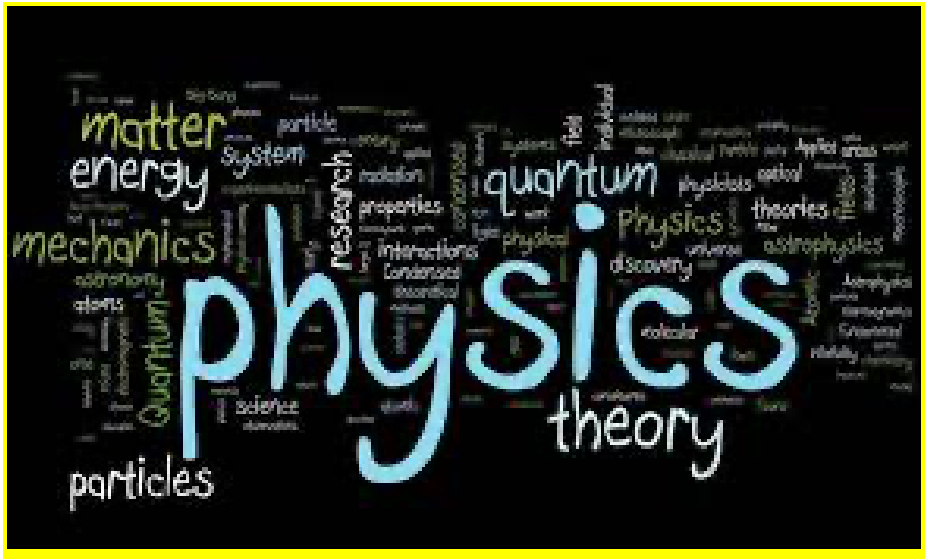
change. ● Every item that we purchase has an environmental impact from “cradle to grave” and should be considered.	● What is the total environmental cost of things that we purchase?
Students will know... ● what invasive species are located in the U.S. ● what infectious diseases are on the rise due to environmental changes or issues. ● what their personal impact is on the environment. ● what environmental cost the production of things we want has.	**Students will be able to...** ● identify local invasive species. ● identify infectious diseases that are affected by changes in the environment. ● determine their ecological footprint. ● determine if the environmental cost of “things” is worth it.
Key Vocabulary: Invasive species, infectious diseases, ecological footprint.	
Assessment Evidence	
Performance Tasks: ● Environmental Scavenger Hunt: Students will explore the area on the Nonnewaug High School campus to identify something found in nature and then offer an explanation or connection to an environmental science theme or topic. ● ECE UConn Final Exam Poster Project: Students will choose an item that they utilize and enjoy and trace the environmental impact of that item from creation to disposal.	**Other Evidence:** (To vary year to year) ● Invasive species Wanted Poster ● Infectious Disease Flyer ● Endangered Species Pamphlet ● Natural Areas Project
Learning Plan	
VOL Common Assessments: AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation. ● ECE Poster Project “From Cradle to Grave” TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions. ● Scavenger Hunt ● ECE Poster Project “From Cradle to Grave” CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success. ● ECE Poster Project “From Cradle to Grave”	

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

- Invasive species Wanted Poster
- Infectious Disease Flyer
- Endangered Species Pamphlet
- Natural Areas Project

Teacher Resources:
College Board AP Central: Environmental Science; https://apcentral.collegeboard.org/courses/ap-environmental-science
Environmental Science for the AP Course text 3rd edition by Andrew Friedland and Rick Relyea, 2019
UConn Early College Experience guidelines for Environmental Science; www.ece.uconn.edu

PHYSICS CURRICULUM



Grade Level(s): 11-12

Curriculum Author(s): Bill Pease

Course Description: Physics is a full year course for the student who is confident in math and science and intends to pursue a postsecondary education in the fields of Science, Pre-Medical, Engineering or Mathematics. It is also highly recommended that all students planning to attend college take this course regardless of career path. Topics covered include Newtonian mechanics,work, energy, power, mechanical waves, sound and light. It will also introduce circuits, optics, electricity and magnetism. Evaluation is based upon tests, quizzes, laboratory work, and a final exam. Physics is offered as an honors or college prep course. The honors level course is designed and implemented so that the depth of the topics discussed in the course surpass that of the College Prep course and include the following: extensions of learning, accelerated pacing, greater complexity in topics, and greater responsibility, creativity, and reflection on the part of the students as their thinking is challenged.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Kinematics	How does our choice of reference frame affect how we perceive and measure motion in real-world contexts?	Understanding motion in different frames of reference is crucial for fields such as aviation, space travel, and autonomous vehicle navigation.	TCC1(9-12), TCC3(9-12)
Newton's Laws	Why does anything move or stay still?	Forces cause motion and hold structures together.	TCC1(9-12), TCC3(9-12)
Work and Energy	In what ways can work and energy principles help us reduce environmental impact?	Real-world challenges like climate change and resource management depend on understanding how energy is stored, transferred, and conserved.	TCC1(9-12), TCC3(9-12)
Impulse and Momentum	How do airbags, helmets, and crumple zones use momentum concepts to reduce injury?	The conservation of momentum explains real-world phenomena like car crashes and athletic collisions and informs how we protect people from injury.	TCC1(9-12), TCC3(9-12)
2 Dimensional Physics	How can we apply Physics to 2 Dimensional Motions and Rotations?	Most Mechanical situations can be modeled in 2 Dimensions.	TCC1(9-12)
Electricity	How do circuit designs impact power distribution in homes and electronic devices?	Electric forces govern interactions in all electronic devices, and understanding these forces allows for efficient circuit design.	TCC1(9-12)
Electromagnetism	What technologies rely on electromagnetic principles to function?	Magnetic fields created by currents allow the conversion of energy between mechanical and electrical forms, enabling efficient energy systems.	TCC1(9-12)
Sound and Waves	How can wave behavior be manipulated to solve practical problems?	Engineers use wave interference and superposition to solve problems in signal processing and sound design.	TCC3(9-12)

Light and Optics	How do different wavelengths of light affect technology, health, and the environment?	Light exhibits wave and particle properties that are central to technologies like lasers, microscopes, and solar panels.	TCC1(9-12)

Unit 1 - Kinematics

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

- **HS-PS2-1:** Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.
- **Science and Engineering Practice:** Analyzing and interpreting data.
- **Crosscutting Concepts:** Patterns; Cause and effect.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- Motion can be accurately modeled using mathematical tools, helping engineers design safer cars, better sports equipment, and efficient transit systems.
- Graphical and mathematical descriptions of motion allow us to evaluate system performance and identify trends across a range of real-world applications.
- Understanding motion in different frames of reference is crucial for fields such as aviation, space travel, and autonomous vehicle navigation.

Essential Questions:

- How can the motion of vehicles, athletes, or projectiles be predicted and optimized using mathematical models?
- In what ways does accurate motion analysis improve safety and efficiency in transportation systems?
- How does our choice of reference frame affect how we perceive and measure motion in real-world contexts?

Students will know...

- that motion can be described using such quantities as position, displacement, distance, velocity, speed, and acceleration
- that displacement, velocity and acceleration are vectors
- that displacement is a change in position. Velocity is the rate of change of position. Acceleration is the rate of change of velocity. Changes in each property are

Students will be able to...

- express the motion of an object using narrative, mathematical, and graphical representations.
- design and experimental investigation of the motion of an object.
- analyze experimental data describing the motion of an object and is able to express the results of the analysis using narrative, mathematical, and graphical representations.
- model the motion of anything with a constant acceleration or an

expressed by subtracting initial values from final values ● that a choice of reference frame determines the direction and the magnitude of each of these quantities. ● that motion can be described using graphs and diagrams.	acceleration that can be approximated to be constant.
Key Vocabulary: Displacement, distance, velocity, speed, acceleration, vector, scalar	
Assessment Evidence	
Performance Tasks: Labs: Motion Matching with motion sensors Measuring acceleration, velocity and position of dropped picket and rolling cart on ramp. Problem solving: Determining Position, Velocity and Acceleration from graphs Determine Position, Velocity and Acceleration using equations of motion	**Other Evidence:** Khan Academy practice Unit Test
Learning Plan	
TCC1 I can ask purposeful, insightful questions to find a variety of innovative solutions. ● Motion Matching Lab TCC3 I can integrate relevant information to produce multiple valid solutions. ● Problem solving: Determining Position, Velocity and Acceleration from graphs ● Determine Position, Velocity and Acceleration using equations of motion	
Teacher Resources: Physicsclassroom.com *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, Computer based motion measuring sensors Department Lab Report rubric Practice Problems and Khan Academy	

Unit 2 - Newton's Laws

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

HS-PS2-1: Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.
HS-PS2-2: Use mathematical representations to support claims about momentum conservation.
Science and Engineering Practice: Developing and using models; Using mathematics and computational thinking.
Crosscutting Concepts: Systems and system models; Stability and change.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- Forces cause motion and hold structures together.
- Newton's laws provide the foundation for predicting and analyzing the forces acting within engineered systems.
- Free-body diagrams help identify key factors in the stability and safety of structures and mechanical systems.
- Real-world applications—from biomechanics to aerospace—rely on understanding forces to design systems that function safely and efficiently.

Essential Questions:

- Why does anything move or stay still?
- How do engineers use Newton's laws to ensure the structural integrity of buildings, bridges, and spacecraft?
- What role do force diagrams play in predicting system behavior under stress?
- How can we model and analyze the forces involved in real-world activities like jumping, lifting, or driving?

Students will know...

- that the acceleration of an object is directly proportional to the net force exerted on it and inversely proportional to the mass of the object
- that force and acceleration are both vectors, with acceleration in the same direction as the net force.
- that forces have magnitude and direction.

Students will be able to...

- make predictions about the motion of a system based on the fact that acceleration is equal to the change in velocity, and velocity is equal to the change in position per unit time.
- make free body diagrams that describe all the forces acting on an object.

• if one object exerts a force on a second object, the second object always exerts a force of equal magnitude on the first object in the opposite direction. • that even though an object is at rest, there may be forces exerted on that object by other objects. • the difference between conservative and nonconservative forces. • the difference between static friction and kinetic friction.	• design an experiment for collecting data to determine the relationship between the net force exerted on an object and its acceleration. • represent frictional forces, normal forces and weight where appropriate in all his or her models. • apply Newton's laws to determine the cause of accelerations. • use force diagrams to show how different forces are related • apply action-reaction to determine the external forces that make things move.
Key Vocabulary: Mass, force, contact force, non-contact force, friction, tension, weight, equilibrium and free body diagram	
Assessment Evidence	
Performance Tasks: Labs: Effects on Friction Hooke's Law Modified Atwood Machine	**Other Evidence:** Khan Academy practice Unit Test
Learning Plan	
TCC1 I can ask purposeful, insightful questions to find a variety of innovative solutions. • Effects of Friction labs TCC3 I can integrate relevant information to produce multiple valid solutions. • Hooke's Law lab and Modified Attwood lab	
Teacher Resources: Physicsclassroom.com *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, Computer based motion measuring sensors Department Lab Report rubric Practice Problems and Khan Academy	

Unit 3 - Work and Energy

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

NGSS HS-PS3-1. Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.

NGSS HS-PS3-2. Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).

HS-PS3-3. Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

Science and Engineering Practice: Constructing explanations; Designing solutions.

Crosscutting Concepts: Energy and matter; Structure and function.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- Energy conservation and transformation principles are essential for designing efficient systems in transportation, construction, and human performance.
- Analyzing energy flows allows us to compare the sustainability and impact of various technologies, from hybrid cars to wind turbines.
- Real-world challenges like climate change and resource management depend on understanding how energy is stored, transferred, and conserved.

Essential Questions:

- How does understanding energy transformations improve the efficiency of machines, appliances, and human movement?
- How do we evaluate the energy costs of different technologies and daily activities?
- In what ways can work and energy principles help us reduce environmental impact?

Students will know...	**Students will be able to...**
● that the change in kinetic energy of an object depends on the force exerted on the object and on the displacement of the object during the interval that the force is exerted. ● that the energy of a system includes its kinetic energy, potential energy, and microscopic internal energy. Examples include gravitational potential energy, elastic potential energy, and kinetic energy. ● that mechanical energy (the sum of kinetic and potential energies) is transferred into or out of a system such that a component of the force is parallel to its displacement. The process through which the energy is transferred is called work. ● If the force is constant during a given displacement, then the work done is the product of the displacement and the component of the force parallel or antiparallel to the displacement. ● Hooke's Law	● calculate the net work applied to a system ● apply the law of conservation of energy to a closed system ● calculate kinetic energy, gravitational potential energy, elastic potential energy and power ● make predictions about the changes in kinetic energy of an object based on considerations of the direction of the net force on the object as the object moves. ● apply mathematical routines to determine the changes in kinetic energy given the forces on the object and the displacement of the object. ● predict changes in the total energy of a system due to changes in position and speed of objects or frictional interactions within the system. ● Use bar charts to illustrate energy exchanges ● determine when external energy is added or removed from a mechanical system. ● account for Work done and Energy exchanged in a variety of situations including those where mechanical energy is conserved and those where external work changes the amount of mechanical energy available.

Key Vocabulary: Work, conservative forces, elastic forces, kinetic energy, potential energy, mechanical energy, power.

Assessment Evidence	
Performance Tasks: Labs: Energy Skate Park simulation, Stair Climbing Power Lab, Bungee Jump Lab, Energy of a Tossed Ball Lab	**Other Evidence:** Khan Academy practice Unit Test

Learning Plan

TCC1 I can ask purposeful, insightful questions to find a variety of innovative solutions.
- Energy Skate Park simulation, and Energy of a Tossed ball lab.

TCC3 I can integrate relevant information to produce multiple valid solutions.

- Bungee Jump Lab

Teacher Resources:
Physicsclassroom.com, *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009
Lab equipment, Computer based motion measuring sensors
Department Lab Report rubric
Practice Problems and Khan Academy, Phet Online simulation

Unit 4 - Impulse and Momentum

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

NGSS HS-PS2-2. Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.

NGSS HS-PS2-3. Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.

Crosscutting Concepts: Stability and change; Cause and effect.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- The conservation of momentum explains real-world phenomena like car crashes and athletic collisions and informs how we protect people from injury.
- Impulse, as the product of force and time, is a key concept in safety engineering and forensic analysis.
- Understanding collisions enables engineers to design safer vehicles and athletes to improve performance.

Essential Questions:

- How do airbags, helmets, and crumple zones use momentum concepts to reduce injury?
- How can momentum be used to analyze and reconstruct real-life collisions or sports plays?
- What trade-offs are involved in designing systems that absorb impact?

Students will know...

- that the change in momentum of an object is a vector in the direction of the net force exerted on the object.
- that the change in momentum of an object occurs over a time interval.
- that the change in momentum of an object depends on the impulse, which is the product of the average force and the time interval during which the interaction occurred.
- that in a collision between objects, linear momentum is

Students will be able to...

- calculate the momentum of an object and of a system of objects.
- calculate the impulse applied to an object.
- justify the selection of routines for the calculation of the relationships between changes in momentum of an object, average force, impulse, and time of interaction.
- make qualitative predictions about natural phenomena based on conservation of linear momentum and restoration of kinetic energy in elastic collisions.

conserved. In an elastic collision, kinetic energy is the same before and after.	• model punches with the Impulse Momentum Theorem (Newton's Second Law). • model collisions applying the Conservation of Momentum. • demonstrate the difference between Elastic and Inelastic Collisions.
Key Vocabulary: Momentum, Impulse, Elastic Collision, Inelastic Collision	
Assessment Evidence	
Performance Tasks: Labs: Impulse Momentum, Conservation of Energy and Momentum in collisions	**Other Evidence:** Unit Test and Khan practices
Learning Plan	
TCC1 I can ask purposeful, insightful questions to find a variety of innovative solutions. • Impulse and Momentum lab TCC3 I can integrate relevant information to produce multiple valid solutions. • Conservation of Energy and Momentum in Collisions lab	
Teacher Resources: Physicsclassroom.com *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, Computer based motion measuring sensors Department Lab Report rubric Practice Problems and Khan Academy	

Unit 5 - 2 Dimensional Physics

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

NGSS HS-PS2-4. Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.

Science and Engineering Practice: Using mathematics and computational thinking.

Crosscutting Concepts: Scale, proportion, and quantity.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC1(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- Real-world motion often involves two dimensions and requires the use of vectors and reference frames to analyze effectively.
- Understanding gravitational and projectile motion is essential in aerospace, sports science, and civil engineering.
- Accurate predictions of complex motion are crucial for safe navigation and targeting technologies.

Essential Questions:

- How do pilots, athletes, and engineers apply 2D motion to navigate and optimize performance?
- What role does gravity play in shaping planetary motion and satellite paths?
- How can vector analysis help us break down and solve real-world motion problems?

Students will know...

- that perpendicular motions can be looked at independently
- that velocities depend on the frame of reference and perpendicular velocities can added using the Pythagorean Theorem
- that horizontal projectiles experience no accelerations
- that vertical projectiles only experience gravity
- that the centripetal force acting on an object acts perpendicular to the direction of travel.
- that the centripetal force is the force that maintains circular motion.

Students will be able to...

- calculate the motions of boats in perpendicular currents
- calculate the motions of plane experiencing perpendicular crosswinds
- apply kinematics to projectiles is flight
- use Newton's law of gravitation to calculate the gravitational force the two objects exert on each other and use that force in contexts other than orbital motion.
- use Newton's law of gravitation to calculate the gravitational force between two objects and use that force in contexts involving orbital motion

• that circular acceleration is equal to the square of the linear speed of an object divided by the radius of the circle (or portion of the circle) the object is traveling along. • that on Earth, the gravitational force is called weight • that the gravitational field at a point in space is measured by dividing the gravitational force exerted by the field on a test object at the point by the mass of the test object and has the same direction as the force. • that the gravitational field is radial and varies as the inverse square of the radial distance from the center of that object.	• calculate the centripetal acceleration • calculate the centripetal force • calculate the gravitational force between two masses • create and use free-body diagrams to analyze physical situations, solve problems with motion qualitatively and quantitatively. • choose appropriate frames of reference to model circular, projectile and gravitational motions.
Key Vocabulary: Vector, Scalar, Component of Motion, Frame of Reference, Centripetal, Gravitational Field	
Assessment Evidence	
Performance Tasks: Labs: 2 Dimensional Forces in Equilibrium, Horizontal projectile lab, Projectile at an angle lab, Flying Pig lab	**Other Evidence:** Unit test and Khan practices
Learning Plan	
TCC1 I can integrate relevant information to produce multiple valid solutions. • Projectile at an angle lab (target challenge)	
Teacher Resources: Physicsclassroom.com, *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, Computer based motion measuring sensors Department Lab Report rubric Practice Problems and Khan Academy	

Unit 6 - Electricity

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

HS-PS2-4. Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.

HS-PS3-5: Model interactions through electric fields and energy changes.

Crosscutting Concepts: Systems and system models; Cause and effect.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

Understandings: Students will understand that...

- Electric forces govern interactions in all electronic devices, and understanding these forces allows for efficient circuit design.
- Circuit modeling and analysis enable the development of everything from smartphones to renewable energy grids.
- Mastering electric current behavior is essential in fields like electrical engineering, robotics, and biomedical device design.

Essential Questions:

- How do circuit designs impact power distribution in homes and electronic devices?
- Why is understanding electric fields and charge important for developing modern technologies?
- How can we model and troubleshoot electrical systems in daily life?

Students will know...

- Electric charge is conserved.
- There are only two kinds of electric charge. Neutral objects or systems contain equal quantities of positive and negative charge, with the exception of some fundamental particles that have no electric charge.
- The smallest observed unit of charge that can be isolated is the electron charge, also known as the elementary charge.

Students will be able to...

- make predictions, using the conservation of electric charge, about the sign and relative quantity of net charge of objects or systems after various charging processes.
- calculate any one of the variables — electric force, electric charge, and electric field — at a point given the values and sign or direction of the other two quantities.
- make and justify a quantitative prediction of the effect of a change in values or arrangements of one or two circuit elements

• The magnitude of the electric force F exerted on an object with electric charge q by an electric field E is F=qE. The direction of the force is determined by the direction of the field and the sign of the charge. • The values of currents and electric potential differences in an electric circuit are determined by the properties and arrangement of the individual circuit elements such as sources of emf, resistors, and capacitors.	on the currents and potential differences in a circuit containing a small number of sources of emf, resistors, capacitors, and switches in series and/or parallel. • model the forces that affect electric charges. • evaluate the effects of different circuit wiring patterns (series or parallel).
Key Vocabulary: Charge, Current, Electric Field, Electric Potential	
Assessment Evidence	
Performance Tasks: Labs: Simple Circuits, Series and Parallel Circuits, Compound Circuits	**Other Evidence:** Unit test and Khan practices
Learning Plan	
TCC1 I can ask purposeful, insightful questions to find a variety of innovative solutions. • Simple Circuits lab	
Teacher Resources: Physicsclassroom.com, *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, Computer based voltage and current measuring sensors Department Lab Report rubric Practice Problems and Khan Academy	

Unit 7 - Electromagnetism

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

HS-PS3-5. Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.

HS-PS2-5. Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.

HS-PS3-3. Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

Crosscutting Concepts: Energy and matter; Structure and function.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC1(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- The interplay between electricity and magnetism powers essential technologies, from power grids to electric vehicles.
- Magnetic fields created by currents allow the conversion of energy between mechanical and electrical forms, enabling efficient energy systems.
- Understanding electromagnetic induction is foundational to innovations in clean energy and automation.

Essential Questions:

- How do motors and generators harness the relationship between electricity and magnetism?
- What technologies rely on electromagnetic principles to function?
- How can we create more sustainable energy solutions using electromagnetism?

Students will know...

- The magnetic field exerts a force on a moving electrically charged object.
- Ferromagnetic materials contain magnetic domains that are themselves magnets.
- A magnetic force results from the interaction of a moving

Students will be able to...

- describe the orientation of a magnetic dipole placed in a magnetic field applying the right hand rule.
- create a verbal or visual representation of a magnetic field around a long straight wire or a pair of parallel wires

charged object or a magnet with other moving charged objects or another magnet. ● The magnetic properties of some materials can be affected by magnetic fields in the system. ● Changing magnetic flux induces an electric field that can establish an induced emf in a system.	● use the representation of magnetic domains to qualitatively analyze the magnetic behavior of a bar magnet composed of ferromagnetic material. ● use representations and models to qualitatively describe the magnetic properties of some materials that can be affected by magnetic properties of other objects (electromagnets) in the system. ● construct an explanation of the function of a simple electromagnetic device (electric motor) in which an induced emf is produced by a changing magnetic flux through an area defined by a current loop ● describe how to create a magnetic field with electricity ● explain why the same mechanism can be used as a motor and a generator.
Key Vocabulary: Magnetic domain, permanent magnetism, soft magnetism, solenoid, induction, emf, Lenz's Law, Faraday's Law	
Assessment Evidence	
Performance Tasks: Labs: Magnetic field lab about various magnets, Magnetic field lab about a conductor, Mini electric motor project	**Other Evidence:** Unit Test
Learning Plan	
TCC1 I can integrate relevant information to produce multiple valid solutions. ● Magnetic field about various magnets lab ● Magnetic field about a conductor lab	
Teacher Resources: Physicsclassroom.com, *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, PHET simulations Department Lab Report rubric	

Unit 8 - Sound and Waves

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

HS-PS4-1. Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.

HS-PS4-2. Evaluate questions about the advantages of using a digital transmission and storage of information.

Crosscutting Concepts: Patterns; Energy and matter.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC3(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

Understandings: Students will understand that...

- Waves are fundamental to technologies that transmit, store, and analyze data—from cell phones to medical imaging.
- Understanding wave properties enables the design of efficient communication systems and acoustic environments.
- Engineers use wave interference and superposition to solve problems in signal processing and sound design.

Essential Questions:

- How do sound and wave technologies enhance communication, medicine, and entertainment?
- Why are digital signals more reliable than analog in transmitting information?
- How can wave behavior be manipulated to solve practical problems?

Students will know...

- The rate of oscillations depends on the physical force pulling the oscillator back to the center
- Waves can propagate via different oscillation modes such as transverse and longitudinal.
- A simple wave can be described by an equation involving one sine or cosine function involving the wavelength, amplitude, and frequency of the wave.
- When two waves cross, they travel through each other; they do not bounce off each other. Where the waves

Students will be able to...

- describe oscillations and waves using appropriate vocabulary, generating examples using waves on a spring
- calculate wave properties using appropriate mathematical models
- measure the wavelengths of standing waves in strings and sound in a tube to find the speed of the waves
- use computer tools to unpack waves and investigate the properties of different sounds

overlap, the resulting displacement can be determined by adding the displacements of the two waves. This is called superposition.	• construct representations to graphically analyze situations in which two waves overlap over time using the principle of superposition. • model waves mathematically and graphically. • graphically show the results of wave interference and use computer tools to unpack interference to see how digital (square waves) signals are easier to combine and unpack than analog (sine waves) signals.
Key Vocabulary: refraction, reflection, propagation, diffraction, interference, superposition, wavelength, period, frequency, volume, longitudinal, transverse	
Assessment Evidence	
Performance Tasks: Simple Harmonic Motion of Pendulums lab Simple Harmonic Motion of Springs lab Waves in a spring lab Standing waves activity Drawing interference of waves Measuring sound waves and Beat interference Exploring sound waves using FFT Speed of sound lab	**Other Evidence:** Wave vocabulary quiz Khan reviews Unit test
Learning Plan	
TCC3 I can integrate my learning to adapt to experiences in the classroom, career and life. • Exploring sound waves using FFT	
Teacher Resources: Physicsclassroom.com, *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, Computer based microphones and motion sensors Department Lab Report rubric Practice Problems and Khan Academy	

Unit 9 - Light and Optics

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

HS-PS4-1. Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.

HS-PS4-3. Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.

HS-PS4-4. Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.

HS-PS4-5. Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.

Crosscutting Concepts: Wave behavior; Systems and models.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

Understandings: Students will understand that...

- Light exhibits wave and particle properties that are central to technologies like lasers, microscopes, and solar panels.
- Engineers and scientists manipulate light to enhance vision, diagnose illness, and transmit data.
- Different types of electromagnetic radiation have varying impacts, applications, and risks, from UV exposure to wireless communication.

Essential Questions:

- How do different wavelengths of light affect technology, health, and the environment?
- How are lenses and mirrors used to improve vision, imaging, and scientific discovery?
- Why does understanding light matter in fields ranging from photography to quantum physics?

Students will know...

- When waves pass through an opening whose dimensions are comparable to the wavelength, a diffraction pattern can be observed.

Students will be able to...

- analyze data (or a visual representation) to identify patterns that indicate that a particular mechanical wave is polarized and

• When waves pass through a set of openings whose spacing is comparable to the wavelength, an interference pattern can be observed. • When light travels from one medium to another, some of the light is transmitted, some is refracted, and some is absorbed. • When light hits a smooth reflecting surface at an angle, it reflects at the same angle on the other side of the line perpendicular to the surface; this law of reflection accounts for the size and location of images seen in mirrors. • When light passes through polarizing filters or reflects off a flat surface it is polarized, demonstrating that the waves are transverse • The refraction of light as it travels from one transparent medium to another can be used to form images. • Types of electromagnetic radiation are characterized by their wavelengths, and certain ranges of wavelength have been given specific names. These include (in order of increasing wavelength spanning a range from picometers to kilometers) gamma rays, x-rays, ultraviolet, visible light, infrared, microwaves, and radio waves.	construct an explanation of the fact that the wave must have a vibration perpendicular to the direction of energy propagation • make claims about the diffraction pattern produced when a wave passes through a small opening, and to qualitatively apply the wave model to quantities that describe the generation of a diffraction pattern when a wave passes through an opening whose dimensions are comparable to the wavelength of the wave. • qualitatively apply the wave model to quantities that describe the generation of interference patterns to make predictions about interference patterns that form when waves pass through a set of openings whose spacing and widths are small compared to the wavelength of the waves. • make claims using connections across concepts about the behavior of light as the wave travels from one medium into another, as some is transmitted, some is refracted, and some is absorbed. • make predictions about the locations of objects and images relative to the location of a reflecting surface. • plan data collection strategies as well as perform data analysis and evaluation of the evidence for noting the relationship between the angle of incidence and the angle of refraction for light crossing boundaries from one transparent material to another (Snell's law) • use quantitative and qualitative representations and models to analyze situations and solve problems about image formation occurring due to the refraction of light through thin lenses. • make qualitative comparisons of the wavelengths of types of electromagnetic radiation. • use light rays to model how light can be used to create images
Key Vocabulary: refraction, reflection, propagation, diffraction, interference, polarization, radiation, focus,	
Assessment Evidence	
Performance Tasks: Polarization, nature of light lab	**Other Evidence:** Unit Test

Plane Mirror Lab Ray tracing for Mirrors Snell's Law Lab Measuring object and image properties lab Diffraction Interference lab	

Learning Plan
TCC1 I can ask purposeful, insightful questions to find a variety of innovative solutions. ● Polarization, nature of light lab ● Snell's Law lab
Teacher Resources: Physicsclassroom.com, *Physics* Walker 3rd edition; *Conceptual Physics,* Hewitt, High School Ed. 2009 Lab equipment, including lasers and diffraction gratings Department Lab Report rubric Practice Problems

ENGLISH 11: SURVIVING THE JOURNEY CURRICULUM



Grade Level(s): 11

Curriculum Author(s): Kelly Nichols, Marisa Holtman

Course Description: In this course, students will examine the complex nature of the journey and related topics such as resilience, perseverance, grit, adversity, and fear. In each unit, students will consider the tensions in and stages of many kinds of journeys: the hero's journey, the adolescent journey, the journey from home, and the journey toward resilience. Students will be asked to think critically about the world around them by analyzing a wide range of sources such as novels, film, TED talks, poetry, and other nonfiction. There will be opportunities each quarter for students to delineate their thinking and understanding about complex topics in different forms of writing (narrative, explanatory, persuasive) and different multimodal formats. Students will develop skills in close reading, critical analysis, public speaking, and use of digital media, and will participate in a collaborative environment by sharing, challenging, and articulating multiple viewpoints.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
1-The Hero's Journey	What makes a hero? How does our understanding of heroes inform our own journeys?	Analyzing the qualities of a hero and the hero's journey creates a shared understanding of the personal and societal impact of one's own journey.	TCC2(9-12) CCE4(9-12) TI4(9-12) AA4(9-12)
2-The Adolescent Journey	What does it mean to come of age? What factors make the transition from innocence to experience challenging?	Personal narratives serve as a medium for understanding our challenges and experiences transitioning to adulthood.	TCC3(9-12) TCC4(9-12) CCE1(9-12) CCE3(9-12) TI3(9-12)
3-The Journey from Home	How does our perception of home shape our perceptions of ourselves? How does one's home contribute to his or her ability to persevere through adversity?	Making connections between geography, socioeconomic factors, and cultural expectations fosters the development of one's personal identity through those lenses.	TCC1(9-12) TCC2(9-12) CCE3(9-12) CCE4(9-12) DE2(9-12)
4-The Journey Toward Resilience	How do we define resilience and what does it mean in our daily lives? How can we foster resilience in our communities as we learn from the lessons of the stories we read?	Studying global, historical, and personal moments of adversity help us to self reflect on our role in our communities.	TCC2(9-12) CCE1(9-12) CCE3(9-12) TI4(9-12)

Unit 1 - The Hero's Journey

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core State Standards

CCSS.ELA-LITERACY.S.12.1
Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively

CCSS.ELA-LITERACY.RL.11-12.1
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

CCSS.ELA-LITERACY.W.11-12.1
Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-LITERACY.W.11-12.9
Draw evidence from literary or informational texts to support analysis, reflection, and research.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.

AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

<table>
<tr><td>Understandings: Students will understand that…

• The definitions of heroes and monsters are complex
• Analyzing both canonical and contemporary literature can help students self reflect on their own life journeys
• Analyzing big ideas in multiple modes can help develop a complex understanding of unit topics
• A successful argument will put forth a claim, support that claim with evidence, then offer a counterclaim.</td><td>Essential Questions:

• What makes a hero?
• How does our understanding of heroes inform our own journeys?
• How can crafting a claim and defending a topic make us insightful writers and thinkers?</td></tr>
<tr><td>Students will know…

• How to craft a strong claim and counterclaim
• How to select substantial, relevant evidence to support a claim
• How to use feedback to self edit and revise written work</td><td>Students will be able to…

• Students will be able to analyze the role of different heroes in literature and life and define or revise their own concepts of heroism.
• Students will be able to communicate their ideas clearly and effectively both in their writing and in oral conversations.
• Students will be able to defend a position about heroism with effective components of argumentation.</td></tr>
<tr><td colspan="2">Key Vocabulary: hero, hero’s journey, villain, anti-hero, claim, counterclaim, evidence, survival, adversity</td></tr>
<tr><td colspan="2">Assessment Evidence</td></tr>
<tr><td>Performance Tasks:

Summative 1: Modern Day Hero Research Project

Summative 2: Argumentative Essay - Is Odysseus a hero?</td><td>Other Evidence:

Formative Assessment:

1) Analysis of examples of modern-day heroes
2) Research conferences and check ins
3) The Odyssey close reading practice
4) Review of argument writing techniques

Interim Assessments:

1) Hero Research Project Graphic Organizer (research, thesis workshop)</td></tr>
</table>

	2) Hero Research Project Reflection Draft 3) Odysseus Mind Map 4) Argumentative Essay Rough Draft

Learning Plan

TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
Summative 2: Argumentative Essay

CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
Formative 2: Research conferences; Summative 1: Modern Day Hero Research Project

TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.
Formatives: Modern Day Hero Project research, Close reading passages from *The Odyssey*

AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.
Summative 2: Argumentative Essay

Teacher Resources:

Mentor Text: *The Odyssey*

Supplemental Texts (including but not limited to):

Ebooks: The Quest, The Hero (available in databases)
Misc. Video: What makes a hero?, The Austin Hatch Story, The Thai Cave Rescue, The Story of Sully
Film: T*he Power of One*/Avildsen
Student selected non-fiction pieces such as memoir excerpts or articles about modern day heroes

Unit 2 - The Adolescent Journey

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core State Standards

CCSS.ELA-LITERACY.W.11-12.3
Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

CCSS.ELA-LITERACY.RL.11-12.2
Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.

CCSS.ELA-LITERACY.RL.11-12.4
Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

AA2(9-12): I can assess my past successes and mistakes to change my approach.

CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.

Understandings: Students will understand that… ● The definition of coming of age is complex ● There are patterns and similarities between coming of age stories across time and space ● The big ideas in multiple modes can help develop a complex understanding of unit topics ● A successful personal narrative will incorporate multiple literary and language devices to tell a story	**Essential Questions:** ● What does it mean to come of age? ● What factors make the transition from innocence to experience challenging for individuals? ● How can I develop my voice as a writer?
Students will know… ● How to use literary devices (diction, imagery, inner monologue) to create voice in a personal narrative ● How a theme is introduced and developed over the course of a text ● How analysis of characterization contributes to understanding theme	**Students will be able to…** ● Interpret and analyze a visual text ● Participate in small group discussions on character development and theme ● Close read passages in literature to identify literary devices, character, and theme ● Draft and revise a personal narrative ● Identify patterns in the coming of age process and explain those patterns using multiple modes
Key Vocabulary: memoir, personal narrative, imagery, diction, inner monologue, close reading, theme, characterization, infographic	
Assessment Evidence	
Performance Tasks: Summative 1: Personal Narrative Summative 2: Infographic of Patterns in the Adolescent Journey (Personal Theme Project)	**Other Evidence:** Formative Assessment: 1) Analysis of visual media 2) Writing conferences 3) Narrative writing practice using imagery, diction, and inner monologue 4) Close Reading passages from *Born a Crime* Interim Assessments:

	1) Close reading quizzes 2) Theme Comparison Paragraph 3) Personal Narrative Draft 4) Personal Theme Project Draft

Learning Plan

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
Summative 2: Personal Theme Project

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
Summative 2: Personal Theme Project

AA2(9-12): I can assess my past successes and mistakes to change my approach.
Interim 3: Personal Narrative Draft

CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
Formative: Class discussions on character development and theme

P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.
Formative 2: Writing conferences
Interim 3: Personal Narrative Draft
Summative 1: Personal Narrative

Teacher Resources:

Mentor Text: *Born a Crime* (with audiobook)

Supplemental Texts (including but not limited to):

Short stories: “Two Kinds” by Tan, “All-American Slurp” by Namioka
Misc. Video: Humans of New York.com
Film: *Stand By Me*/Reiner
Student selected memoir passages

Unit 3 - The Journey From Home

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core State Standards

CCSS.ELA-LITERACY.RI.11-12.7
Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

CCSS.ELA-LITERACY.W.11-12.2
Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

CCSS.ELA-LITERACY.W.11-12.6
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

DE2(9-12): I can honor my own feelings and show empathy toward others through my actions.

Understandings: Students will understand that… • Geography, societal, and cultural expectations impact an individual's perspective of home • Research on the refugee experience can help them self reflect on their own journeys • Critically analyzing research sources is a necessary component of digital literacy • Different modes allow different methods of communication depending on audience	**Essential Questions:** • How does our perception of home shape our perceptions of ourselves? • What motivates some people to move away while others never stay close to their familiar environments? • What limits can our homes impose? What freedoms can they grant? • How does one's home contribute to one's ability to persevere through adversity?
Students will know… • How to analyze digital sources for authority, reliability, and relevance • How to use evidence (details, facts, statistics, etc.) to explain • Multiple examples of the global refugee experience	**Students will be able to…** • Evaluate the complicated role our notion of "home" plays in shaping our identities. • Analyze how geography, societal, and cultural expectations impact an individual's perspective of home • Evaluate sources for authority, reliability, and relevance • Write an explanatory essay considering topic sentences, evidence, and organization
Key Vocabulary: refugee, authority, reliability, relevance, multimodal, socioeconomic, expectations, perspective. mode	
Assessment Evidence	
Performance Tasks: Summative 1: Refugee Multimodal Research Project Summative 2: Journey From Home Creative Project and Explanatory Essay	**Other Evidence:** Formative Assessment: 1) Small group discussions 2) Research on global refugee experiences 3) Film viewing guide 4) Explanatory Essay Peer Editing Interim Assessments: 1) *Refugee* Webquest 2) *Refugee* Reading Group Portfolio 3) *Refugee* Research Project Graphic Organizer and Annotated Works Cited 4) Explanatory Essay Draft

Learning Plan
Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated) TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions. Summative 1: Refugee Research Project TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions. Summative 1: Refugee Research Project CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products. Formative 1: Small group discussion, Summative 1: Refugee Research Project CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression. Summative 2: Journey From Home Creative Project DE2(9-12): I can honor my own feelings and show empathy toward others through my actions. 4) Explanatory Essay Peer Editing
Teacher Resources: Mentor Text: *Refugee* by Gratz Supplemental Texts (including but not limited to): Poetry: “Where I’m From” by Perdomo Misc. Video: Noodletools Tutorials, www.savethechildren.org, the UDHR, Storycorps.org

Unit 4 - The Journey Toward Resilience

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core Standards

CCSS.ELA-LITERACY.W.11-12.6
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

CCSS.ELA-LITERACY.W.11-12.7
Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

CCSS.ELA-LITERACY.RL.11-12.1
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

CCSS.ELA-LITERACY.RL.11-12.4
Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

CC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

DE4(9-12): I can work respectfully with all members of my community and support the needs of others.

TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.

P4(9-12): I can take-on challenges and continuously engage in my own long-term strategies to overcome them to demonstrate through personal experience that failures are more instructive than discouraging.

AA1(9-12): I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that…	**Essential Questions:**
• Resilience is an important factor that dictates the course of a journey • Adversity is a necessary component to all journeys • Different modes allow different methods of communication depending on the audience • Inquiry means exploring a topic or big idea rather than proving a point	• How do we define resilience and what does it mean in our daily lives? • How can we foster resilience in our communities as we learn from the lessons of the stories we read? • How does the ability to be resilient determine the course of our lives? • How do you define courage? • Is perseverance necessary for a successful life? • Why has grit become such a popular concept in recent years?
Students will know…	**Students will be able to…**
• How to identify poetic devices such as figurative language, etc. • How to annotate a poem for poetic devices and author's message • How to self reflect on their learning styles and select a mode for a creative project	• Annotate a poem • Analyze poetry for poetic devices and message • Understand how images in a graphic novel contribute to characterization and theme • Compose poetry and demonstrate understanding of multiple texts and genres through various creative expressions.

Key Vocabulary: inquiry, annotate, figurative language, enjambment, end stop, resilience, grit, perseverance, symbolism, resilience

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative 1: Inquiry Essay Summative 2: *Dispatches from the Edge* Creative Project or Poetry Portfolio	Formative Assessments: 1) Crafting inquiry questions 2) *TCUE* Chapter Analysis Questions

	3) Poetry annotation practice Interim Assessments: 1) *TCUE* Daily Mail Quiz 2) Creative Project Proposal 3) Inquiry Essay Outline 4) *Dispatches* Close Reading Quiz

Learning Plan

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
Summative 1: Inquiry Essay

CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
Formative 1: Crafting inquiry questions, Interim 2: Creative Project Proposal

DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
Formative 3: Poetry annotation practice, Interim 2: Creative Project Proposal

TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.
Interim 3: Inquiry Essay Outline

P4(9-12): I can take-on challenges and continuously engage in my own long-term strategies to overcome them to demonstrate through personal experience that failures are more instructive than discouraging.
Formative 2: *TCUE* Chapter Analysis Questions, Interim 1: *TCUE* Daily Mail Quiz

AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
Summative 1: Inquiry Essay

Teacher Resources: Mentor Text: *They Called Us Enemy* by Takei; Supplemental Texts (including but not limited to): Excerpts from *Dispatches from the Edge* by Anderson Cooper, "The Long and Short of It" by Paul Bloom; Poetry: "Invictus" By Henley, "A Brief for the Defense" By Gilbert, If by Kipling, Still I Rise by Angelou, "The Journey" by Oliver; Misc. Video: Angela Lee Duckworth on Grit, Facing History.org, "This is Water" by Wallace; Film: *Rudy*

BUILDING BRIDGES YEAR TWO CURRICULUM



Grade Level(s): 9 & 10

Curriculum Author(s): Renee Harris, Kellie Barber, Jennifer Trocolla

Course Description: Building Bridges is a one-credit, elective course designed for Freshmen and Sophomores with individualized education plans to learn study skills, time management, test taking skills, and transition skills. The class would take the place of an academic lab and students would receive one credit for the year-long course. The course would have an opening lesson in which students would receive direct instruction on a skill to practice and then time in class to work on that skill using their own assignments from other content area classes or an assignment that has been made specifically for the course. The course is meant to bridge the gap between middle school and high school for students identified through special education, and to teach them skills to help bridge the gap between high school and post-secondary planning.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Individual Rights and Responsibilities	What role do I play in defining my future?	Individual Rights and responsibilities are based on the rights that are determined through IDEA as well as the rights of students and individuals as a learner. Along with these rights comes the responsibilities that each student has to their community and their school as well themselves. It means making your own choices, learning effectively to solve problems, and taking control and responsibility for one's life.	TCC1 (9-12); TCC3 (9-12); CCE1 (9-12); TI3 (9-12); TI4 (9-12); AA1 (9-12)
Study Skills	How can I align my own strengths and weaknesses to a career or post-secondary path?	College and Career Planning is a lifelong process that is unique to each individual based on their interests, strengths and future aspirations in alignment with your own strengths and weaknesses	AA2 (9 -12); TCC4 (9 -12); TCC3 (9-12); TCC2 (9-12); TI1 (9-12)
Individual Strengths and Weaknesses	How do my strengths and weaknesses tell me who I am as a learner and how I can plan my future effectively based on myself as an individual	Success in long term goals is established through short term successes	TI4 (9 -12); P3 (9 -12); AA3 (9-12); AA4 (9-12); P1 (9-12)
Life Planning	How can I start to plan to live independently and contribute to my community as an individual.	A successful member of society contributes to their community as well their individual growth and success.	P3 (9-12); AA4 (9-12); AA2 (9-12); TI2 (9-12); CCE2 (9-12)

Unit 1 - Individual Rights and Responsibilities

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Connecticut School Counseling Framework Guide
Standard A-3 (9-10) : Demonstrate an understanding of the value of life-long learning
Standard A-1 (9-10) : Use time management skills in addressing school responsibilities
Standard A- 6 (9-10) : Use problem solving and decision making skills to assess progress toward educational goals
Standard A- 1 (9-10) : Demonstrate the ability to work cooperatively in a group
Standard C - 3 (9-10): Develop ongoing time management skills and create a school and work schedule
Standard S/E 3 (9- 10): Demonstrate effective decision making skills that lead to positive interpersonal relationships

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- TCC1 (9-12) I can ask purposeful insightful questions to find a variety of innovative solutions
- TCC3 (9-12) I can integrate relevant information to produce multiple valid solutions
- CCE1 (9-12) Engage others in meaningful conversations while respecting multiple perspectives
- TI3 (9-12) I can formulate and investigate probing questions to further my learning
- TI4 (9-12) I can apply my strengths and anticipate challenges to reach my current and future goals
- AA1 (9-12) I can evaluate different approaches and justify the best pathway to success

Understandings: Students will understand that…

- Self Advocacy is understanding one's own strengths and weaknesses and the skills to find the appropriate resources when necessary in order to achieve the desired outcomes
- Self Determination is a combination of attitudes and abilities that lead people to set goals for themselves and to take initiative to reach those goals. It means making your own choices, learning effectively to solve problems, and taking control and responsibility for one's life.
- Developing effective executive functioning strategies and skills

Essential Questions:

- How does one's choice affect their life?
- What role do I play in defining my future?
- What is personal responsibility and why is it important to practice?
- How can I take notes that I can understand and utilize later?
- What rights do I have under IDEA and how do those transfer to career and college readiness?
- How can I balance my school, work and home life through planning, prioritizing and executive functioning skills?

enable us to plan, focus attention, remember and juggle multiple tasks and allows us to create a successful balance academically and personally.	
Students will know... ● The difference between an IEP and 504 under IDEA ● How to read and understand their own IEP ● How to use their resources to appropriately advocate for themselves ● Different executive functioning strategies to assist them academically and personally including note-taking and planning ● How to become an active participant in their educational plan	**Students will be able to...** ● Create an effective plan in order to accomplish a set goal ● Read and understand their own individualized education plan ● Identify and explain their rights under an IEP and 504 ● Identify and apply the most effective executive functioning strategies that best meets their learning needs ● Collaborate and communicate effectively in their own planning and placement meeting
Key Vocabulary: IDEA, 504, Individualized Education Plan, Advocacy, Executive Functioning, Self Determination, planning and placement team meeting, prioritizing, accommodations, modifications, chunking, rights, ADA	
Assessment Evidence	
Performance Tasks: Summative One: Use an executive functioning questionnaire to find who they are as a student and create a fact sheet on how they learn best to give to teachers or support staff. Summative Two: Students will plan and create a powerpoint or presentation to use at their own PPT meeting describing their goals and strengths in order to be a part of the PPT	**Other Evidence:** <u>Interim</u> IEP Questionnaire Executive Functioning Questionnaire Self Assessment Rubric
Learning Plan	
TCC1 (9-12) I can ask purposeful insightful questions to find a variety of innovative solutions ★ Summative Two ★ Inventories and questionnaires TCC3 (9-12) I can integrate relevant information to produce multiple valid solutions ★ Daily/ Weekly Activities and Forms	

CCE1 (9-12) Engage others in meaningful conversations while respecting multiple perspectives
- ★ Personal Interviews

TI3 (9-12) I can formulate and investigate probing questions to further my learning
- ★ Interim One
- ★ Checklist for assignment initiation, carry through and completion

TI4 (9-12) I can apply my strengths and anticipate challenges to reach my current and future goals
- ★ Interim Two
- ★ Interim Three

AA1 (9-12) I can evaluate different approaches and justify the best pathway to success
- ★ Summative One

Teacher Resources:

Teacher created resources including but not limited to
- ❖ Self Assessment Rubric
- ❖ IEP Scavenger Hunt
- ❖ Weekly Homework/ Grade Checks
- ❖ Weekly planning template
- ❖ Executive Functioning Inventories
- ❖ Self Determination and Advocacy Inventories
- ❖ 504 vs IEP slideshow and Edpuzzles
- ❖ Assignment Checklists

Unit 2 - Study Skills

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Standard A -1 (9 - 10) Apply techniques for reducing stress and test anxiety
Standard A - 4 (9 - 10) Apply technical knowledge and skills to complete real world assignments
Standard A - 4 (9 - 10) Identify, evaluate and utilize technology tools for academic success
Standard C - 2 (9 - 10) Apply decision making skills to previous career research to set career goals
Standard C - 2 (9 - 10) Research postsecondary academic requirements in relation to future career goals for the purpose of academic planning
Standard C - 6 (9- 10) Apply knowledge of technology and social media to research and organize career goals

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- AA2 (9 -12) I can assess my past successes and mistakes to change my approach.
- TCC4 (9 -12) I can integrate my learning to adapt to experiences in the classroom, career and life.
- TCC3 (9- 12) I can integrate relevant information to produce multiple valid solutions.
- TCC2 (9-12) I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
- TI1 (9-12) I can implement a realistic plan and adapt when necessary to achieve my goals.

Understandings:

- College and Career Planning is a lifelong process that is unique to each individual based on their interests, strengths and future aspirations in alignment with your own strengths and weaknesses
- Developing a wide array of strategies and interventions to support my academic successes based on my own strengths and weaknesses will help me achieve success.

Essential Questions:

- Why is it important to research and explore career and college options in high school?
- How can I align my own strengths and weaknesses to a career or post-secondary path?
- How do my actions and choices today affect my future self?
- How do I support my future goals using tools and interventions available to me?
- How do I align my strengths and weaknesses with available tools and strategies to improve my academic and personal success?

Students will know...	**Students will be able to...**
• The difference between a certification, associates and college degree • The difference between the traditional college route and a trade related program • The tools available to students within the school to help them research and create their own post-secondary plan • The essential elements to test taking strategies • The essential elements to an effective study plan	• Choose and create an individualized study plan prior to an assessment that aligns to their own strengths and weaknesses • Identify and explain effective test taking skills for an upcoming assessment based on their own strengths and weaknesses • Identify and evaluate the differences between a certification, associate and college degree • Identify and evaluate the differences between the traditional college route and a trade related program • Research and create a fluid individualized post secondary plan that aligns with their own interests and skills

Key Vocabulary: Certification, effective, traditional, associates, elements, individualized, undergraduate, graduate, PSAT, SAT, bachelors, masters, doctorate, post-secondary, naviance, CCRC, ASVAB, mnemonics,

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative #1: Create study plan for a upcoming project and/or test as well as their own study guide using materials from the classroom and online Summative #2: Research 1 career choice detailing how the career aligns with their own strengths and weaknesses and a successful path to the career.	<u>Interims</u> Test taking strategies inventory Long term project inventory Onet inventory and questionnaires

Learning Plan

AA2 (9 -12) I can assess my past successes and mistakes to change my approach.
- ★ Interim #1
- ★ Personal Interviews

TCC4 (9 -12) I can integrate my learning to adapt to experiences in the classroom, career and life.
- ★ Summative #1
- ★ Inventories and Questionnaires

TCC3 (9- 12) I can integrate relevant information to produce multiple valid solutions.

- ★ Interim #2
- ★ Class Discussions/Socratic Seminar

TCC2 (9-12) I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

- ★ Interim #3
- ★ Class Discussions/Socratic Seminar

TI1 (9-12) I can implement a realistic plan and adapt when necessary to achieve my goals.

- ★ Summative #2
- ★ CCRC visit (virtual or in person)

Teacher Resources:

Teacher created resources including but not limited to:

- ★ Study Tools
- ★ Onet questionnaire and resources
- ★ Test Taking Strategies
- ★ Career fact sheets
- ★ Study Skills powerpoints and edpuzzles
- ★ Career research inventories
- ★ Study Skills tools and inventories

Unit 3 - Individual Strengths and Weaknesses

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Standard A3 (9-10): Seek and undertake experiences within the school and community that enhance coursework and support personal goals.
Standard A2 (9-10): Connect future plans to goals and make informed program of studies choices
Standard A1 (9-10): Review, revise and update academic, career and personal goals
Standard A5 (9-10): Understand the correlation between school success and the positive transition to community, post-secondary and career path
Standard C1 (9 - 10) Identify personal strengths and weaknesses in relationship to postsecondary education and training requirements
Standard C3 (9- 10): Continue to learn how to effectively make SMART goals and make improvements or changes as necessary

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- TI4 (9 -12) I can apply my strengths and anticipate challenges to reach my current and future goals.
- P3 (9 -12) Demonstrate flexibility and acceptance of setbacks to reach success.
- AA3 (9-12) I can adjust my expectations and behaviors to succeed in a changing and unpredictable environment.
- AA4 (9-12) I can seek opportunities to learn more and continue to push my thinking.
- P1 (9-12) Identify and utilize personal strengths to overcome obstacles.

Understandings: Students will understand that…

- Effective communication both digitally and in person can help achieve a desired outcome but is a practiced skill that must be developed and maintained
- Choices made now impact future life goals
- Success in long term goals is established through short term successes
- Future planning is a process and has key elements that are scaffolded and have a natural progression throughout someone's life

Essential Questions:

- What are the key elements for future planning?
- How can I make short term success that will help me achieve my long term goals?
- How can I make good choices that will positively affect my future self?
- How does effective communication help achieve a desired outcome?

Students will know…	**Students will be able to...**
• The difference between formal and informal communication • The key words and understanding of strengths and weaknesses • How to become a strong individual and use strengths in long term planning • The importance of establishing goals both short and long term	• Create list and fact sheet of strengths and weaknesses • Craft a formal communication for educators or employers • Identify and locate community resources and activities that align with their own goals • Identify and explain the difference between a short and long term goal • Identify their own strengths and weakness and how they build their learner profile

Key Vocabulary: Strength, learner, individual, learning styles, advocate, formal, informal, community, credit, strategy, learning tool

Assessment Evidence

Performance Tasks:	**Other Evidence:**
★ Summative One: Create a fact sheet detailing their individual strengths and how they align with their goals and long term plans ★ Summative Two: Create a formal letter to a future employer about intent (cover letter)	<u>Interims</u> ★ Individual inventories ★ Goal setting sheet ★ Resume editing and revising ★ Real world inventories

Learning Plan

TI4 (9 -12) I can apply my strengths and anticipate challenges to reach my current and future goals.
- ★ Summative One
- ★ Goal Setting Sheet

P3 (9 -12) Demonstrate flexibility and acceptance of setbacks to reach success.
- ★ Interim One
- ★ Performance Rubric

AA3 (9-12) I can adjust my expectations and behaviors to succeed in a changing and unpredictable environment.
- ★ Interim Three
- ★ Inventories and Questionnaires

AA4 (9-12) I can seek opportunities to learn more and continue to push my thinking.
- ★ Interim One
- ★ Interim Four

P1 (9-12) Identify and utilize personal strengths to overcome obstacles. ★ Summative Two
Teacher Resources: Teacher created but not limited to: ❖ Strength Inventories ❖ Email Presentation and examples ❖ Goal Planning presentation and template ❖ Performance rubric

Unit 4 - Life Planning

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Connecticut Comprehensive k-12 School Counseling Framework Guide:
Standard C5: (9-10): Develop a system for collecting information that will be helpful in writing a resume(i.e., participation in extracurricular, community service activities,awards)
Standard C3 (9-10): Identify steps that need to be taken over the next few years for transition from high school to postsecondary education/training
Standard C2: Demonstrate the skills and abilities to research, identify career options, and take the necessary steps to obtain a job. Develop a research strategy and the tools to search for and obtain employment.
Standard C1 (9-10): Identify personal values, personality, abilities and interests in relation to career options and the world of work.
Standard A5 (9-10): Understand the correlation between school success and the positive transition to community, post-secondary and career path

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- P3 (9-12) I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
- AA4 (9-12) I can create opportunities to extend my learning by remaining open-minded in any situation.
- AA2 (9-12) I can assess my past successes and mistakes to change my approach.
- TI2 (9-12) I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
- CCE2 (9-12) I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

Understandings: Students will understand that…

- Community resources and activities available
- How an individual contributes to a community successes and failures
- Small choices can make big changes in future planning
- Your choices can help shape your educational career and school life.

Essential Questions:

- What resources are available to me in my own community?
- How can I contribute to my community in a meaningful way?
- How can I make small choices now that can affect my own future?
- How can I be a part of my own education choices and planning?

Students will know…

Students will be able to…

• How to find community resources and community leaders • Activities and opportunities to help our community as an individual • How to choose classes and activities that align with future goals and interests • How to create a future educational plan to help reach their future goals	• Find community resources and activities in their own towns • Plan a community project or volunteer opportunity within their community • Create a future plan for classes for their next two years to help support their goals • Choose classes that align with their own interests and strengths
Key Vocabulary: Independence, transition, community partnerships, extracurricular,volunteer, MBLE	
Assessment Evidence	
Performance Tasks: Summatives ★ Create three ideas for a community improvement project ★ Plan their classes and choices for the next year through the program of studies	**Other Evidence:** Interims ★ Community research sheet ★ Program of Studies ★ Life planning sheet ★ Future classes planning
Learning Plan	
★ P3 (9-12) I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals. ○ Summative One ○ Interim Three ★ AA4 (9-12) I can create opportunities to extend my learning by remaining open-minded in any situation. ○ Interim Two ○ Interim Four ○ Inventories and Assessments ★ AA2 (9-12) I can assess my past successes and mistakes to change my approach. ○ Interim One ○ Personal Interviews	

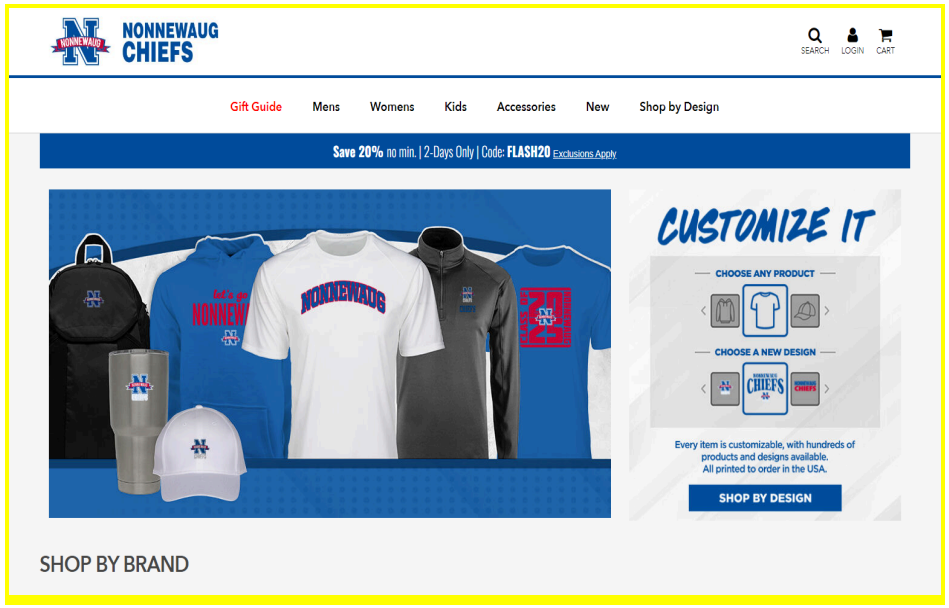
★ TI2 (9-12) I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
  - Summative One
  - Interim One

★ CCE2 (9-12) I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
  - Summative Two
  - Interim Four

Teacher Resources:

★ Program of Studies
★ Future classes planning tool
★ Community tools
★ Workplace inventories
★ Community resources

MARKETING CURRICULUM



Grade Level(s):9-12

Curriculum Author(s): Devon Bares & Adam Lengyel

Course Description: Marketing is an introductory course that focuses on marketing theory and concepts, economics, international business, salesmanship and promotion. Exploring this growing and dynamic field offers students exposure to the vast marketing system that exists both globally and within the United States. Marketing will emphasize marketing terms and concepts, preparing students for Advanced Marketing and experience working in the Nonnewaug School Store. Marketing is highly recommended for sophomores and juniors who can then take Marketing II in one of the following academic years. Marketing I students are encouraged to join FBLA or DECA, and participate in the state-wide competitions. Students must enroll in Marketing in order to join DECA. All Students who pass Marketing with a “C” or better will have the opportunity to attain college credit through the Post University High School Academy.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Introduction to Marketing	What are the key concepts and strategies of marketing that influence consumer decisions and drive business success?	Marketing is a process that involves understanding consumer needs, developing strategies to meet those needs, and effectively communicating value to create lasting relationships.	TCC1(9-12), TCC4(9-12), CCE4(9-12), DE1(9-12), P1(9-12), AA4(9-12)
Economic Factors in Marketing	How do economic conditions and trends influence consumer behavior and marketing strategies?	Economic factors significantly impact consumer behavior and shape marketing strategies.	TCC1(9-12), TCC4(9-12), CCE4(9-12), DE1(9-12), P1(9-12), AA4(9-12)
International Business	How do cultural, economic, and political differences impact marketing strategies in international markets?	Successful international business requires an understanding of diverse cultural, economic, and regulatory environments to effectively develop and implement marketing strategies that resonate with global consumers.	TCC1(9-12), TCC4(9-12), CCE4(9-12), DE1(9-12), P1(9-12), AA4(9-12)
Business Ethics	How do ethical considerations shape business practices and influence consumer trust in the marketplace?	Ethical business practices are essential for building trust, fostering positive relationships with stakeholders, and ensuring long-term success in the marketplace.	TCC1(9-12), TCC4(9-12), CCE4(9-12), DE1(9-12), P1(9-12), AA4(9-12)
Selling	How do effective selling strategies create value for customers and drive business success?	Successful selling involves understanding customer needs, utilizing effective communication strategies, and building long-term relationships to create value for both the customer and the business.	TCC1(9-12), TCC4(9-12), CCE4(9-12), DE1(9-12), P1(9-12), AA4(9-12)
Promotion	How do effective promotional strategies influence consumer behavior and drive business success?	Effective promotion integrates various strategies and media to communicate value, engage target audiences, and ultimately drive consumer behavior and business outcomes.	TCC1(9-12), TCC4(9-12), CCE4(9-12), DE1(9-12), P1(9-12), AA4(9-12)

Unit 1 - Introduction to Marketing

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Standard: Understands the concepts and strategies utilized to determine and target marketing strategies to a select audience
Performance Element: Select target market appropriate for product/business to obtain the best return on marketing investment (ROMI).
Performance Indicators:
Explain the concept of market and market identification (MP:003, LAP-MP-003) (CS)
Identify market segments (MP:004) (MN)
Develop customer profile (MP:031) (MN)
Select target market (MP:005) (MN)

Performance Element: Employ marketing-information to plan marketing activities.
Performance Indicators:
Explain the nature of marketing planning (MP:006) (SP)
Explain the nature of marketing plans (MP:007, LAP-MP-007) (SP)
Explain the role of situation analysis in the marketing planning process (MP:008) (SP)
Conduct market analysis (market size, area, potential, etc.) (MP:009) (MN)
Conduct SWOT analysis for use in the marketing planning process (MP:010, LAP-MP-010) (MN)
Assess global trends and opportunities (MP:011) (MN)
Conduct competitive analysis (MP:012) (MN)
Explain the nature of sales forecasts (MP:013, LAP-MP-013) (SP)
Forecast sales for marketing plan (MP:014) (MN)
Set marketing goals and objectives (MP:015) (MN)
Select marketing metrics (MP:016) (MN)
Set marketing budget (MP:017) (MN)
Develop marketing plan (MP:018) (MN)

All standards are pulled from Standards | Business Education Guidelines | MBA Research
Marketing Cluster (PQ) = Prerequisite; (CS) = Career-sustaining; (SP) = Specialist; (SU) = Supervisor; (MN) = Manager; (ON) = Owner

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation

Understandings: Students will understand that...

- Marketing can impact how we perceive ourselves and others and can influence all aspects of our lifestyle.
- Marketing influences the economy, the job market, the quality of products through competition, and the prices we pay for goods and services.
- All aspects of the marketing mix are essential
- All businesses have a target market
- Marketers have a customer in mind during product development and this image drives their decisions.
- Marketing relies on data and research to understand customer needs and preferences.

Essential Questions:

- How does marketing impact our lives?
- What is the most crucial part of the marketing mix?
- How do marketers identify their customers?
- What role does competition play in determining product quality, price, and availability?
- How do marketers balance creativity with strategy to effectively reach customers?
- Why is understanding the target audience crucial for successful marketing, and how can marketers effectively gather and apply customer insights?

Students will know...

- The definition and purpose of marketing in both business and society.
- The elements of the marketing mix: product, price, place, and promotion.
- How consumer behavior and psychology influence marketing strategies.
- The role of market research in identifying and understanding target audiences.
- The impact of competition on pricing, quality, and product innovation.
- How cultural and global factors influence marketing strategies and consumer preferences.

Students will be able to...

- Explain the concept of market and market identification
- Explain the concept of marketing strategies
- Describe the nature of target marketing in marketing communication
- Define a target market and the factors impacting target market selection
- Explain the relationship between market segmentation and consumer behavior.
- Describe the role of consumer behavior in strategic marketing planning
- Describe the purpose and components of marketing plans
- Explain the SWOT Analysis
- Students interpret, analyze and evaluate text in order to extend understanding and appreciation.
- Students communicate with others to create interpretations of written, oral and visual texts.

Key Vocabulary: Marketing, Consumer Behavior, Target Market, Market Research, Branding, Marketing Mix, Product Lifecycle, Segmentation, Positioning, Value Proposition, Demographics, Psychographics, Promotion, Pricing Strategy, Advertising, Public Relations, Sales Promotion,

Digital Marketing, Customer Relationship Management (CRM), Competitive Advantage	
Assessment Evidence	
Performance Tasks: Summative: Students will complete the 30 under 30 assignment which will require a presentation for the class. The assessment requires students to choose a business from Forbes 30 under 30 and justify the need for a marketing department at the company. In their justification students will answer the essential questions and use the concepts highlighted in the enduring understandings above.	**Other Evidence:** Interim: Students will complete a research assignment, “traditional” multiple choice/short answer assessment, Performance based assessment and review quiz
Learning Plan	
• Participate in class discussions and activities that explore Market ID, functions of marketing and the marketing mix.TCC1(9-12), DE1 (9-12) • Analyze and interpret graphs and data related to business growth, sales and market segmentation.TCC1(9-12) • Complete individual or group projects that apply the concepts of market ID, functions, marketing mix and connect to real-world situations.CCE4 (9-12) • Practice problem-solving skills by working on exercises and quizzes that test their understanding of the foundations of marketing and the marketing mix.TCC1 (9-12) • Reflect on their learning and connect it to their own lives and experiences.TCC4(9-12), AA4 (9-12)	
Teacher Resources: Glencoe Marketing Essentials Text, MSNBC original business documentaries via YouTube (McDonalds, Costco), Forbes 30 under 30, Census.gov, ABC’s Shark Tank, “The Profit” Series	

Unit 2 - Economic Factors in Marketing

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Instructional Area: Economics (EC) S
Standard: Understands the economic principles and concepts fundamental to business operations
Performance Element: Understand global trade's impact to aid business decision-making.
Performance Indicators:
Identify the effects of global trade on retailing (EC:094) (SP)
Explain current retail trends driven by global trade (EC:102) (SP)
Performance Element: Interpret analytical patterns to predict/analyze consumer behavior.
Performance Indicators:
Predict demand patterns (IM:385) (MN)
Conduct demand analysis (IM:317) (MN)
Forecast changes in customer expectations (IM:360) (MN)
Evaluate product usage (IM:354) (MN)
Analyze purchasing behavior and supply (IM:305) (MN)
Estimate repeat purchase rate (IM:352) (M)

All standards are pulled from Standards | Business Education Guidelines | MBA Research
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Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
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P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation

Understandings: Students will understand that...	**Essential Questions:**
• Economic conditions influence consumer purchasing power and spending habits. • Supply and demand and its impact on pricing and product	• How do economic conditions influence the choices consumers make? • In what ways do supply and demand affect product pricing and

availability. • Economic indicators are essential when measuring the overall health of an economy • Inflation affects the cost of goods • Exchange rates influence the cost and availability of goods. • Employment rates can be a strong indicator of overall economic well being. • Government policies affect pricing • Economic systems can differ around the world. • Economic cycles (recession, growth, etc.) impact business strategies and consumer behavior.	availability? • How does inflation impact both businesses and consumers? • Why are exchange rates important in determining the cost of imported and exported goods? • How does the employment rate shape consumer confidence and spending habits? • How do government policies like taxes and tariffs affect marketing? • How do different economic systems affect a population? • Why is an understanding of economic cycles important?
Students will know... • The impact of supply and demand on pricing and product availability. • How inflation affects costs, prices, and consumer purchasing power. • The role of exchange rates in international marketing and trade. • How employment rates influence consumer spending and overall economic stability. • How government policies, including taxes and tariffs, influence marketing strategies and product costs. • The characteristics of different economic systems • The phases of economic cycles (growth, recession) and their effects on business strategy. • The role of global economic factors, such as trade agreements, on local markets. • How economic indicators (e.g., GDP, CPI) are used to assess economic health	**Students will be able to...** • Analyzing supply and demand trends to assess their impact on pricing and availability. • Interpreting economic indicators (like GDP, CPI, unemployment rates) to evaluate market conditions. • Identifying how inflation influences consumer behavior and business pricing strategies. • Understanding and calculating the effects of exchange rates on international marketing. • Evaluating the impact of government policies, such as taxes and tariffs, on marketing decisions. • Compare different economic systems • Recognizing the stages of economic cycles and how to adjust marketing strategies accordingly. • Analyzing the effects of global economic trends • Applying economic knowledge to make informed marketing decisions.
Key Vocabulary: Consumer Price Index (CPI), Deflation, Economic Cycle, Economic Growth, Exchange Rate, GDP, Inflation, Market Segmentation, Market Structure, Monopoly, Oligopoly, Price Elasticity, Recession, Supply, Tariff, Taxation, Unemployment Rate, Demand, Consumer Confidence Index	
Assessment Evidence	
Performance Tasks: Summative: The economics and FES Summative will require students to answer a series of short answer and case study questions. Graphs	**Other Evidence:** Interim: Economic Comparisons activity using CIA world Factbook,Create a supply and demand curve using google

and data will be provided for students to analyze and they must also read text and answer comprehension questions that follow.	sheets/Microsoft Excel, Multiple choice/short answer assessment.

Learning Plan

- Participate in class discussions and activities that explore the basics of economics, economic systems and free enterprise.TCC1(9-12), DE1 (9-12)
- Analyze and interpret graphs and data related to supply, demand, equilibrium, shortages and surplus.TCC1(9-12)
- Complete individual or group projects that apply the concepts of economics and free enterprise and connect to real-world situations.CCE4 (9-12)
- Practice problem-solving skills by working on exercises and quizzes that test their understanding of the foundations of economics and the free enterprise system.TCC1 (9-12)
- Reflect on their learning and connect it to their own lives and experiences.TCC4(9-12), AA4 (9-12)

Teacher Resources: Glencoe Marketing Essentials Text, 60 minutes documentaries via YouTube (Luxottica),MRU University supply and demand unit plan,Federal agency database, ABC's Shark Tank, PBS Amazon Empire, Monopoly

Unit 3 - International Business

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Standard:
Understands risk-management strategies and techniques used to minimize business loss
Performance Element:
Acquire a foundational understanding of risk management to demonstrate knowledge of its nature and scope.
Performance Indicators:
Explain the role of ethics in risk management (RM:041, LAP-RM-041) (SP)
Describe the use of technology in risk management (RM:042) (SP)
Discuss legal considerations affecting risk management (RM:043) (SP)
Describe international considerations affecting risk management (RM:092) (SP)
Describe trends in international distribution systems (OP:508) (SP)
Explain international transportation and delivery system elements (OP:510) (SP)
Discuss sampling issues with international marketing research projects (IM:438) (SP)
Identify questionnaire design issues for international marketing research projects (IM:448) (MN)
Determine issues associated with interpretation of international marketing research data (IM:453)
Manage issues associated with international marketing research studies (IM:462) (MN)
Determine final cost of purchases from domestic and international sources (PM:193) (SP)

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Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
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P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation

Understandings: Students will understand that...	**Essential Questions:**
● International marketing is essential for businesses to remain	● What criteria should businesses use when selecting an

competitive. ● Political and economic factors are important for the success of international business. ● Increasing international trade introduces both business opportunities and risk. ● Cultural and social factors can vary widely across countries, affecting consumer behavior and business practices. ● Trade barriers and incentives can shape the international business landscape and impact decision-making. ● Different countries have distinct guidelines and regulations governing business conduct, which can affect international operations.	emerging market for their products? ● How do political and economic environments impact international business operations? ● In what ways does international trade affect local and global market conditions? ● How can businesses effectively navigate cultural differences in international markets? ● What role do ethical considerations play in decision-making within international business? ● How do trade barriers and incentives influence companies' strategies for entering foreign markets? ● What are the key challenges businesses face when operating in a global market?
Students will know... ● The significance of international marketing for maintaining competitiveness in a global economy. ● The impact of political and economic factors on market selection ● An understanding of how trade agreements shape the landscape of international business. ● The role of cultural and social differences in consumer behavior and business practices across countries. ● The definitions and principles of business ethics and social responsibility. ● The effects of international trade on local economies and global market conditions. ● The classification of businesses based on their physical and financial characteristics.	**Students will be able to...** ● Analyze and evaluate the impact of political and economic factors on international business decisions. ● Identify and assess trade barriers and incentives that affect global market entry strategies. ● Conduct market research to understand cultural and social differences in target markets. ● Formulate and present a comprehensive international marketing strategy for a product or service. ● Use data analysis tools to interpret trade data and economic indicators relevant to international business.
Key Vocabulary: Balance Of Trade, Business Ethics, Cultural Differences, Economic Factors, Emerging Markets, Foreign Direct Investment, Globalization, International Trade, Market Entry Strategies, Multinational Corporation, Political Environment, Trade Barriers, Trade Incentives, Social Responsibility, Consumer Behavior, Corporate Governance, Ethical Standards, Market Research, Stakeholder Management, Supply Chain Management.	
Assessment Evidence	
Performance Tasks:	**Other Evidence:**

Summative: Students will complete a performance based assessment requiring them to move a domestic company into a new international market. The end product will be a presentation incorporating the knowledge acquired in the enduring understandings listed above	Interim: Students will watch videos showing real world examples of the above concepts. Students will also analyze trade agreements and their effect on global economic conditions.

Learning Plan

- Participate in class discussions and activities that explore the basics of international business, trade agreements and the strategies used by marketers to move a product/service into a foreign market.TCC1(9-12), DE1 (9-12)
- Analyze and interpret graphs and data related to exchange rates and international sales.TCC1(9-12)
- Complete individual or group projects that apply the concepts of international business/marketing and connect to real-world situations.CCE4 (9-12)
- Practice problem-solving skills by working on exercises and quizzes that test their understanding of the foundations of international business and marketing.TCC1 (9-12)
- Reflect on their learning and connect it to their own lives and experiences.TCC4(9-12), AA4 (9-12)

Teacher Resources: Glencoe Marketing Essentials Text, 60 minutes documentaries via YouTube (Dubai, Mcdonalds,KFC,Apple),MRU University International business unit plan, World Trade Organization online resources, CIA World factbook, ABC's Shark Tank

Unit 4 - Business Ethics

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Instructional Area:
Emotional Intelligence (EI)
Standard: Understands techniques, strategies, and systems used to foster self-understanding and enhance relationships with others
Performance Element:
Apply ethics to demonstrate trustworthiness to staff.
Performance Indicators:
Use ethics in staff supervision (EI:078) (SU)
Performance Element:
Adhere to a professional code of ethics to guide business decisions.
Performance Indicators:
Discuss factors to consider in developing a managerial code of ethics (PD:261) (MN)
Utilize an established professional code of ethics (PD:262) (MN)
Performance Element:
Apply ethics to demonstrate trustworthiness to staff.
Performance Indicators:
Explain the nature of managerial ethics (EI:079) (MN)
Performance Element:
Adhere to a professional code of ethics to guide business decisions.
Performance Indicators:
Discuss factors to consider in developing a managerial code of ethics (PD:261) (MN)
Utilize an established professional code of ethics (PD:262) (MN)
Explain business ethics in product/service management (PM:040, LAP-PM-040) (SP)
Explain the role of ethics in marketing-information management (IM:025, LAP-IM-025) (SP)
Describe the role of business ethics in pricing (PI:015) (SP)
Describe the use of business ethics in promotion (PR:099) (SP)
Apply ethics to digital communications (EI:073) (CS)

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Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

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Understandings: Students will understand that...

- Business ethics in marketing means following moral rules
- Ethical marketing helps build trust with customers,
- Dishonest or misleading advertising can lead to serious legal problems and damage a brand's credibility.
- Marketers need to find a balance between making money and being ethical
- Being open and honest in marketing helps build trust and improves relationships with customers
- Ethical challenges can happen in marketing, and it's important to think critically and make good decisions
- Corporate social responsibility (CSR) programs can improve a company's marketing by showing their commitment to being ethical and making a positive impact on society, which benefits both the community and the business.

Essential Questions:

- How do ethical choices affect marketing strategies and campaigns?
- How can marketing practices influence consumer trust and brand loyalty?
- What happens if a company uses misleading advertising or dishonest marketing?
- How can marketers find a balance between making money and being responsible to consumers?
- What does being open and honest mean in marketing, and how can companies do it well?
- What can marketers do when they face ethical problems in their campaigns?
- How does corporate social responsibility (CSR) help or make things harder for marketing efforts

Students will know...

- The definition of business ethics and its relevance to marketing practices.
- The principles of ethical decision-making
- The impact of misleading advertising
- The importance of transparency and honesty in marketing
- How corporate social responsibility (CSR) initiatives influence marketing strategies and consumer perceptions..
- Strategies for addressing and resolving ethical dilemmas
- The benefits of ethical marketing for long-term business success.

Students will be able to...

- Analyze tough choices in marketing and think about how those decisions affect different groups of people.
- Create guidelines to help make ethical decisions in marketing.
- Clearly explain ethical issues
- Work together to solve ethical problems in marketing situations..
- Learn how to keep a businesses trust and reputation strong by using ethical marketing practices.
- Think about how marketing strategies affect society

Key Vocabulary: Accountability, Brand Integrity, Corporate Social Responsibility (CSR), Data Privacy, Deceptive Advertising, Ethical Dilemma,

Ethical Decision-Making, Ethical Leadership, Fairness, Transparency, Greenwashing, Honesty, Informed Consent, Integrity, Inclusivity, Misleading Advertising, Sustainability, Trustworthiness, Whistleblowing, Stakeholders.

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative: Students will complete a research assignment, “traditional” multiple choice/short answer assessment,	Interim: Students will complete a research assignment and ethical dilemmas case study. There will also be a role play assessment for the class.

Learning Plan

- Participate in class discussions and activities that explore the basics of business ethics, ethical guidelines and social responsibility.TCC1(9-12), DE1 (9-12)
- Analyze and interpret graphs and data related to corporate social responsibility and the ROI of these programs.TCC1(9-12)
- Complete individual or group projects that apply the concepts of ethics and social responsibility and connect to real-world situations.CCE4 (9-12)
- Practice problem-solving skills by working on exercises and quizzes that test their understanding of the foundations of business ethics and social responsibility.TCC1 (9-12)
- Reflect on their learning and connect it to their own lives and experiences.TCC4(9-12), AA4 (9-12)

Teacher Resources: Glencoe Marketing Essentials Text, Fortune’s best companies to work for, Ethisphere world's most ethical companies, Ethical Case studies Michigan State University, Ethical dilemma Peer to Peer training, ABC’s Shark Tank

Unit 5 - Selling

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Instructional Area:
Selling (SE)
Standard: Understands the concepts and actions needed to determine client needs and wants and respond through planned, personalized communication that influences purchase decisions and enhances future business opportunities
Performance Element: Acquire a foundational knowledge of selling to understand its nature and scope.
Performance Indicators:
Explain the nature and scope of the selling function (SE:017, LAP-SE-017) (CS)
Explain the role of customer service as a component of selling relationships (SE:076, LAP-SE-076) (CS)
Explain company selling policies (SE:932, LAP-SE-932) (CS)
Explain key factors in building a clientele (SE:828, LAP-SE-828) (SP)
Explain legal and ethical considerations in selling (SE:106, LAP-SE-106) (SP)
Describe the use of technology in the selling function (SE:107) (SP)
Performance Element: Acquire product knowledge to communicate product benefits and to ensure appropriateness of product for the customer. Performance Indicators:
Acquire product information for use in selling (SE:062, LAP-SE-062) (CS)
Analyze product information to identify product features and benefits (SE:109, LAP-SE-109) (SP)
Performance Element: Understand sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales.
Performance Indicators:
Explain the selling process (SE:048, LAP-SE-048) (CS)
Discuss motivational theories that impact buying behavior (SE:359) (SP)

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Understandings: Students will understand that...	**Essential Questions:**
• A good sales plan is important for guiding sales efforts and being successful in the market.. • Building strong relationships through follow-ups and outreach is key to creating customer loyalty and getting repeat business. • Good communication skills are essential for salespeople to connect with customers • Understanding how customers think and make decisions helps salespeople adapt their approach for each person. • Simple math skills are important for making smart sales decisions • Practicing through role-playing gives valuable experience for developing sales techniques • Working together as a team is crucial in sales	• What are the main parts of a good sales plan? • How does knowing product details and analyzing competitors make a salesperson more effective? • What strategies can salespeople use to build customer relationships? • How can good communication skills help a salesperson connect with customers? • Why is practice and role-playing important for preparing salespeople for real-life selling situations? • How can teamwork and working together among sales team members improve sales results?
Students will know...	**Students will be able to...**
• Knowing about the product and understanding competitors are important for being successful in sales • Good ways to build and keep customer relationships include following up with them after sales. • Strong communication skills are needed to engage customers • Understanding consumer behavior helps us know how people make buying decisions • Basic math skills are needed for pricing, calculating discounts, and understanding sales data. • Practicing selling skills through role-playing helps build confidence • Working as a team is important in sales to reach common goals	• Create and carry out a complete sales plan. • Learn about the product and analyze competitors effectively. • Keep accurate and legal records of sales transactions. • Use good communication skills to engage and persuade customers. • Use math skills for pricing, calculating discounts, and analyzing sales data. • Practice role-playing different selling situations • Work with team members to reach sales goals

Key Vocabulary: Sales Plan, Customer Relationship Management (CRM), Product Knowledge, Competitor Analysis, Follow-Up, Closing Techniques, Lead Generation, Sales Pitch, Objection Handling, Value Proposition, Prospecting, Sales Funnel, Direct Sales, Consultative Selling, Upselling, Cross-Selling, Sales Metrics, Conversion Rate, Pricing Strategy, Target Market.

Assessment Evidence

Performance Tasks: Summative: Performance based assessment requiring students to create a product from scratch. This will also include a written assessment requiring students to use the skills/knowledge attained in the enduring understandings above.	**Other Evidence:** Interim: “traditional” multiple choice/short answer assessment, Analyze sales techniques used in elevator pitch, define types of persuasion sales people may use

Learning Plan

- Participate in class discussions and activities that explore the basics of the sales process and techniques used by salespeople in the field.TCC1(9-12), DE1 (9-12)
- Analyze and interpret graphs and data related to sales leads and effective techniques.TCC1(9-12)
- Complete individual or group projects that apply the concepts within the sales process and connect to real-world situations.CCE4 (9-12)
- Practice problem-solving skills by working on exercises and quizzes that test their understanding of the foundations of selling and persuasion.TCC1 (9-12)
- Reflect on their learning and connect it to their own lives and experiences.TCC4(9-12), AA4 (9-12)

Teacher Resources: Glencoe Marketing Essentials Text,The Founder (movie), Youtube’s Science of Persuasion, Sales manual samples, ABC’s Shark Tank

Unit 6 - Promotion

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Instructional Area:
Promotion (PR)
Standard: Understands the concepts and strategies needed to communicate information about products, services, images, and/or ideas to achieve a desired outcome
Performance Element: Acquire a foundational knowledge of promotion to understand its nature and scope.
Performance Indicators:
Explain the role of promotion as a marketing function (PR:001, LAP-PR-901) (CS)
Explain the types of promotion (i.e., institutional, product) (PR:002, LAP-PR-902) (CS)
Identify the elements of the promotional mix (PR:003, LAP-PR-001) (SP)
Describe the use of business ethics in promotion (PR:099) (SP)
Describe the use of technology in the promotion function (PR:100) (SP)
Describe the regulation of promotion (PR:101) (SP)
Performance Element: Understand promotional channels used to communicate with targeted audiences.
Performance Indicators:
Explain types of advertising media (PR:007, LAP-PR-007) (SP)
Describe word-of-mouth channels used to communicate with targeted audiences (PR:247) (SP)
Explain the nature of direct marketing channels (PR:089) (SP)
Identify communications channels used in sales promotion (PR:249) (SP)
Explain communications channels used in public-relations activities (PR:250) (SP)
Performance Element: Understand the use of an advertisement's components to communicate with targeted audiences.
Performance Indicators:
Explain the components of advertisements (PR:014) (SP)
Explain the importance of coordinating elements in advertisements (PR:251) (SP)
Performance Element: Understand the use of public-relations activities to communicate with targeted audiences.
Performance Indicators:
Identify types of public-relations activities (PR:252) (SP)
Discuss internal and external audiences for public-relations activities (PR:253) (SP)

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Understandings: Students will understand that...

- Good advertising is important for businesses to grow and influence how people make choices.
- All parts of the promotional mix work together to create a strong plan for reaching and engaging the right audience.
- Different types of media have their own benefits and challenges.
- Public relations are important for keeping a company's image positive and building good relationships with important people.
- Online and mobile advertising needs special strategies to effectively reach and engage digital consumers.
- We can measure how well promotional campaigns work by looking at reach, engagement, and conversion rates.
- Understanding how consumers think and what they prefer should guide how we create promotional strategies and campaigns.

Essential Questions:

- How does good advertising affect how people buy things and make choices?
- What are the main parts of the promotional mix, and how do they work together to reach marketing goals?
- How do different types of media change how many people see and engage with promotional messages?
- What is the role of public relations in building a company's reputation and keeping good relationships with people involved?
- What are the best ways to create effective online and mobile ads?
- How can we measure and check the success of promotional campaigns?

Students will know...

- The main parts of the promotional mix and how they help in marketing plans.
- Different types of media used in advertising and their benefits and drawbacks.
- Why public relations is important for creating and keeping a good brand image.
- How to use word-of-mouth marketing to increase brand awareness.
- The basics of online and mobile advertising, including how to target and engage customers.

Students will be able to...

- Choose the right types of media for different ads.
- Make eye-catching promotional materials that share brand messages clearly.
- Write strong public relations messages to improve the brand's image and connect with people.
- Use word-of-mouth marketing to get customers to share recommendations.
- Create and manage online and mobile ads that reach specific groups of people.
- Check how well promotional campaigns work using important

• The importance of knowing what consumers like and want when creating promotions.	measurements. • Explain promotional plans and results clearly in writing and speaking.
Key Vocabulary: Advertising, Promotional Mix, Target Audience, Media Channels, Brand Awareness, Public Relations, Social Media Marketing, Content Marketing, Direct Marketing, Event Sponsorship, Visual Merchandising, Sales Promotion, Consumer Behavior, Reach, Engagement, Conversion Rate, Return on Investment (ROI), Marketing Strategy, Call to Action (CTA), Influencer Marketing.	
Assessment Evidence	
Performance Tasks: Summative: Performance based assessment requiring students to design a product placement proposal for a brand/product of their choice using their enduring understandings from above. Create a promotional campaign complete with a budget, sample materials	**Other Evidence:** Interim: Students will design their social media marketing campaign and store loyalty program within the provided parameters. Design a new school store design that incorporates the aspects of promotion discussed throughout the unit
Learning Plan	
• Participate in class discussions and activities that explore the basics of social media marketing, loyalty plans, product placement and other forms of promotion.TCC1(9-12), DE1 (9-12) • Analyze and interpret graphs and data related to ROI of a variety of promotional mediums.TCC1(9-12) • Complete individual or group projects that apply the basic promotional techniques discussed and connect to real-world situations.CCE4 (9-12) • Practice problem-solving skills by working on exercises and quizzes that test their understanding of the foundations of promotion.TCC1 (9-12) • Reflect on their learning and connect it to their own lives and experiences.TCC4(9-12), AA4 (9-12)	
Teacher Resources: Glencoe Marketing Essentials Text, Shopify's social media marketing media kit, Youtube Product placement videos, Hollywood branded product placement simulation, Interbrands best promotional campaigns of all time, ABC's Shark Tank, CNBC original supermarkets Inc	

Personal Finance ECE CURRICULUM

Grade Level(s): 11-12	**Curriculum Author(s):** Devon Bares & Adam Lengyel
Course Description: This course will be similar to the traditional Personal Finance course offered in the description above but will be specifically aligned with Uconn's financial literacy course with more advanced finance topics. In addition, the rigor will be more specific to that of a college level course and the content will go more in depth than the traditional. This course is open to students in the 11th and 12th grades that have had at least two years of high school level math.	

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Behavioral Economics	How do your values impact your financial decision making?	Society places a lot of pressure on individuals to spend their money. It is important to take personal responsibility and determine values and behaviors that will put oneself on a path to financial success.	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)
Banking	Why are banks important to personal financial security?	Banks are a vehicle that provides protection, growth and service (i.e. loans) opportunities needed to gain financial independence.	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)
Paying for College (unique to ECE)	How should you plan for college expenses?	College is expensive, but the right plan can make your dream school a reality.	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)
Investing	Why should you invest your money?	Money loses value over time. You must invest your money wisely if you want to grow your net worth over time.	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)
Credit	How can credit be used responsibly?	Credit is a double edged sword. It can be helpful on your path to financial success but if it is not used wisely it can be harmful.	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)
Taxes (unique to ECE)	How do you file taxes correctly and efficiently?	Paying taxes is a citizen's responsibility. Knowing how to do it correctly can save you time and money.	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)

Budgeting	Why do I need a budget?	Budget provide the guardrails needed to pave the path towards financial freedom	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)
Insurance	Why is insurance an important part of your financial plan?	Insurance provides protection from loss and is a necessary component to keep oneself on track.	TCC4(9-12), CCE1(9-12), DE4(9-12), P3(9-12), AA1(9-12), AA4(9-12)

Unit 1 - Behavioral Economics

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
(Saving) 9a: Explain how external influences (e.g. peers, family, or social media) can impact personal savings decisions
(Investing) 9a: Identify several behavioral biases that can result in poor investment decisions (e.g. loss aversion, mental accounting)
(Investing) 9b: Brainstorm methods for avoiding negative consequences from behavioral biases

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that....

- Common psychological biases, such as loss aversion, confirmation bias, and overconfidence, can lead to suboptimal financial choices.
- Behavioral economics offers insights into strategies and interventions.
- Social influences, including peer pressure, societal norms, and cultural factors, can significantly impact financial behaviors and attitudes.
- Individuals can develop self-awareness, resilience, and adaptive strategies to navigate complex financial environments and improve their financial well-being.

Essential Questions:

- What role does self-control play in personal finance?
- What strategies can be used to overcome impulsive behavior and promote long-term financial stability?
- How do social norms and peer pressure impact our financial choices?
- What techniques can we use to resist societal pressures and make decisions that align with our personal financial goals?
- How does framing affect our perceptions of financial options?
- What are the psychological factors behind our attitudes towards risk?
- How can a basic understanding of behavioral economics help us navigate risk management strategies to achieve our financial objectives?

Students will know...

- How psychological biases, such as loss aversion and overconfidence, can influence their financial decision-making

Students will be able to...

- Practice making financial decisions
- Reflect on their personal values and how they can influence

processes. • That behavioral economics offers insights into why individuals may make seemingly irrational financial choices. • About various strategies and interventions derived from basic behavioral economics • That social influences can impact their financial behaviors. • The importance of self-awareness and reflection in personal finance.	their financial decisions • Explore how values differ from person to person • Explain what a cognitive bias is and how it can cause someone to make irrational decisions, particularly around money • Explore and experience a variety of cognitive biases • Define common cognitive biases humans have and explain how they might influence someone's financial decisions • Identify signs of cognitive bias • Explore steps someone can take to overcome cognitive bias
Key Vocabulary: Behavioral economics, Psychological biases, Loss aversion, Endowment effect, Self-control, Impulsive behavior, Social norms Peer pressure, Framing, Decision-making processes, Cognitive biases, Prospect theory, Anchoring, Confirmation bias, Availability heuristic Overconfidence bias, Herd mentality, Temporal discounting, Needs, Wants, Trade Offs, Opportunity Cost	
Assessment Evidence	
Performance Tasks: Student Activity Packets • Your Values and Money • Your Brain and Money • Overcoming Cognitive Biases • PLAY: Dollar Auction Game • PLAY: The Bean Game	**Other Evidence:** Interim: MOVE: Your Cognitive Biases MOVE: Your Money Values Summative: Behavioral Economics Unit Test
Learning Plan	
NGPF Semester Long Curriculum Documents • Students will explore how their values shape their money decisions in questionnaires and virtual learning labs TCC4(9-12) • Discussion boards and questionnaires will be used to answer questions and view the thoughts and opinions of classmates and the instructor. CCE1(9-12) • Students will work with others on group projects and assignments DE4(9-12) • Self reflection assignments will be integrated to ensure that students can personalize the material P3(9-12) • Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12) • Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)	
Teacher Resources: **NGPF Semester Course**	

Unit 2 - Banking

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Saving

1a: Compare the features of regular savings accounts, money market accounts, and CDs
1b: Explain why CDs typically pay higher interest rates than regular savings accounts or interest-bearing checking accounts
2a: Select a preferred location for a savings account based on comparison of interest rates and fees at different types of financial institutions
3a: Research mobile payment account alternatives
3b: Compare and contrast the features of mobile payment accounts, cryptocurrency accounts, and checking/ savings accounts
4a: Illustrate how inflation can reduce the purchasing power of savings over time if the nominal interest rate is lower than the inflation rate
5a: Investigate the areas of financial institution operations that are subject to state and/or federal regulation and supervision
5c: Explain the importance of solvency regulation for financial institutions
9a: Explain how external influences (e.g. peers, family, or social media) can impact personal savings decisions
9b: Identify strategies to manage psychological and emotional obstacles to saving
9c: Discuss strategies for avoiding personal triggers that result in deviating from a savings plan
9d: Explain how the saving strategy “pay yourself first” can help people achieve their saving goals

Spending

1a: Identify their short-term and long-term financial goals
1b: Develop a budget to allocate current income to necessary and desired spending, including estimates for both fixed and variable expenses
3b: Analyze the cost and features of three competing products or services

Managing Credit

13a: Identify products and practices that are classified as alternative financial services
13b: Discuss the costs and benefits of using alternative financial services relative to traditional banking
13b: Discuss the costs and benefits of using alternative financial services relative to traditional banking

Earning Income

5b: Evaluate the impact of technological advances on employment and income

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.

P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that…

- There are a variety of ways they can deposit and withdraw funds from their checking account.
- There are various components of a bank statement that help us interpret where our money goes.
- A variety of criteria should be considered when comparing checking and savings account options.
- Saving money has many personal and societal benefits.
- Online banking is a necessary tool that has many benefits.
- Online banking safeguards are important to personal security.

Essential Questions:

- What are the key differences between checking and savings accounts?
- How do banks generate revenue?
- What factors should we consider when selecting a bank for our checking and savings accounts?
- What are the benefits and risks associated with various types of payment methods, such as checks, debit cards, and electronic transfers?
- How does compound interest work?

Students will know...

- What a checking account is used for
- The important criteria to consider when selecting a savings account
- The common checking and saving account fees and how to avoid them
- The consequences of being unbanked
- What an emergency fund is for and how much to save up
- What a P2P payment is
- The advantages of online and mobile banking versus traditional banking
- How to bank safely online
- The pros and cons of a cashless society

Students will be able to...

- Explain the pros and cons of opening a checking account at a credit union
- Explain the difference between a checking and savings account
- Compare different savings vehicles such as a savings account, CD, and money market account
- Explain how overdraft protection works and the impact of overdraft fees
- Compare overdraft policies at major US banks
- Explain who is typically unbanked and the reasons that they are unbanked
- Compare payroll and prepaid cards to debit and credit cards
- Explore banking status in regions across the U.S
- Identify various rules of thumb and strategies to save money
- Brainstorm short, medium and long-term savings goals
- Identify everyday obstacles Americans experience when trying to save money
- Recognize the impact of inflation on savings
- Experience simulated challenges of living paycheck to paycheck
- List the pros and cons of digital wallets
- Set up a P2P account of their choice
- Compare and contrast various peer to peer payment apps

	• Explain what online bill pay is and how recurring payments work • Enumerate the benefits of direct deposit for their paychecks • Compare and contrast various peer-to-peer payment apps

Key Vocabulary: Checking account, Savings account, Interest rate, Overdraft fee, Minimum balance, ATM (Automated Teller Machine) Debit card, Direct deposit, Online banking, Mobile banking, Routing number, Account statement, Electronic funds transfer, Bank teller Certificate of deposit (CD), Money market account, Federal Deposit Insurance Corporation (FDIC), Bankruptcy, Credit union, Wire transfer

Assessment Evidence

Performance Tasks:	Other Evidence:
Student Activity Packets: Checking Accounts Savings Accounts Beware of Banking Fees Being Unbanked Strategies to Save Challenges to Saving Digital Wallets & P2P Apps Online and Mobile Banking	Interim: CASE STUDY: Bank on This CASE STUDY: Save Me! Summative: Banking Unit Test

Learning Plan

NGPF Semester Long Curriculum Documents

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- Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12)
- Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)

Teacher Resources: **NGPF Semester Course**

Unit 3 - Paying for College

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Earning Income
3a: Evaluate the costs and benefits of investing in additional education or training
3c: Compare earnings and unemployment rates by level of education and training
Managing Credit
4a: Describe the different sources of funding for postsecondary education
4b: Explain the role the FAFSA plays in applying for college financial aid
4c: Identify scholarships and grants for which they are eligible
5a: Compare federal and private student loans based on interest rates, repayment rules, and other characteristics
5c: Estimate total interest on various student loans based on interest rates and repayment plan
5d: Predict the potential consequences of deferred payment of student loans
Spending
2a: Select a product or service and describe the various factors that may influence a consumer's purchase decision
2b: Describe a process for making an informed consumer decision

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that...
- The decision to attend college involves opportunity costs
- The total cost of attending college includes both direct costs and indirect costs.
- A college's sticker price often differs significantly from the net price.
- The FAFSA (Free Application for Federal Student Aid) is a critical step in accessing financial aid
- Scholarships and grants should be prioritized over loans
- Borrowing responsibly for college is important and a variety of

Essential Questions:
- What are the opportunity costs of going to college?
- What are the direct and indirect costs of attending college?
- How do the sticker price and net price of a college differ?
- What role does the FAFSA play in the financial aid process?
- Why should scholarships and grants be prioritized over loans?
- What does it mean to be a responsible borrower?

factors and decisions need to be addressed	
Students will know... ● The opportunity costs of attending college, including how delayed earnings and work experience compare to entering the workforce immediately. ● The most common costs of attending college, including tuition, fees, room and board, books, transportation, and personal expenses. ● The difference between a college's sticker price and net price, and how to calculate and compare net prices across different institutions. ● The purpose of the FAFSA, how to complete it, and the significance of their Student Aid Index (SAI) in determining financial aid eligibility. ● How to distinguish between scholarships, grants, and loans, and why scholarships and grants should be prioritized as financial aid options. ● How to analyze financial aid offers, evaluate the types of aid included, and determine the best strategies for borrowing and repayment.	**Students will be able to...** ● Analyze the opportunity cost of going to college when compared to entering the workforce ● Identify the most common costs associated with attending college ● Explain the difference between a college's sticker price and net price ● Compare the net price of different colleges ● Explain the role the FAFSA plays in the financial aid process ● Understand the importance of submitting the FAFSA ● Read a FAFSA Submission Summary and understand the role of their Student Aid Index (SAI) in paying for college ● Explain why scholarships and grants should be prioritized when looking for and accepting financial aid ● Explain the difference between scholarships and grants ● Find scholarships and grants that they are eligible for ● Explain what it means to be a responsible borrower ● Analyze different types of federal student loans ● Compare federal and private student loans ● Analyze hypothetical and personal scenarios involving college and career decisions that impact their ability to pay for college ● Discuss the direct and indirect costs of attending college ● Explain the important elements of a financial aid offer ● Analyze different sample financial aid offers ● Demonstrate the order in which different types of financial aid should be accepted ● Discuss common mistakes made in repaying student loans ● Explain the difference between different types of repayment plans ● Identify sources of assistance if they need help with student loan repayment ● Analyze different scenarios and choose the best repayment option
Key Vocabulary: Sticker price, net price, FAFSA (Free Application for Federal Student Aid), Student Aid Index (SAI), financial aid package, scholarships, grants, work-study, federal student loans, private student loans, tuition, fees, room and board, indirect costs, repayment plan,	

interest rate, subsidized loans, unsubsidized loans, cost of attendance (COA), financial aid offer, merit-based aid, need-based aid, opportunity cost, default, loan forgiveness, consolidation, deferment, forbearance, expected family contribution (EFC), Pell Grant, direct PLUS loan.

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Student Activity Packets: Paying for College 101 Applying for the FAFSA Scholarships and Grants Student Loans Financial Aid Packages Student Loan Repayment Time for Payback	Interim: ANALYZE: A FAFSA Submission Summary ANALYZE: College and Career Choices COMPARE: Which Repayment Option is Best? FINE PRINT: Financial Aid Package INTERACTIVE: Payback INTERACTIVE: Sticker Price vs. Net Price RESEARCH: Finding Scholarships and Grants Summative: Paying for College Unit Test

Learning Plan

NGPF Semester Long Curriculum Documents

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- Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12)
- Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)

Teacher Resources: **NGPF Semester Course**

Unit 4 - Investing

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Investing

1a: Identify their short-term and long-term financial goals
1b: Discuss how a person's risk tolerance influences their investment decisions
2a: Describe the different types of annual cash flows that can be received by investors
2b: Compare nominal annual rates of return over time on different types of investments, including cash flows and price changes
3a: Discuss the advantages and disadvantages of investing in riskier assets
3b: Investigate the long-run average rates of returns on small-company stocks, large-company stocks, corporate bonds, and Treasury bonds
4a: Describe the impact of inflation on prices over time
5a: Describe factors that influence the prices of financial assets
5b: Predict what could happen to the price of a stock if new information is reported about the company or its products
5c: Discuss how economic downturns that result in high unemployment can affect the prices of financial assets
6a: Recommend portfolio allocation between major asset classes for a short-term goal versus a long-term goal
6b: Discuss the pros and cons of investing in a diversified mutual fund versus investing in a small number of individual stocks
6c: Suggest an appropriate asset allocation for a very risk averse person versus a very risk tolerant person
6d: Explain how target date retirement funds reallocate investments over time to meet their investment objective
7a: Discuss how the expenses associated with buying and selling investments can impact rates of return and investment outcomes
7b: Compare the expense ratios for several mutual funds
7c: Explain why an actively managed mutual fund usually has a higher expense ratio than an index fund
8b: Describe the advantages of investing through a tax deferred account such as an IRA or 401(k) versus a taxable account
8c: Investigate the contribution limits and tax advantages of a traditional IRA versus a Roth IRA
10b: Describe the importance of having multiple sources of income in retirement, such as Social Security, employer sponsored retirement plans, and personal investments
10d: Report the average benefit paid to a retiree living on Social Security today

Spending

13a: Explain why investors often compare portfolio performance to a benchmark such as the S&P 500 Index
13b: Research the composition of the most popular benchmark indices and compare their recent performance
13c: Discuss the advantages of investing in an exchange traded fund (ETF) that tracks a market index rather than investing in actively managed mutual funds or individual stocks and bonds

Earning Income

1d: Examine the benefits of participating in employer sponsored retirement savings plans and healthcare savings plans
10c: Explain the importance of participating in employer sponsored retirement plans, when available, and contributing enough to qualify for the maximum employer match

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

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CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
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P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that…

- The differences between saving and investing
- Compounding builds wealth over time
- Why it can be difficult to predict trends in the stock market
- There are various factors that can influence bond prices such as interest rates
- What a stock split is and how it impacts investors who own that stock
- What risk is and its role in investing
- What a fund is and how investing in one can create a more diversified investment portfolio
- What a brokerage account is and how to open one
- What Social Security is and why most Americans cannot rely on Social Security alone for retirement
- What a 401(k) plan is and its advantages

Essential Questions:

- How do concepts such as risk, return, diversification, and liquidity influence our investment decisions?
- What are the main types of investment vehicles available to individuals?
- What factors should we consider when choosing investments that align with our financial goals and risk tolerance?
- What role does "time horizon" play in determining asset allocation and investment selection?
- What are the potential benefits and drawbacks of actively managed versus passively managed investment strategies?
- How can we develop and implement an investment plan to achieve long-term financial success?

Students will know...

- What the stock market is and why companies and investors choose to participate in the stock market
- What stocks are and how they can make money from investing in them
- What a bond is and the pros and cons of investing in bonds
- The difference between active investing and passive investing
- How investing can be a powerful tool to meet their retirement

Students will be able to...

- Define investing and distinguish it from saving and trading
- Identify reasons for investing, including outpacing inflation
- Experience making a variety of investment decisions through an interactive simulation
- Summarize long-term trends in the stock market
- Identify ways to minimize risk when investing in stocks
- Read a stock quote and evaluate a stock's performance over

goals • The options available to them if an employer does not offer a 401(k) plan • How to compare different types of retirement accounts, including Roth IRAs, traditional IRAs, 401(k)s, and pensions • How artificial intelligence (AI) is changing the investing landscape	time • Identify the differences between an individual bond and a bond fund • Read a bond fund fact sheet • Analyze effective strategies to manage investment risk such as investing early, diversification, and dollar cost averaging • Calculate the impact of using dollar cost averaging in hypothetical scenarios and by using the real historical performance of an index fund • Arrange companies to create a diversified mutual fund • Identify strategies recommended for a beginner investor and explain why these strategies may be beneficial • Explore their own risk tolerance through a worksheet • Experience making a variety of investment decisions through an interactive simulation • Explain what retirement means through a financial lens • Explore factors that can impact how much they might need in retirement and their ability to meet their retirement savings goal • Discuss the function and growth of robo-advising, along with its relationship with human investment managers • Explain the function, pros, and cons of micro-investing • Compare modern investing tools
Key Vocabulary: Stocks, Bonds, Mutual funds, Exchange-Traded Funds (ETFs), Asset allocation, Diversification, Risk tolerance Portfolio, Capital gains, Dividends, Index funds, Volatility, Market volatility, Bull market, Bear market, Investment horizon, Compound interest Brokerage account, Stock market, Investment risk	
Assessment Evidence	
Performance Tasks: Student Activity Packets: Why Should I Invest? What is the Stock Market? What is a Stock? What is a Bond? Managing Risk Investing in Funds Start Investing	**Other Evidence:** Interim: INTERACTIVE: Invest with STAX! INTERACTIVE: What's the S&P 500? PROJECT: Joining the Market Summative: Investing Unit Test

The Importance of Investing for Retirement How to Invest for Retirement	

Learning Plan

NGPF Semester Long Curriculum Documents

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- Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12)
- Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)

Teacher Resources: NGPF Semester Course

Unit 5 - Credit

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Managing Credit
1a: Explain how credit card grace periods, methods of interest calculation and fees affect borrowing costs
1b: Compare the cost of borrowing $1,000 using consumer credit options that differ in rates and fees
2a: Give examples of unsecured and secured loans
2c: Compare what happens if a borrower fails to make required payments on a secured loan, such as an auto loan or a home mortgage, versus failing to pay a credit card account
3b: Differentiate between adjustable-rate and fixed-rate mortgages
3c: Compare monthly mortgage payments for loans that differ in repayment period, amount borrowed, and interest rate
6a: Identify examples of loans that may require down payment
6c: For a specified loan amount, compare the monthly loan payment with a 10% down payment versus a 20% down payment
8b: Explain how a borrower's credit score can impact their cost of credit and their ability to get credit
10a: Describe how failing to repay a loan can negatively impact a person's finances and life
10c: Create a plan for a person who is having difficulty repaying debt
13a: Identify products and practices that are classified as alternative financial services
13b: Discuss the costs and benefits of using alternative financial services relative to traditional banking
13c: Explain how using payday loans can cause a cycle of debt

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
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CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that...
- There are three basic components of lines of credit: principal, interest rate, and term
- How interest is charged and how to avoid or minimize it

Essential Questions:
- What are the different types of credit available to consumers?
- How does our creditworthiness impact our ability to access credit and borrow money?

• There are differences between debit, prepaid debit, and credit cards • There are many different types of loans. • Credit reports and scores can have a measurable effect on livelihood • There are different strategies to start building credit	• What steps can we take to establish, build, and maintain credit history? • What are the common pitfalls and risks associated with using credit? • What factors contribute to the calculation of interest rates on credit products? • How can we effectively manage our credit obligations to reduce debt and improve our financial well-being over time?
Students will know… • What net worth means and how it is calculated • Why a person may need or want to use credit • How a credit card works in terms of making purchases and managing payments • Why a person may need or want to use credit • How a credit card works in terms of making purchases and managing payments • What a payday loan is and how it can cause users to fall into a cycle of debt • How interest-bearing credit accounts impact a person's ability to manage debt • Often credit reports are used • How to address errors on a credit report • What a credit score is and how one is calculated • How long it takes to establish a credit score	**Students will be able to...** • Identify the major types of credit and their characteristics • Identify at least 3 ways a young adult can gain access to a credit card, even before they are 21 • Read a Schumer Box • Interpret data to understand what types of debt the average American household has • Differentiate between amortized installment loans and revolving credit lines • Read an amortization table and understand how the payments are structured • Calculate how much an auto loan will cost given special offers as well as standard factors such as down payment, APR, and term • Compare auto loan offers and decide how they fit within your budget • Explain what a mortgage is and why most Americans require one to finance a home • Use a mortgage calculator to explore how downpayment, credit score, interest rate, and term all impact the total cost of buying a home • Distinguish between fixed- and adjustable-rate mortgages • Identify what financial need payday lenders are meeting and why consumers use payday loans • Compare the price of borrowing money using various loan and credit products • Critique the actions of someone who found themselves in problematic debt • Assess multiple strategies to reduce or eliminate debt

	• Compare when late payments become troublesome and the potential consequences for late payments of different types of debt • Summarize the content and purpose of a credit report • Analyze a credit report • Compare the percentage of people in different credit score bands • Analyze the different methods available to view their credit score • Critique different credit score scenarios and formulate a plan on how to improve credit scores • Analyze reasons why it's important to establish credit early in life • Compare the impact of different credit scores when taking out different types of loans
Key Vocabulary: Credit score, Credit report, Credit history, Creditworthiness, Credit utilization ratio, FICO score, Credit card Annual percentage rate (APR), Minimum payment, Credit limit, Secured credit card, Unsecured credit card, Revolving credit Installment loan, Interest rate, Late payment fee, Credit counseling, Credit bureau, Default, Debt consolidation	
Assessment Evidence	
Performance Tasks: Student Activity Packets: Intro to Credit Young People & Credit Cards Using Credit Cards Wisely Loan Fundamentals Auto Loans Mortgages Predatory Lending Debt Management Your Credit Report Your Credit Score Building Credit from Scratch	**Other Evidence:** Interim: CASE STUDY: Gimme Some Credit CASE STUDY: Payday Loan, Bankruptcy...What Should I Do? CASE STUDY: A Tale of Two Credit Scores Summative: Credit Unit Test
Learning Plan	
NGPF Semester Long Curriculum Documents	

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- Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12)
- Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)

Teacher Resources: **NGPF Semester Course**

Unit 6 - Taxes

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Earning Income
6a: Calculate the amount of taxes a person is likely to pay when given information or data about the person's sources of income and amount of spending
6b: Identify which level(s) of government typically receive(s) the tax revenue for income taxes, payroll taxes, property taxes, and sales taxes
6c: Describe the benefits they receive, or may receive in the future, from government-collected tax revenue
7c: Differentiate between gross, net, and taxable income
7d: Explain why some income is reported on an IRS Form W-2 and some is reported on an IRS Form 1099, and how that could affect their taxes
8a: Explain the difference between earned and unearned income
9a: Complete IRS Form W-4
11a: Evaluate the benefits and costs of gig employment, such as driving for a cab or delivery service

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that...

- Gross pay and net pay are different
- The tax cycle has key dates and forms that individuals must be aware of.
- A W-4 form determines the amount of tax withheld
- The U.S. government's spending is funded by your payments to the IRS
- Taxes can be prepared using various methods.
- The 1040 form is the primary tool for filing federal taxes.

Essential Questions:

- What information does a pay stub provide?
- How can understanding deductions help in managing personal finances?
- What is the difference between gross pay and net pay?
- What are the differences between mandatory and discretionary government spending?
- What are the key dates and forms necessary to file your taxes?
- What is the purpose of a W-4 form?

Students will know...

- How to read and interpret a pay stub, including identifying gross

Students will be able to...

- Read and understand a pay stub

pay, net pay, and common deductions. • How government spending affects their day to day lives. • The difference between gross pay and net pay and how to calculate take-home pay. • The purpose of key tax forms, including the W-2, W-4, and 1040. • The important dates in the tax cycle, including deadlines for filing taxes and receiving forms.	• Compare mandatory and discretionary government spending • Explain the difference between gross and net pay • Analyze the different categories of discretionary government spending • Identify important dates within the tax cycle • Compare tax forms and their purpose • Analyze a W-4 form • Identify key facts about taxes and the tax cycle • Explain who qualifies to be claimed as a dependent for tax purposes • Determine whether or not a person is required to file taxes • Identify the different forms needed to prepare their taxes • Compare different methods of preparing federal and state taxes • Analyze a W-2 form • Complete a 1040 form to file their taxes
Key Vocabulary: Gross pay, net pay, deductions, withholding, pay stub, mandatory spending, discretionary spending, tax cycle, W-4 form, W-2 form, 1040 form, dependent, tax credit, tax deduction, filing status, federal income tax, state income tax, Social Security tax, Medicare tax, flat tax, progressive tax, taxable income, adjusted gross income (AGI), standard deduction, itemized deduction.	
Assessment Evidence	
Performance Tasks: Student Activity Packets: Taxes and Your Pay Stub The Tax Cycle and Job Paperwork Teens and Taxes How to File Your Taxes Completing the 1040	**Other Evidence:** Interim: CALCULATE: Completing a 1040 CALCULATE: The Math Behind Your Federal Taxes CALCULATE: What Affects How Much We Pay in Income Taxes? COMPARE: Tax Forms and their Purpose FINE PRINT: W-2 Form FINE PRINT: W-4 Form MOVE: Paycheck Scavenger Hunt MOVE: Your Tax Dollar in Action Summative: Budgeting Unit Test
Learning Plan	
NGPF Semester Long Curriculum Documents • Students will explore how their values shape their money decisions in questionnaires and virtual learning labs TCC4(9-12)	

- Discussion boards and questionnaires will be used to answer questions and view the thoughts and opinions of classmates and the instructor. CCE1(9-12)
- Students will work with others on group projects and assignments DE4(9-12)
- Self reflection assignments will be integrated to ensure that students can personalize the material P3(9-12)
- Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12)
- Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)

Teacher Resources: NGPF Semester Course

Unit 7 - Insurance

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Managing Risk

1a: Discuss whether a premium paid to insure against a crash that never happens is wasted

1b: Analyze the conditions under which it is appropriate for young adults to have life, health, and disability insurance

2b: Recommend types of insurance needed by people with different characteristics

3b: Discuss why most states mandate auto liability coverage

3c: Research the minimum auto liability insurance required in the state they live in and whether it is sufficient to cover typical auto accident financial losses

4a: Research factors that result in lower auto insurance premiums

4b: Explain why taking a safe driving course can lower a driver's auto insurance premium

4c: Discuss the pros and cons of buying an auto insurance policy with a higher deductible

5a: Discuss the advantages of obtaining health insurance coverage through an employer plan versus buying private insurance or being uninsured

5b: Analyze the conditions under which it is appropriate for young adults to have life, health, and disability insurance

5c: Estimate the effect on different health insurance deductibles and coinsurance rates on out-of-pocket medical costs

7a: Explain the primary types of losses covered by auto, homeowner's, and renter's insurance policies

7b: Describe situations where someone may be liable for injuries or damages to another person or their property

8a: Explain how a person's death can result in financial losses to others

8b: Discuss the benefits and costs of purchasing life insurance on the primary earners in a household

9b: Compare the Medicare and Medicaid programs based on who they cover and how they are funded

12a: Evaluate the costs and benefits of buying an extended warranty on a specific item (e.g. cellphone, laptop, or vehicle) considering the likelihood of product failure, cost of replacing the item, and price of the warranty

12b: Explain how extended warranties or service contracts are similar to and different from insurance

Saving

5a: Investigate the areas of financial institution operations that are subject to state and/or federal regulation and supervision

7d: Explain the benefits of saving money in a health savings account for individuals with high-deductible health plans

Earning Income

1d: Examine the benefits of participating in employer sponsored retirement savings plans and healthcare savings plans

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that...

- Insurance is a financial tool designed to protect individuals and families from the financial consequences of unexpected events.
- Insurance policies can be complex and it is important to understand what is stated in the policy.
- Insurance premiums can differ significantly between individuals and there are a variety of factors used by insurance companies to determine premiums.
- Insurance policies have various features, including deductibles, coverage limits, and exclusions, which can impact the cost and scope of coverage.
- Insurance plays a crucial role in financial planning.

Essential Questions:

- What are the primary types of insurance coverage available to individuals?
- How do insurance premiums, deductibles, and coverage limits vary across different insurance policies?
- What factors should we consider when selecting insurance coverage?
- What is the role of risk assessment in determining insurance premiums?
- How does the claims process work when filing an insurance claim?
- How can we assess our insurance needs and develop a comprehensive insurance strategy?

Students will know...

- How everyone risks financial loss and how insurance shares that risk
- How the insurance industry uses risk pooling and math to provide insurance coverage and make a profit
- Why it is valuable to have insurance, regardless of whether you own or rent a home
- How health insurance works and the different types of plans available to them
- The pros and cons of enrolling in employer-sponsored health plans vs individual plans from the Marketplace

Students will be able to...

- Identify factors that impact insurance premiums and the relationship between premiums, deductibles, and coverage limits
- Explain a deductible, out-of-pocket expenses, and what insurance will pay for in different situations
- List factors that determine auto insurance premiums
- Distinguish the similarities and differences between renters and homeowners insurance
- Identify the various costs affiliated with having health insurance
- Explore steps they can take to lower their medical costs
- Understand how government healthcare programs like Medicaid, CHIP, and Medicare work and who qualifies for them
- Investigate health insurance policies and eligibility in their states
- Explain how pet insurance works and how it compares to human

	health insurance • Differentiate between short- and long-term disability insurance • Decide when a life insurance policy is appropriate and how to select the best type for their needs
Key Vocabulary: Insurance policy, Premium, Deductible, Coverage limit, Policyholder, Insurer, Beneficiary, Claim, Underwriting, Risk assessment Actuary, Exclusion, Copayment, Coinsurance, Policy term, Renewal, Policyholder's equity, Umbrella insurance, Term life insurance, Whole life insurance	
Assessment Evidence	
Performance Tasks: Student Activity Packets: Intro to Insurance Auto Insurance Renters & Homeowners Insurance How Health Insurance Works How to Access Health Insurance Other Types of Insurance	**Other Evidence:** Interim: CASE STUDY: Fender Bender Frenzy! CASE STUDY: Like a Good Neighbor, Noelle Is There Summative: Insurance Unit Test
Learning Plan	
NGPF Semester Long Curriculum Documents • Students will explore how their values shape their money decisions in questionnaires and virtual learning labs TCC4(9-12) • Discussion boards and questionnaires will be used to answer questions and view the thoughts and opinions of classmates and the instructor. CCE1(9-12) • Students will work with others on group projects and assignments DE4(9-12) • Self reflection assignments will be integrated to ensure that students can personalize the material P3(9-12) • Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12) • Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)	
Teacher Resources: NGPF Semester Course	

Unit 8 - Budgeting

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:
Investing
4a: Describe the impact of inflation on prices over time
Earning Income
7c: Differentiate between gross, net and taxable income
Managing Credit
6a: Identify examples of loans that may require down payments
6b: Given the price of a home, estimate the amount of down payment required
Spending
1a: Identify their short-term and long-term financial goal
1b: Develop a budget to allocate current income to necessary and desired spending, including estimates for both fixed and variable expenses
1c: Explain methods for adjusting a budget for unexpected expenses or emergencies
1d: Evaluate the advantages of using budgeting tools, such as spreadsheets or apps
2b: Describe a process for making an informed consumer decision
4a: List different ways retailers advertise the prices of their products
4b: Describe how inflation affects purchase decisions and the price of goods and services
6a: Identify financial and personal reasons that younger adults often choose to rent a home instead of buying
6b: Compare the short-term and long-term costs and benefits of renting versus buying a home in their city of residence

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that...
- Budgeting helps them track their income and expenses, prioritize spending, and achieve their financial goals.
- Budgeting teaches them to allocate their resources wisely by

Essential Questions:
- What is the importance of creating and following a budget?
- What are the key components of a budget?
- How can we track and categorize our financial transactions to

prioritizing needs over wants. ● A budget is a dynamic tool that requires regular adjustments and discipline to maintain. ● Saving regularly is essential for financial security and future planning. ● Budgeting teaches how to manage debt responsibly by avoiding excessive borrowing and paying off existing debt systematically.	create an accurate and realistic budget? ● How can we differentiate between fixed expenses and variable expenses in our budget? ● What strategies can we use to stick to a budget and show financial restraint? ● What are the potential benefits of using budgeting tools and apps to manage our finances? ● How can technology assist us in the budgeting process? ● How can we develop effective budgeting strategies for achieving short-term goals (e.g., saving for a vacation) and long-term goals (e.g., buying a home, retirement planning)?
Students will know... ● The difference between gross pay and net pay ● How to research and choose appropriate budgeting apps to meet specific needs ● How to create a budget on a salaried adult's income and adjust it as required ● How inflation affects one's ability to budget for food ● How to compare the popularity of various transportation methods in the United States	**Students will be able to...** ● Describe the purpose of a budget ● Classify expenses as needs and wants ● List the different categories of expenses ● Explain how four different budgeting strategies work ● Weigh the pros and cons of each budgeting strategy ● Prioritize many factors when deciding where to live ● Identify ways to reduce their transportation costs ● Understand the financial implications and overall tradeoffs of using different transportation options ● Estimate the costs of buying food ● Detail strategies for lowering a dining out budget
Key Vocabulary: Income, Expenses, Budget, Fixed expenses, Variable expenses, Discretionary spending, Savings, Emergency fund, Debt repayment, Net income, Gross income, Budget surplus, Budget deficit, Financial goals, Envelope system, Zero-based budgeting, Budget tracker, Budget categories, Financial planner, Financial literacy	
Assessment Evidence	
Performance Tasks: Student Activity Packets: Budgeting Basics Budgeting Strategies Budgeting for Housing Budgeting for Transportation Budgeting for Food Build Your Budget	**Other Evidence:** Interim: CASE STUDY: How Do I Budget? PROJECT: Budgeting with Roommates Summative: Budgeting Unit Test

Learning Plan
NGPF Semester Long Curriculum Documents ● Students will explore how their values shape their money decisions in questionnaires and virtual learning labs TCC4(9-12) ● Discussion boards and questionnaires will be used to answer questions and view the thoughts and opinions of classmates and the instructor. CCE1(9-12) ● Students will work with others on group projects and assignments DE4(9-12) ● Self reflection assignments will be integrated to ensure that students can personalize the material P3(9-12) ● Students will use simulations and other instructional methods that are skill based and can adjust the content to what learning style fits best for them AA1(9-12) ● Group projects and assessments will provide opportunities for students to explore how the content can be used in the future. AA4(9-12)
Teacher Resources: NGPF Semester Course

AP French Language and Culture CURRICULUM



AP® French Language and Culture

Grade Level(s): 11-12

Curriculum Author(s): Kate Peterson

Course Description: The three modes of communication—Interpretive, Interpersonal, and Presentational—defined in the World Readiness Standards for Learning Languages, are foundational to the AP French Language and Culture course. The AP course provides students with opportunities to demonstrate their proficiency in each of the three modes in the Intermediate to Advanced range, as described in the ACTFL Performance Descriptors for Language Learners. As such, the course has been designed to provide high school students with a rich and rigorous opportunity to study the language and cultures of the French Speaking world.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Families in Different Societies	What constitutes a family in French speaking societies?	There exist societal, economical, and cultural factors which determine the concept and role of the family.	TCC2(9-12), CCE4(9-12), DE1(9-12), AA2(9-12)
The Influence of Language and Culture on Identity	How does language and culture influence identity in French-speaking societies?	Science, technology, social media, art and advertising all have a profound effect on shaping personal and public identity.	TCC4(9-12), CCE1(9-12), CCE4(9-12), DE1 (9-12), TI3(9-12), P3(9-12)
Influences of Beauty and Art	How does art and the concept of beauty influence and shape values in society and culture?	Art and aesthetics play an essential role in shaping culture and societal values and are a reflection of each generation.	TCC3(9-12),CCE3(9-12) TI2(9-12), P3(9-12)
How Science and Technology Affect Our Lives	What are the cultural influences that drive scientific and technological advances, and what are the ethical concerns associated with those advances?	There are numerous effects on people's lives in French speaking countries due to innovations in science and technology. How will advances in these fields affect the future of the francophone world?	TCC2(9-12), TCC3(9-12), CCE4(9-12), TI2(9-12), P4(9-12)
Factors That Impact the Quality of Life	What factors determine how we define 'quality of life'?	There are a number of factors which determine the quality of life, both internal and external.	TCC1(9-12), CCE4(9-12), DE1(9-12), P2(9-12), AA2(9-12)
Environmental, Political, and Societal Challenges	How do societal issues affect an individual and society?	Each francophone community around the world has its own set of environmental, social and economic factors which have unique effects on its society.	TCC1(9-12), CCE4(9-12), DE1(9-12), P2(9-12), AA2(9-12)

Unit 1 - Families in Different Societies

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals: *Standards based on the French Language and Culture Exam Course Description. For more information visit: www.collegeboard.org

1.A: Describe the literal meaning of the text.
- 1.A.1: Identify the main idea.
- 1.A.2: Identify supporting/relevant details.
- 1.A.3: Retell or summarize information in narrative form.

3.A: Interpret the distinguishing features of a text.
- 3.A.1: Identify the intended audience.
- 3.A.2: Identify the purpose.
- 3.A.3: Identify and/or describe the point(s) of view, perspective(s), tone, or attitude.

3.B: Interpret the meaning of a text.
- 3.B.2: Infer implied meanings through context.

4.A: Determine the meaning of familiar and unfamiliar words.
- 4.A.1: Determine the meaning of a variety of vocabulary.
- 4.A.2: Deduce the meaning of unfamiliar words or expressions.

4.B: Use words appropriate for a given context.
- 4.B.1: Use a variety of vocabulary in written and spoken communication.
- 4.B.2: Explain and use idiomatic and culturally authentic expressions.

5.A: Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.A.1: Initiate, maintain, and close spoken exchanges.
- 5.A.2: Comprehend an interlocutor's message in spoken exchanges.
- 5.A.3: Provide and obtain relevant information in spoken exchanges.
- 5.A.4: Use appropriate register and greeting for the intended target culture audience in spoken exchanges.
- 5.A.5: Use pronunciation that is comprehensible when interacting with speakers of the target language in spoken exchanges.
- 5.A.6: Use effective intonation patterns, pacing, and delivery when interacting with speakers of the target language in spoken exchanges.
- 5.A.7: Use communication strategies such as circumlocution, requesting clarification, asking for repetition, and paraphrasing to maintain

spoken exchanges.

5.B: Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.
5.B.1: Use a variety of grammar and syntax in spoken exchanges.
5.B.2: Use transitional expressions and cohesive devices in spoken exchanges.
5.B.3: Comprehend and produce simple, compound, and complex sentences in a variety of time frames in spoken exchanges.
5.B.4: Monitor language production; recognize errors and attempt self-correction in spoken exchanges.

6.A: Understand and apply appropriate communication strategies in interpersonal writing.
6.A.1: Initiate, maintain, and close written exchanges.
6.A.2: Provide and obtain relevant information in written exchanges.
6.A.3: Use a variety of grammar and syntax in written exchanges.
6.A.4: Use register appropriate for the intended target culture audience in written exchanges.
6.A.5: Use communication strategies such as circumlocution, requesting clarification, and paraphrasing to maintain written exchanges**.**

6.B: Understand and apply appropriate and varied syntactical expressions in interpersonal writing.
6.B.1: Use transitional expressions and cohesive devices to create paragraph-length discourse in written exchanges.
6.B.2: Comprehend and produce simple, compound, and complex sentences in a variety of time frames in written exchanges.
6.B.3: Use standard conventions of the written language (e.g., capitalization, orthography, accents, punctuation) in written exchanges.
6.B.4: Monitor language production; recognize errors and attempt self-correction in written exchanges.

7.A: Plan and research an issue or topic for presentational speaking.
7.A.1: Use a process to plan spoken presentations.
7.A.2: Use research strategies to gather information and evidence for inclusion in spoken presentations.

7.B: Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.
7.B.1: Produce spoken presentations in the appropriate register with an introduction, development of topic, and conclusion.
7.B.2: Use transitional expressions and cohesive devices to create paragraph-length discourse in spoken presentations.
7.B.3: Use pronunciation in spoken presentations that is comprehensible to speakers of the target language.
7.B.4: Use effective intonation patterns, pacing, and delivery in spoken presentations.
7.B.5: Use communication strategies such as circumlocution and paraphrasing to maintain spoken presentations.

7.C: Use appropriate language and vocabulary for the intended audience in presentational speaking.
7.C.1: Use a variety of grammar and syntax in spoken presentations.
7.C.2: Produce simple, compound, and complex sentences in a variety of time frames in spoken presentations.

7.C.3: Monitor language production; recognize errors and attempt self-correction in spoken presentations.

7.D: Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.
7.D.1: Explain ideas and opinions with examples in spoken presentations.
7.D.2: Compare features (including products, practices, and perspectives) of target cultural communities to those of the student's own community in spoken presentations.

Vision of A Learner Attributes:

TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.
P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.
AA2(9-12): I can assess my past successes and mistakes to change my approach.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.

Understandings: Students will understand that...

- Families shape values and traditions, as well as personal beliefs and personal interests.
- Families face challenges such as access to education and availability of employment.
- The concept and role of families in contemporary societies are constantly evolving.

Essential Questions:

- What constitutes a family in French Speaking societies?
- What are some important aspects of family values and family life in the francophone world?
- What challenges do francophone families face in today's world?

Students will know...

- Societal and economic factors can determine family structure and individual roles.

Students will be able to…

- Describe the literal meaning of the text.
- Describe data.

• How the concept of family has changed over time in French-speaking families.	• Interpret the distinguishing features of a text. • Determine the meaning of familiar and unfamiliar words. • Use words appropriate for a given context. • Apply appropriate communication strategies in interpersonal speaking. • Apply appropriate and varied syntactical expressions in interpersonal speaking. • Apply appropriate communication strategies in interpersonal writing. • Apply appropriate and varied syntactical expressions in interpersonal writing. • Plan and research an issue or topic for presentational speaking • Use appropriate vocal and visual strategies to communicate an idea in presentational speaking. • Use appropriate language and vocabulary for the intended audience in presentational speaking. • Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.
Key Vocabulary: la famille monoparentale/recopmposée, la femme au foyer, les liens familiaux, le conflit conjugal, les moeurs, veuf/veuve, la retraite, une échelle des valeurs, accorder l'autonomie à, les rapports, faire confiance à, se sentir à l'aise, soutenir, un colocataire, déménager, s'installer, louer, la facteur, les frais, un citoyen, le témoin, les noces	
Assessment Evidence	
Performance Tasks: • Free Response Email reply • Free Response Conversation (listening and oral response) • Cultural Presentation (describe and explain the role of family in a specific francophone country)	**Other Evidence:** **Formative assessments:** • Promotional Materials: "AP Central: Martinique" • Letter: ""Une lettre à vos petit-enfants qui parle de traditions" • Conversation and Chart: ""Grignoter en Randonnée" • Email Reply: "Une Admission à l'Institut de Diambars" • Conversation: "Le Bénévolat"
Learning Plan	
• **TCC2(9-12):** Cultural Presentation (describe and explain the role of family in a specific francophone country)	

- **CCE4(9-12):** Cultural Presentation (describe and explain the role of family in a specific francophone country), Free Response Conversation (listening and oral response)
- **DE1(9-12):** Conversation:

Teacher Resources:

- Thèmes: vistahigherlearning.com
- United Nations website: *https://www.un.org/es/*
- Teacher and student selected resources including articles, texts, TED Talks, documentaries, etc.
- Google Docs, Google Slides, Google Shared Drive, Google Classroom
- College Board released AP French Language and Culture student samples, scorings guidelines, and rubrics
- AP Classroom - AP French Workshop Handbook and Resources (CollegeBoard)

Unit 2 - The Influence of Language and Culture on Identity

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals: *Standards based on the French Language and Culture Exam Course Description For more information visit: www.collegeboard.org.

1.A: Describe the literal meaning of the text.
- 1.A.1: Identify the main idea.
- 1.A.2: Identify supporting/relevant details.
- 1.A.3: Retell or summarize information in narrative form.

1.B: Describe data.
- 1.B.1: Identify and describe patterns and trends in data.

2.A: Make cultural connections.
- 2.A.1: Identify and/or describe content and connections among cultural topics.
- 2.A.3: Explain how information from a text connects or relates to the target cultural topics or phenomena.

2.B: Make connections in and across disciplines.
- 2.B.3: Explain how information from a text connects or relates to interdisciplinary topics or phenomena.

3.A: Interpret the distinguishing features of a text.
- 3.A.1: Identify the intended audience.
- 3.A.2: Identify the purpose.
- 3.A.3: Identify and/or describe the point(s) of view, perspective(s), tone, or attitude.

4.A: Determine the meaning of familiar and unfamiliar words.
- 4.A.2: Deduce meaning of unfamiliar words or expressions.

4.B: Use words appropriate for a given context.
- 4.B.1: Use a variety of vocabulary in written and spoken communication.
- 4.B.2: Explain and use idiomatic and culturally authentic expressions.

7.A: Plan and research an issue or topic for presentational speaking.
- 7.A.1: Use a process to plan spoken presentations.

7.A.2: Use research strategies to gather information and evidence for inclusion in spoken presentations.

7.B: Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.
7.B.1: Produce spoken presentations in the appropriate register with an introduction, development of topic, and conclusion.
7.B.2: Use transitional expressions and cohesive devices to create paragraph-length discourse in spoken presentations.
7.B.3: Use pronunciation in spoken presentations that is comprehensible to speakers of the target language.
7.B.4: Use effective intonation patterns, pacing, and delivery in spoken presentations.
7.B.5: Use communication strategies such as circumlocution and paraphrasing to maintain spoken presentations.

7.C: Use appropriate language and vocabulary for the intended audience in presentational speaking.
7.C.1: Use a variety of grammar and syntax in spoken presentations.
7.C.2: Produce simple, compound, and complex sentences in a variety of time frames in spoken presentations.
7.C.3: Monitor language production; recognize errors and attempt self-correction in spoken presentations.

7.D: Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.
7.D.1: Explain ideas and opinions with examples in spoken presentations.
7.D.2: Compare features (including products, practices, and perspectives) of target cultural communities to those of the student's own community in spoken presentations.

8.A: Plan and research an issue or topic for presentational writing.
8.A.1: Use a process to plan written presentations.
8.A.2: Use research strategies to gather information and evidence for inclusion in written presentations.

8.B: Use appropriate writing strategies to communicate an idea for presentational writing.
8.B.1: Produce written presentations in the appropriate register with an introduction, development of topic, and a conclusion.
8.B.2: Use communication strategies such as circumlocution and paraphrasing to maintain written presentations.

8.C: Understand and apply appropriate and varied syntactical expressions in presentational writing.
8.C.1: Use transitional expressions and cohesive devices to create paragraph-length discourse in written presentations.
8.C.2: Use a variety of grammar and syntax in written presentations.
8.C.3: Produce simple, compound, and complex sentences in a variety of time frames in written presentations.
8.C.4: Use standard conventions of the written language (e.g., capitalization, orthography, accents, punctuation) in written presentations.
8.C.5: Monitor language production; recognize errors and attempt self-correction in written presentations.

8.D: Express a perspective with details and examples to illustrate an opinion or idea for written presentations.
8.D.1: Explain ideas and opinions with examples in written presentations.

8.D.2: Integrate information from sources and cite them appropriately in written presentations.

Vision of A Learner Attributes:

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
TI3(9-12): I can formulate and investigate probing questions to further my learning.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.

Understandings: Students will understand...

- There are relationships between language and identity including the impacts and influences that technology, social media, art, and advertising all have on personal identity.

Essential Questions:

- How does one's identity evolve over time?
- How does language shape our cultural identity?
- How does technology influence the development of personal and public identity?
- How does the art of a community reflect its public identity?

Students will know...

- One's personal and public identity are consistently evolving.
- There are numerous social, economic, linguistic and cultural factors that shape who we are.

Students will be able to…

- Describe the literal meaning of the text.
- Describe data.
- Make cultural connections.
- Make connections in and across disciplines.
- Interpret the distinguishing features of a text.
- Determine the meaning of familiar and unfamiliar words.
- Use words appropriate for a given context.
- Plan and research an issue or topic for presentational speaking.
- Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.
- Use appropriate language and vocabulary for the intended audience in presentational speaking.
- Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.
- Plan and research an issue or topic for presentational writing.

	• Use appropriate writing strategies to communicate an idea for presentational writing. • Understand and apply appropriate and varied syntactical expressions in presentational writing. • Express a perspective with details and examples to illustrate an opinion or idea for written presentations.
Key Vocabulary: la quête de soi, une croyance, un système de valeurs, la pluriculturalisme, un immigré, un pays d'acceuil, le pays natal, un défilé, les feux d'artifice, la loi, la burqua, l'argot, maghrébin(e), musulman(e), un imam, un griot, juif, l'athéisme, laïc, laïque, la laïcité, Dieu, la patrie, valoriser, le patrimoine, la frontière ouverte, un autochtone, le métissage, le tatouage	
Assessment Evidence	
Performance Tasks: • Cultural Presentation (describe and explain how clothes/fashion defines identity in a specific francophone country and compare similar aspects in the United States) • Argumentative Essay (Establish a position on whether Globalization has positive or negative effects on countries throughout the world). • Unit 2 Progress check (MCQs)	**Other Evidence:** Formative assessments: • Cultural Comparison Quiz (Oral recording) • Article Report and Audio Quiz (MCQs based on text and audio) • Literary Text Quiz (MCQs based on a short literary text)
Learning Plan	
• **TCC4(9-12):** *Summative:* Cultural Comparison Presentation • **CCE4(9-12):** *Summative:* Argumentative Essay (Globalization) • **TI3(9-12):** *Summative:* Cultural Comparison Presentation (Language and identity)	
Teacher Resources: • TV5Unis - La Belle Vie • VOCES Notre Histoire 4: Unité 1 "En quoi est-ce que tu crois?" • Teacher and student selected resources including articles, texts, TED Talks, documentaries, etc. • Google Docs, Google Slides, Google Shared Drive, Google Classroom • College Board released AP French Language and Culture student samples, scorings guidelines, and rubrics • AP Classroom	

Unit 3 - Influences of Beauty and Art

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals: *Standards based on the French Language and Culture Exam Course Description. For more information visit: www.collegeboard.org.

1.A: Describe the literal meaning of the text.
- 1.A.1: Identify the main idea.
- 1.A.2: Identify supporting / relevant details.
- 1.A.3: Retell or summarize information in narrative form.

2.B: Make connections in and across disciplines.
- 2.B.1: Identify and/or describe content and connections among interdisciplinary topics.
- 2.B.2: Explain how data from a graph or table illustrate interdisciplinary topics or phenomena.
- 2.B.4: Infer interdisciplinary information from a text.

3.A: Interpret the distinguishing features of a text.
- 3.A.2: Identify the purpose.
- 3.A.4: Identify organizing and/or rhetorical structures and/or strategies.

3.B: Interpret the meaning of a text.
- 3.B.1: Identify and/or describe similarities and/or differences among different types of texts.
- 3.B.2: Infer implied meanings through context.

4.A: Determine the meaning of familiar and unfamiliar words.
- 4.A.2: Deduce the meaning of unfamiliar words or expressions.

4.B: Use words appropriate for a given context.
- 4.B.1: Use a variety of vocabulary in written and spoken communication.
- 4.B.2: Explain and use idiomatic and culturally authentic expressions.

5.A: Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.A.1: Initiate, maintain, and close spoken exchanges.
- 5.A.2: Comprehend an interlocutor's message in spoken exchanges.

5.A.3: Provide and obtain relevant information in spoken exchanges.
5.A.4: Use appropriate register and greeting for the intended target culture. audience in spoken exchanges.
5.A.5: Use pronunciation that is comprehensible when interacting with speakers of the target language in spoken exchanges.
5.A.6: Use effective intonation patterns, pacing, and delivery when interacting with speakers of the target language in spoken exchanges.
5.A.7: Use communication strategies such as circumlocution, requesting clarification, asking for repetition, and paraphrasing to maintain spoken exchanges.

5.B: Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.
5.B.1: Use a variety of grammar and syntax in spoken exchanges.
5.B.2: Use transitional expressions and cohesive devices in spoken exchanges.
5.B.3: Comprehend and produce simple, compound, and complex sentences in a variety of time frames in spoken exchanges.
5.B.4: Monitor language production; recognize errors and attempt self-correction in spoken exchanges.

6.A: Understand and apply appropriate communication strategies in interpersonal writing.
6.A.1: Initiate, maintain, and close written exchanges.
6.A.2: Provide and obtain relevant information in written exchanges.
6.A.3: Use a variety of grammar and syntax in written exchanges.
6.A.4: Use a register appropriate for the intended target culture. audience in written exchanges.
6.A.5: Use communication strategies such as circumlocution, requesting clarification, and paraphrasing to maintain written exchanges.

6.B: Understand and apply appropriate and varied syntactical expressions in interpersonal writing.
6.B.1: Use transitional expressions and cohesive devices to create paragraph-length discourse in written exchanges.
6.B.2: Comprehend and produce simple, compound, and complex sentences in a variety of time frames in written exchanges.
6.B.3: Use standard conventions of the written language (e.g., capitalization, orthography, accents, punctuation) in written exchanges.
6.B.4: Monitor language production; recognize errors and attempt self-correction in written exchanges.

7.A: Plan and research an issue or topic for presentational speaking.
7.A.1: Use a process to plan spoken presentations.
7.A.2: Use research strategies to gather information and evidence for inclusion in spoken presentations.

7.B: Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.
7.B.1: Produce spoken presentations in the appropriate register with an introduction, development of topic, and conclusion.
7.B.2: Use transitional expressions and cohesive devices to create paragraph-length discourse in spoken presentations.
7.B.3: Use pronunciation in spoken presentations that is comprehensible to speakers of the target language.
7.B.4: Use effective intonation patterns, pacing, and delivery in spoken presentations.
7.B.5: Use communication strategies such as circumlocution and paraphrasing to maintain spoken presentations.

7.C: Use appropriate language and vocabulary for the intended audience in presentational speaking.
7.C.1: Use a variety of grammar and syntax in spoken presentations.
7.C.2: Produce simple, compound, and complex sentences in a variety of time frames in spoken presentations.
7.C.3: Monitor language production; recognize errors and attempt self-correction in spoken presentations.

7.D: Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.
7.D.1: Explain ideas and opinions with examples in spoken presentations.
7.D.2: Compare features (including products, practices, and perspectives) of target cultural communities to those of the student's own community in spoken presentations.

Vision of A Learner Attributes:
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
TI2(9-12): I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.

Understandings: Students will understand that...	**Essential Questions:**
● Art and aesthetics play an essential role in shaping culture and societal values. ● The type and medium of popular art (including music, dance, architecture) varies by country ● The role art plays in culture varies between the U.S. and individual francophone countries.	● How does art and the concept of beauty influence and shape values in society and culture? ● What are the art mediums in francophone countries and how do they influence culture and society?
Students will know... ● Art and aesthetics have a profound impact on our daily lives. ● Art both reflects as well as challenges cultural perspectives. ● Ways in which art is used to record history as well as communicate shared values.	**Students will be able to…** ● Identify point of view and purpose. ● infer meanings. ● Summarize content. ● Identify themes or morals. ● Explain and compare cultural products, practices, and perspectives. ● Read and deconstruct letters which inform students about the features of written interpersonal communication ● Build skills in reading and responding to emails. ● Prepare a present a two-minute comparison between their

	community and a francophone community • Deliver an organized presentation with a thesis statement and supporting evidence. • Build their repertoire of transitional and cohesive expressions to make more effective comparisons.
Key Vocabulary: l'architecture, les beaux-arts, les arts plastiques, peindre, un chef d'oeuvre, le beau/la beauté, les canons de beauté, un écrivain, un spectacle, percevoir, juger, un réalisateur, une intrigue, un personnage principal, un débutant, les lieux historiques, une peinture/un tableau, l'estime de soi, avoir honte, le savoir-faire, les vestiges, la gastronomie, agréable à voir/entendre, se dérouler, une exposition (d'art), les exigences, une ride, le bien-être, le maquillage	
Assessment Evidence	
Performance Tasks: • Summative #1: Free Response Writing, Email Reply. • Summative #2: Free Response Oral, Guided conversation. • Summative #3: MCQ Reading Text/Literature.	**Other Evidence:** Interim Assessments: • Cultural Comparison Presentation: Free response comparing "le beau" with a particular francophone country and the U.S. • Article Report and Audio Quiz (MCQs based on text and audio) • Literary Text Quiz (MCQs based on a short literary text) • Sentence structure and syntax practice
Learning Plan	
• **TCC3(9-12):** Interim: Sentence structure and syntax practice • **CCE3(9-12)**: Interim: Cultural Comparison Presentation: Free response comparing an aspect of Unit 3 with a particular francophone country and the U.S. • **TI2(9-12):** Summative #2: Free Response Oral, Guided conversation. • **P3(9-12):** Summative #1: Free Response Writing, Email Reply.	
Teacher Resources: • VOCES Notre Histoire 4: Chapitre 6 "L'art de la parole" • TV5Unis: Encre dans la peau • Teacher and student selected resources including articles, texts, TED Talks, documentaries, etc. • Google Docs, Google Slides, Google Shared Drive, Google Classroom • College Board released AP French Language and Culture student samples, scorings guidelines, and rubrics • AP Classroom	

Unit 4 - How Science and Technology Affect Our Lives

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals: Established Goals: *Standards based on the French Language and Culture Exam Course Description. For more information visit: www.collegeboard.org.

1.A: Describe the literal meaning of the text.
- 1.A.1: Identify the main idea.
- 1.A.3: Retell or summarize information in narrative form.

1.B: Describe data.
- 1.B.1: Identify and describe patterns and trends in data.
- 1.B.2: Describe data from a table, chart, graph, map, or infographic.

2.B: Make connections in and across disciplines.
- 2.B.1: Identify and/or describe content and connections among interdisciplinary topics.
- 2.B.2: Explain how data from a graph or table illustrate interdisciplinary topics or phenomena.
- 2.B.4: Infer interdisciplinary information from a text.

3.A: Interpret the distinguishing features of a text.
- 3.A.1: Identify the intended audience.
- 3.A.2: Identify the purpose.
- 3.A.3: Identify and/or describe the point(s) of view, perspective(s), tone, or attitude.

4.A: Determine the meaning of familiar and unfamiliar words.
- 4.A.2: Deduce the meaning of unfamiliar words or expressions.

4.B: Use words appropriate for a given context.
- 4.B.1: Use a variety of vocabulary in written and spoken communication.
- 4.B.2: Explain and use idiomatic and culturally authentic expressions.

7.A: Plan and research an issue or topic for presentational speaking.
- 7.A.1: Use a process to plan spoken presentations.
- 7.A.2: Use research strategies to gather information and evidence for inclusion in spoken presentations.

7.B: Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.

7.B.1: Produce spoken presentations in the appropriate register with an introduction, development of topic, and conclusion.
7.B.2: Use transitional expressions and cohesive devices to create paragraph-length discourse in spoken presentations.
7.B.3: Use pronunciation in spoken presentations that is comprehensible to speakers of the target language.
7.B.4: Use effective intonation patterns, pacing, and delivery in spoken presentations.
7.B.5: Use communication strategies such as circumlocution and paraphrasing to maintain spoken presentations.

7.C: Use appropriate language and vocabulary for the intended audience in presentational speaking.

7.C.1: Use a variety of grammar and syntax in spoken presentations.
7.C.2: Produce simple, compound, and complex sentences in a variety of time frames in spoken presentations.
7.C.3: Monitor language production; recognize errors and attempt self-correction in spoken presentations.

7.D: Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.

7.D.1: Explain ideas and opinions with examples in spoken presentations.
7.D.2: Compare features (including products, practices, and perspectives) of target cultural communities to those of the student's own community in spoken presentations.

8.A: Plan and research an issue or topic for presentational writing.

8.A.1: Use a process to plan written presentations.
8.A.2: Use research strategies to gather information and evidence for inclusion in written presentations.

8.B: Use appropriate writing strategies to communicate an idea for presentational writing.

8.B.1: Produce written presentations in the appropriate register with an introduction, development of topic, and a conclusion.
8.B.2: Use communication strategies such as circumlocution and paraphrasing to maintain written presentations.

8.C: Understand and apply appropriate and varied syntactical expressions in presentational writing.

8.C.1: Use transitional expressions and cohesive devices to create paragraph-length discourse in written presentations.
8.C.2: Use a variety of grammar and syntax in written presentations.
8.C.3: Produce simple, compound, and complex sentences in a variety of time frames in written presentations.
8.C.4: Use standard conventions of the written language (e.g., capitalization, orthography, accents, punctuation) in written presentations.
8.C.5: Monitor language production; recognize errors and attempt self-correction in written presentations.

8.D: Express a perspective with details and examples to illustrate an opinion or idea in written presentations.

8.D.1: Explain ideas and opinions with examples in written presentations.
8.D.2: Integrate information from sources and cite them appropriately in written presentations.

Vision of A Learner Attributes:
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
TI2(9-12): I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
P4(9-12): I can take-on challenges and continuously engage in my own long-term strategies to overcome them to demonstrate through personal experience that failures are more instructive than discouraging.

Understandings: Students will understand that...	**Essential Questions:**
● Scientific and technological innovations are driven by cultural factors. ● Scientific and technological advances have ethical considerations and that there may be societal consequences.	● What factors drive innovation and discovery in the fields of science and technology? ● What role do ethics play in scientific advancement? ● What are the social consequences of scientific or technological advancements?
Students will know... ● Developments in science can both create and resolve challenges in contemporary society. ● Technology creates new ways for us to connect with others and impacts and shapes our personal and public identities. ● Access to technology affects quality of life and can determine values and ethics in a society.	**Students will be able to…** ● Describe the literal meaning of the text. ● Describe data. ● Make connections in and across disciplines. ● Interpret the distinguishing features of a text. ● Determine the meaning of familiar and unfamiliar words. ● Use words appropriate for a given context. ● Plan and research an issue or topic for presentational speaking. ● Use appropriate vocal and visual strategies to communicate an idea in presentational speaking. ● Use appropriate language and vocabulary for the intended audience in presentational speaking. ● Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking. ● Plan and research an issue or topic for presentational writing. ● Use appropriate writing strategies to communicate an idea for presentational writing. ● Understand and apply appropriate and varied syntactical expressions in presentational writing. ● Express a perspective with details and examples to illustrate an

	opinion or idea in written presentations.

Key Vocabulary: le cyber-harcèlement, une adresse e-mail, un mot de passe, un moteur de recherche, un outil, un mouchard, effacer, télécharger, guérir, code de verrouillage, soigner, néfaste, délaisser, être accro à, envisager, réfractaire à, de pointe, un brevet d'invention, une découverte capitale, un bienfait, la survie, le dénouement, un lien, en ligne, les réseaux sociaux, le vol d'identité, brancher, faciliter, mettre fin à qch., branché/démodé, fiable, les retombées, la réussite, un chantier majeur de recherches, la tâche, le cerveau

Assessment Evidence

Performance Tasks:

- Summative #1: Argumentative essay (Science/Tech related prompt)
- Summative #2: Free Response Oral Presentation
- Summative #3: Cultural Comparison Presentation

Other Evidence:

- Article Report and Chart Quiz (MCQs based on text and infographic)
- Interview MCQs (based on interview audio)
- Progress Check, MCQs (based on audio and text sources)
- Sentence structure and syntax interim

Learning Plan

- **TCC2(9-12):** Summative #1: Argumentative essay (Science/Tech related prompt)
- **TCC3(9-12)**: -Sentence structure and syntax interim
- **CCE4(9-12)**: Summative #1: Argumentative essay (Science/Tech related prompt)
- **TI2(9-12)**: Summative #3: Cultural Comparison Presentation
- **P4(9-12)**: Summative #2: Free Response Oral Presentation (written and oral feedback provided to all students)

Teacher Resources:

- Thèmes (vistahigherlearning): Unité 2: "La technologie et ses effets sur la société"
- Les Impacts positifs de la technologie sur la société - Medium
- Teacher and student selected resources including articles, texts, TED Talks, documentaries, etc.
- Google Docs, Google Slides, Google Shared Drive, Google Classroom
- College Board released AP Spanish Language and Culture student samples, scorings guidelines, and rubrics
- AP Classroom

Unit 5 - Factors That Impact the Quality of Life

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals: Established Goals: Established Goals: *Standards based on the French Language and Culture Exam Course Description. For more information visit: www.collegeboard.org.

1.B: Describe data.
- 1.B.2: Describe data from a table, chart, graph, map, or infographic.

2.A: Make cultural connections.
- 2.A.1: Identify and/or describe content and connections among cultural topics.
- 2.A.2: Explain how data from a graph or table illustrate cultural topics or phenomena.
- 2.A.3: Explain how information from a text connects or relates to the target cultural topics or phenomena.

3.A: Interpret the distinguishing features of a text.
- 3.A.2: Identify the purpose.
- 3.A.3: Identify and/or describe the point(s) of view, perspective(s), tone, or attitude.
- 3.A.4: Identify organizing and/or rhetorical structures and/or strategies.

3.B: Interpret the meaning of a text.
- 3.B.1: Identify and/or describe similarities and/or differences among different types of texts.
- 3.B.2: Infer implied meanings through context.

4.A: Determine the meaning of familiar and unfamiliar words.
- 4.A.1: Determine the meaning of a variety of vocabulary.
- 4.A.2: Deduce the meaning of unfamiliar words or expressions.

4.B: Use words appropriate for a given context.
- 4.B.1: Use a variety of vocabulary in written and spoken communication.
- 4.B.2: Explain and use idiomatic and culturally authentic expressions.

5.A: Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.A.1: Initiate, maintain, and close spoken exchanges.
- 5.A.2: Comprehend an interlocutor's message in spoken exchanges.
- 5.A.3: Provide and obtain relevant information in spoken exchanges.

5.A.4: Use appropriate register and greeting for the intended target culture. audience in spoken exchanges.
5.A.5: Use pronunciation that is comprehensible when interacting with speakers of the target language in spoken exchanges.
5.A.6: Use effective intonation patterns, pacing, and delivery when interacting with speakers of the target language in spoken exchanges.
5.A.7: Use communication strategies such as circumlocution, requesting clarification, asking for repetition, and paraphrasing to maintain spoken exchanges.

6.A: Understand and apply appropriate communication strategies in interpersonal writing.
6.A.1: Initiate, maintain, and close written exchanges.
6.A.2: Provide and obtain relevant information in written exchanges.
6.A.3: Use a variety of grammar and syntax in written exchanges.
6.A.4: Use register appropriate for the intended target culture. audience in written exchanges.
6.A.5: Use communication strategies such as circumlocution, requesting clarification, and paraphrasing to maintain written exchanges.

6.B: Understand and apply appropriate and varied syntactical expressions in interpersonal writing.
6.B.1: Use transitional expressions and cohesive devices to create paragraph-length discourse in written exchanges.
6.B.2: Comprehend and produce simple, compound, and complex sentences in a variety of time frames in written exchanges.
6.B.3: Use standard conventions of the written language (e.g., capitalization, orthography, accents, punctuation) in written exchanges.
6.B.4: Monitor language production; recognize errors and attempt self-correction in written exchanges.

7.A: Plan and research an issue or topic for presentational speaking.
7.A.1: Use a process to plan spoken presentations.
7.A.2: Use research strategies to gather information and evidence for inclusion in spoken presentations.

7.B: Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.
7.B.1: Produce spoken presentations in the appropriate register with an introduction, development of topic, and conclusion.
7.B.2: Use transitional expressions and cohesive devices to create paragraph-length discourse in spoken presentations.
7.B.3: Use pronunciation in spoken presentations that is comprehensible to speakers of the target language.
7.B.4: Use effective intonation patterns, pacing, and delivery in spoken presentations.
7.B.5: Use communication strategies such as circumlocution and paraphrasing to maintain spoken presentations.

7.C: Use appropriate language and vocabulary for the intended audience in presentational speaking.
7.C.1: Use a variety of grammar and syntax in spoken presentations.
7.C.2: Produce simple, compound, and complex sentences in a variety of time frames in spoken presentations.
7.C.3: Monitor language production; recognize errors and attempt self-correction in spoken presentations.

7.D: Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.
7.D.1: Explain ideas and opinions with examples in spoken presentations.

7.D.2: Compare features (including products, practices, and perspectives) of target cultural communities to those of the student's own community in spoken presentations.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
- CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
- DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
- P2(9-12): I can strengthen my weaknesses by identifying, initiating, and practicing appropriate strategies to become confident in my ability to overcome my challenges.
- AA2(9-12): I can assess my past successes and mistakes to change my approach.

Understandings: Students will understand that...

- There are a number of factors which determine an individual's quality of life. These factors can be external or internal, and directly related to geography, access to health care, education, and socioeconomic levels.

Essential Questions:

- How do aspects of everyday life influence and relate to the quality of life?
- How does where one lives impact the quality of life?
- What influences one's interpretation and perceptions of the quality of life?

Students will know:

- Social status influences one's quality of life.
- Perception and traditions regarding quality of life vary by cultures and communities.
- the main determining factors of an individual's quality of life

Students will be able to:

- Describe data.
- Make cultural connections.
- Interpret the distinguishing features of a text.
- Determine the meaning of familiar and unfamiliar words.
- Use words appropriate for a given context.
- Understand and apply appropriate communication strategies in interpersonal speaking.
- Understand and apply appropriate and varied syntactical expressions in interpersonal writing.
- Plan and research an issue or topic for presentational speaking.
- Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.
- Use appropriate language and vocabulary for the intended audience in presentational speaking.
- Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.

Key Vocabulary: à mi-temps, animé, bosser, cibler, une usine, décoller, démissionner, échouer, efficace, emballer, embaucher/virer, empêcher, en pleine air, emporter, faire du lèche-vitrines, faire la grève, féliciter, gagner sa vie (son pain), gérer, les actualités, l'agence immobilière, l'argent de poche, une autoroute, l'embouteillage, l'enterrement, une bourse, une carte de voeux, une colonie de vacances, la frontière, la livraison, une lune de miel, une panne, la rédaction/composition, la veille, la terminale, le chômage, le sans-abri, faire une stage, le congé, le curriculum-vitae (le CV), le piéton, passer/rater un examen, se plaindre

Assessment Evidence

Performance Tasks:

- Summative #1: Email Response, Free Written Reply
- Summative #2: Guided Conversation, Advice to a friend
- Summative #3: Cultural Comparison, The Importance of College

Other Evidence:

- Literary Text Analysis- MCQs
- Conversation and Chart- Audio and infographic analysis- MCQs
- Interview-Audio source- MCQs

Learning Plan

- **TCC1(9-12):** Summative #3: Cultural Comparison, The Importance of College
- **CCE4(9-12):** Summative #1: Email Response, Free Written Reply
- **DE1(9-12):** Summative #2: Guided Conversation, Advice to a friend
- **P2(9-12):** Self reflection and teacher feedback throughout the Unit
- **AA2(9-12):** Self reflection based upon writing feedback

Teacher Resources:

- TV5Unis: Quelle Famille
- Thèmes (vistahigherlearning): Les Voyages (tourisme et écotourisme au Laos)
- Teacher and student selected resources including articles, texts, TED Talks, documentaries, etc.
- Google Docs, Google Slides, Google Shared Drive, Google Classroom
- College Board released AP Spanish Language and Culture student samples, scorings guidelines, and rubrics
- AP Classroom

Unit 6 - Environmental, Political, and Societal Challenges

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals: *Standards based on the French Language and Culture Exam Course Description. For more information visit: www.collegeboard.org.

1.A: Describe the literal meaning of the text.
- 1.A.1: Identify the main idea.
- 1.A.2: Identify supporting / relevant details.
- 1.A.3: Retell or summarize information in narrative form.

1.B: Describe data.
- 1.B.2: Describe data from a table, chart, graph, map, or infographic.

2.A: Make cultural connections.
- 2.A.3: Explain how information from a text connects or relates to the target cultural topics or phenomena.
- 2.A.4: Infer cultural information from a text.

3.A: Interpret the distinguishing features of a text.
- 3.A.3: Identify and/or describe the point(s) of view, perspective(s), tone, or attitude.
- 3.A.4: Identify organizing and/or rhetorical structures and/or strategies.

3.B: Interpret the meaning of a text.
- 3.B.2: Infer implied meanings through context.

4.A: Determine the meaning of familiar and unfamiliar words.
- 4.A.2: Deduce the meaning of unfamiliar words or expressions.

4.B: Use words appropriate for a given context.
- 4.B.1: Use a variety of vocabulary in written and spoken communication.
- 4.B.2: Explain and use idiomatic and culturally authentic expressions.

7.A: Plan and research an issue or topic for presentational speaking.
- 7.A.1: Use a process to plan spoken presentations.
- 7.A.2: Use research strategies to gather information and evidence for inclusion in spoken presentations.

7.B: Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.

7.B.1: Produce spoken presentations in the appropriate register with an introduction, development of topic, and conclusion.
7.B.2: Use transitional expressions and cohesive devices to create paragraph-length discourse in spoken presentations.
7.B.3: Use pronunciation in spoken presentations that is comprehensible to speakers of the target language.
7.B.4: Use effective intonation patterns, pacing, and delivery in spoken presentations.
7.B.5: Use communication strategies such as circumlocution and paraphrasing to maintain spoken presentations.

7.C: Use appropriate language and vocabulary for the intended audience in presentational speaking.

7.C.1: Use a variety of grammar and syntax in spoken presentations.
7.C.2: Produce simple, compound, and complex sentences in a variety of time frames in spoken presentations.
7.C.3: Monitor language production; recognize errors and attempt self-correction in spoken presentations.

7.D: Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.

7.D.1: Explain ideas and opinions with examples in spoken presentations.
7.D.2: Compare features (including products, practices, and perspectives) of target cultural communities to those of the student's own community in spoken presentations.

8.A: Plan and research an issue or topic for presentational writing.

8.A.1: Use a process to plan written presentations.
8.A.2: Use research strategies to gather information and evidence for inclusion in written presentations.

8.B: Use appropriate writing strategies to communicate an idea for presentational writing.

8.B.1: Produce written presentations in the appropriate register with an introduction, development of topic, and a conclusion.
8.B.2: Use communication strategies such as circumlocution and paraphrasing to maintain written presentations.

8.C: Understand and apply appropriate and varied syntactical expressions in presentational writing.

8.C.1: Use transitional expressions and cohesive devices to create paragraph-length discourse in written presentations.
8.C.2: Use a variety of grammar and syntax in written presentations.
8.C.3: Produce simple, compound, and complex sentences in a variety of time frames in written presentations.
8.C.4: Use standard conventions of the written language (e.g., capitalization, orthography, accents, punctuation) in written presentations.
8.C.5: Monitor language production; recognize errors and attempt self-correction in written presentations.

8.D: Express a perspective with details and examples to illustrate an opinion or idea in written presentations.

8.D.1: Explain ideas and opinions with examples in written presentations.

8.D.2: Integrate information from sources and cite them appropriately in written presentations.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
- CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
- DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
- P2(9-12): I can strengthen my weaknesses by identifying, initiating, and practicing appropriate strategies to become confident in my ability to overcome my challenges.
- AA2(9-12): I can assess my past successes and mistakes to change my approach.

Understandings: Students will understand that...

- Each community has its own set of environmental and economic factors and challenges which have unique effects on its society.

Essential Questions:

- How do environmental, political, and societal challenges positively and negatively impact communities?
- What role do individuals play in addressing complex societal issues?
- How do challenging issues affect a society's culture?

Students will know...

- The economic and environmental factors which impact society and politics.
- Ways that individuals can positively or negatively influence the world around them.
- Possible solutions that address contemporary global challenges.

Students will be able to...

- Describe the literal meaning of the text.
- Describe data.
- Make cultural connections.
- Interpret the distinguishing features of a text.
- Interpret the meaning of a text.
- Determine the meaning of familiar and unfamiliar words.
- Use words appropriate for a given context.
- Plan and research an issue or topic for presentational speaking.
- Use appropriate writing strategies to communicate an idea for presentational writing.
- Understand and apply appropriate and varied syntactical expressions in presentational writing.
- Express a perspective with details and examples to illustrate an opinion or idea in written presentations.

Key Vocabulary: le réchauffement climatique, l'espérance de vie, les maladies, une manque de, néfaste, les toxicomanes, les fusillades, la régulation des armes, le système de soins de santé, prendre conscience de, se rendre compte de, une crise, la sécheresse, la haine, les

resources s'épuisent, jetable, le gaspillage, une inondation, une canicule, les catastrophes naturelles, l'effet de serre, les grèves, une manifestation, les animaux en voie de disparition, un fléau, le SIDA, le pétrole brut, l'analphabétisme, un ouragan, le fossé des générations, la paix/;a guerre, la mondialisation, SMIC, le développement durable, les réfugiés, le tiers-monde, les besoins, l'espoir, l'eau potable, une disparité

Assessment Evidence

Performance Tasks:

- Summative #1: Argumentative Essay
- Summative #2: Cultural Comparison (Environment and Natural Resources)
- Summative #3: Cultural Presentation (describe and explain how environmental views and possibly concerns defines identity in a specific French speaking country and compare similar aspects in the United States)

Other Evidence:

- Article Report and Chart Quiz (MCQs based on text and chart/graph)
- Presentational Audio Quiz (MCQs based on presentational audio)
- General Proficiency practice and assessment (prior to AP Exam)

Learning Plan

- **TCC2(9-12)**: Summative #1: Argumentative essay (Environment/Natural Resources themed)
- **TCC1(9-12):** Summative #2: Cultural Comparison (Compare/Contrast the views regarding the environment based
- **TI2(9-12)**: Summative #3: Cultural Comparison Presentation

Teacher Resources:
VOCES Notre Histoire 4: Les Puits de Farida
Thèmes: Les défis mondiaux "l'alimentation et la santé"
AP Central workbook: "Sauvons le hockey, luttons contre les changements climatiques!
L'Histoire de VOCES: SOS Océane en Détresse
Une caméra caché sur le racisme Pembroke
United Nations Sustainable Development Goals

CULINARY ARTS I CURRICULUM



Grade Level(s): 9-12

Curriculum Author(s): John Dominello

Course Description: This introductory course provides students with foundational culinary skills that emphasize kitchen safety and sanitation, weights and measurements, reading recipes, proper use of equipment, knife skills, and the principles of baking as they work collaboratively in lab settings. Students will focus on the practical application of these skills and competencies while preparing a wide range of foods. Kitchen labs include loaf breads, muffins, biscuits, pies, tarts, cookies, pizza dough, pasta and soups. Real-world applications and Vision of a Learner attributes guide instructional design, preparing students for kitchen skills, culinary careers and lifelong wellness.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Introduction to Culinary Arts	How does understanding the culinary industry and safety standards help us prepare food safely and efficiently?	Understanding food safety, sanitation, and the culinary industry is essential for working in any food-related career or home kitchen.	TI1(9-12), CCE1(9-12), DE1(9-12), AA3(9-12)
Recipes, Measurements, and Cooking Techniques	Why is precision important in the culinary world?	Accurate measurements and proper techniques are essential for consistency, safety, and success in food preparation.	TCC2(9-12), CCE4(9-12), TI3(9-12)
Small Equipment and Knife Skills	How do tools and skills impact the final product?	Proper use of kitchen tools and techniques ensures safety and quality in food production.	P1(9-12), AA1(9-12), TCC4(9-12)
Quick Breads	How do ingredients and techniques affect baked goods?	The function of ingredients and methods of preparation directly influence texture, flavor, and presentation.	TCC3(9-12), TI2(9-12), CCE2(9-12)
Pie and Tart Dough	What makes pie dough, tart dough and pastry successful?	Understanding the science of fats, flour, and mixing methods creates successful baked products.	P3(9-12), TCC1(9-12), AA2(9-12)
Cookies	How do variables impact baking outcomes?	Mastery of cookie types and mixing techniques produces consistent, high-quality results.	TI4(9-12), CCE3(9-12), TCC3(9-12)
Pasta and Sauces	How do culture, creativity, and technique combine in successful pasta preparation?	Pasta and sauce reflect cultural traditions, personal creativity, and practiced culinary technique.	DE4(9-12), TCC4(9-12), CCE1(9-12)

Unit 1 - Introduction to Culinary Arts

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

A. Family and Consumer Science Skills: Develop a common core of skills related to Family and Consumer Science Education.
1. Analyze ways in which individuals and families manage resources to meet goals related to food acquisition, production, and nutrition.

B. Nutrition and Wellness Practices: Analyze factors that influence nutrition and wellness practices across the life span.
3. Describe the impact of global and local events and conditions on the cost and availability of foods.

C. Nutritional Needs: Evaluate the nutritional needs of individuals and families in relation to health and wellness across the life span.
6. Describe the impact of food and diet fads, food addictions, and eating disorders on wellness.
7. Evaluate sources of food and nutrition information, including food labels, related to health and wellness.

D. Acquisition, Handling, and Use of Foods: Demonstrate the ability to acquire, handle, and use foods to meet nutrition and wellness needs of individuals and families across the life span.
8. Demonstrate the ability to select, store, prepare, and serve nutritious foods.
9. Describe principles to maximize nutrient retention in prepared foods.

E. Food Safety: Evaluate factors that affect food safety, from production through consumption.
11. Determine conditions and practices that promote safe food handling, production and consumption.
12. Identify characteristics of major food borne pathogens, their role in causing illness, foods involved in outbreaks, and methods of prevention.
13. Describe food borne illness as a health issue for individuals and families.

F. Career Paths: Analyze career paths within hospitality, food production and services, and food science.
14. Determine education and training requirements and opportunities for career paths in food production and services.
15. Identify opportunities for employment.

G. Safety Issues: Demonstrate procedures applied to safety issues.
16. Demonstrate procedures applied to safety issues.
17. Demonstrate skills in safe handling of knives, tools, and equipment.
18. Examine procedures for safe and secure storage for equipment and tools.

H. Food Safety and Sanitation: Demonstrate food safety and sanitation procedures.

19. Describe and practice good personal hygiene/health procedures, and report symptoms of illness.
20. Explain and demonstrate methods for properly handling and storing both raw and prepared foods.
21. Explain and demonstrate techniques for food handling and preparation that prevent cross contamination between raw, cooked, and ready-to-eat foods and between animal or fish sources and other food products.
22. Demonstrate procedures for cleaning and sanitizing small equipment, serving dishes, glassware, and utensils.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
AA3(9-12): I can adjust my expectations and behaviors to succeed in a changing and unpredictable environment.

Understandings: Students will understand that…	**Essential Questions:**
● Culinary arts blend science, creativity, and safety. ● Food safety and sanitation are essential for public health. ● Understanding the industry helps students explore career opportunities.	1. Is culinary an art or a science? 2. What do we need to know before we cook? 3. How does food safety impact us at home and in industry?
Students will know…	**Students will be able to…**
● Industry roles, trends, and kitchen organization. ● Sanitation principles and sources of contamination. ● Preventive safety practices and hygiene standards.	● Identify career paths in culinary arts. ● Understand the roots of Culinary Arts. ● Evaluate why we cook our food. ● Demonstrate safety and sanitation protocols. ● Prevent kitchen hazards and foodborne illness.

Key Vocabulary: Brigade system, contamination, foodborne illness/foodborne outbreak, cross-contamination, danger zone, sanitation, safety, mise en place, clean/sanitary

Assessment Evidence

Performance Tasks: Summative: Sanitation case study. They are a Health Inspector and need to evaluate a restaurant kitchen. Interim: Safety assessment group project. They are the chef of a restaurant and need to train staff regarding proper kitchen and safety standards.	**Other Evidence:** Formative: Pre-test to evaluate level of understanding of prior knowledge. Interim: Cooking lab to assess their ability to translate kitchen sanitation/safety and teamwork to a hands-on lab. Formative: Group article analysis ("Dirty Kitchens")

Learning Plan

- Demonstration table schema activators and class discussion CCE1(9-12)
- Introduction to kitchen roles and trends TI1(9-12)
- ServeSafe food sanitation and safety video and study guides AA3(9-12)
- Proper handwashing, 3-bay sink, and hazard procedures TI1(9-12)
- Safety demonstrations, fire prevention activities and discussion DE1(9-12)

Teacher Resources: The Culinary Professional text - ServSafe materials and videos - CIA instructional videos - Other resources will be added as needed to accommodate current industry trends.

Unit 2 - Recipes, Measurements, and Cooking Techniques

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

C. Food Service Equipment: Demonstrate industry standards in selecting,using, and maintaining food production and food service equipment.
8. Operate and maintain tools and equipment following safety procedures and OSHA requirements.
9. Demonstrate procedures for cleaning, sanitizing, and storing equipment, tools, serving dishes, glassware, and utensils to meet industry standards and OSHA requirements.
10. Identify a variety of equipment used for food processing, cooking, holding, storing, and serving, including hand tools and smallwares.

D. Menu Planning: Demonstrate menu planning principles and techniques based on standardized recipes to meet customer needs.
12. Analyze food, equipment, and supplies needed for menus.

E. Professional Food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
22. Prepare breads, baked goods, and desserts using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.
TI3(9-12): I can formulate and investigate probing questions to further my learning.

Understandings: Students will understand that… ● Standardized recipes ensure consistency. ● Precise measurement prevents culinary failure. ● Cooking techniques impact safety and taste.	**Essential Questions:** ● Why do we need to follow a recipe? ● Is all measuring equipment the same? ● What do cooking terms/techniques mean?
Students will know… ● Parts of a standardized recipe ● How to properly measure using the appropriate equipment for a specific task. ● Measurement conversions and cooking terms ● Basic cooking techniques (bake, saute, sweat, etc.)	**Students will be able to...** ● Scale and follow recipes accurately ● Convert measurements using different equipment ● Demonstrate basic cooking methods
Key Vocabulary: Mise en place, yield, portion size, bake, measure, scale, tare weight, technique , dry measurements, liquid measurements	
Assessment Evidence	
Performance Tasks: Summative: Chocolate chip cookie kitchen labs comparing two types of recipes	**Other Evidence:** Interim: Assessment on culinary techniques, culinary terms, recipe reading and scaling.
Learning Plan	
● Demonstration and practice of measuring ingredients TI3(9-12) ● Recipe breakdown exercises TCC2(9-12) ● Scaling worksheets TI3(9-12) ● Culinary math and technique demos CCE4(9-12) ● Cooking labs and comparison exercise TCC2(9-12)	
Teacher Resources: The Culinary Professional text - Google Slideshow - Internet recipe calculator - Other resources will be added as needed to accommodate current industry trends.	

Unit 3 - Small Equipment and Knife Skills

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

G. Safety Issues: Demonstrate procedures applied to safety issues.
16. Demonstrate procedures applied to safety issues.
17. Demonstrate skills in safe handling of knives, tools, and equipment.
18. Examine procedures for safe and secure storage for equipment and tools.

H. Food Safety and Sanitation: Demonstrate food safety and sanitation procedures.
22. Demonstrate procedures for cleaning and sanitizing small equipment, serving dishes, glassware, and utensils.

I. Food Production Equipment: Demonstrate selecting, using, and maintaining food production equipment.
23. Describe and demonstrate techniques for operating tools and equipment following safety procedures.
24. Describe and demonstrate the process for maintaining tools and equipment following safety procedures.
25. Describe and demonstrate the proper procedures for storing equipment and tools.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

Understandings: Students will understand that…	**Essential Questions:**
• Each tool has a specific culinary purpose. • Knife safety and care prevent accidents. • Quality knife skills improve food preparation.	• Is it necessary to use the right tool for the job? • Are all knives equal? • How do knife cuts affect a recipe? • Can I substitute one piece of equipment for another?
Students will know…	**Students will be able to…**
• Names and uses of tools and knives • Knife types, cuts, and safety measures	• Identify and use common kitchen tools • Demonstrate safe and accurate knife cuts

	• Maintain and store tools properly
Key Vocabulary: Small dice, mince, rough chop, julienne, chiffonade, chef's knife, paring knife, equipment	
Assessment Evidence	
Performance Tasks: Interim: Equipment ID written test Summative: Knife skills lab (Minestrone soup)	**Other Evidence:** Formative: Zucchini bread lab using various tools Formative: Knife safety quiz
Learning Plan	
Learning Plan: • Knife skills video and safety demonstrations P1(9-12) • Guided knife cut demonstrations TCC4(9-12) • Student demonstrations TCC4(9-12) • Tool ID scavenger hunt and study guides AA1(9-12) • Group cooking labs TCC4(9-12)	
Teacher Resources: Knife skills videos - The Culinary Professional textbook - Kitchen equipment - Other resources will be added as needed to accommodate current industry trends.	

Unit 4 - Quick Breads

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

J. Planning Menu Items: Demonstrate planning menu items based on standardized recipes to meet customer needs.
- 26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
- 27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
- 28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
- 29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
- 34. Describe and demonstrate the process for preparing baked goods and desserts.
- 35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
- 36. Describe and demonstrate techniques for food presentation.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
TI2(9-12): I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

Understandings: Students will understand that…

- Ingredients and techniques affect rise and texture.
- Mixing methods influence structure.
- Presentation adds to culinary appeal.

Essential Questions:

- What makes a quick bread quick?
- Are all leavening agents the same?
- How do we enhance presentation?

Students will know…

- Ingredient functions and mixing methods
- Types of chemical leaveners
- The differences between chemical and organic leaveners

Students will be able to…

- Prepare muffins, loaf breads and biscuits using the appropriate methods
- Garnish baked goods effectively

Key Vocabulary: Creaming method, well method, biscuit/rubbed dough method, leavening agent, baking powder, baking soda, yeast, folding, laminating	
Assessment Evidence	
Performance Tasks: Summative: Written group assessment, Bakery Case Study Formative: Oral presentation on learned skills to date	**Other Evidence:** Interim and Formative: Labs (muffins, loaf breads and biscuits) Formative: Written quiz on quick breads
Learning Plan	
Learning Plan: ● Demonstration display and discussion of leavening agents TCC3(9-12) ● Ingredient experiments (baking powder vs. baking soda vs. yeast TI2(9-12) ● Group presentation planning CCE2(9-12) ● Modeling demonstrations TCC3(9-12) ● Group kitchen labs CCE2(9-12)	
Teacher Resources: Google slides and visual aids - Quick bread troubleshooting charts - The Culinary Professional text - Instructional videos - Other resources will be added as needed to accommodate current industry trends.	

Unit 5 - Pie and Tart Dough

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

J. Planning Menu Items: Demonstrate planning menu items based on standardized recipes to meet customer needs.
- 26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
- 27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
- 28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
- 29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
- 34. Describe and demonstrate the process for preparing baked goods and desserts.
- 35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
- 36. Describe and demonstrate techniques for food presentation.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
AA2(9-12): I can assess my past successes and mistakes to change my approach.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

Understandings: Students will understand that…

- Dough type, fat choice and temperature affect texture.
- Pastry mixing requires precision.
- Baking is both technical and creative.

Essential Questions:

- Can pie dough be used for a tart?
- Can tart dough be used for a pie?
- How do we balance flakiness and tenderness?
- Why does technique matter in baking?
- How does gluten affect dough?

Students will know…

- Types of pie doughs and tart doughs
- The role of fat and gluten

Students will be able to…

- Make flaky and mealy pie doughs and tart doughs
- Assemble and bake pies and tarts

	• Practice blind baking
Key Vocabulary: Flaky dough, mealy dough, tart dough, gluten, dock, crimp, blind baking, rubbed dough method	
Assessment Evidence	
Performance Tasks: Summative: Apple pie lab (flaky dough) Interim: Chocolate tart dough lab(tart dough)	**Other Evidence:** Formative: Pie and tart written assessment Formative: Bakery case study
Learning Plan	
Learning Plan: • Fat comparison activity (shortening vs. butter) TCC1(9-12) • Rolling and shaping demonstration P3(9-12) • Pie crust troubleshooting stations AA2(9-12) • Crust comparison activity (flaky vs tart) TCC1(9-12) • Kitchen labs CCE3(9-12)	
Teacher Resources: The Culinary Professional text, Google slides and Instructional videos - Other resources will be added as needed to accommodate current industry trends.	

Unit 6 - Cookies

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

J. Planning Menu Items: Demonstrate planning menu items based on standardized recipes to meet customer needs.
- 26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
- 27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
- 28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
- 29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
- 34. Describe and demonstrate the process for preparing baked goods and desserts.
- 35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
- 36. Describe and demonstrate techniques for food presentation.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that…

- Mixing method changes the cookie’s texture.
- Consistency and shape are affected by variables.
- Quality baking relies on careful observation.
- Time, temperature and quality of ingredients controls the outcome of the finished product.

Essential Questions:

- What are the six cookie categories?
- What happens when we change the mixing method?
- How do we ensure consistent quality?

Students will know…

- Cookie types and their characteristics
- One-stage vs. creaming method

Students will be able to…

- Mix doughs properly
- Troubleshoot quality issues

• How different fats change the texture, appearance and taste of cookies	• Shape and bake each category of cookie
Key Vocabulary: Drop, rolled, bar, ice box, spritz, sheet, creaming method, one-stage method, butter, shortening	
Assessment Evidence	
Performance Tasks: Summative: Caramel filled cookie lab (drop) Formative: Brownie lab (sheet)	**Other Evidence:** Formative: Holiday cookie lab (rolled) Interim: Cookie written assessment
Learning Plan	
Learning Plan: • Cookie method comparison and contrast demonstrations; student and teacher TCC3(9-12) • Practice dough shaping, forming and portioning TI4(9-12) • Executing three common cookie mixing and baking methods TCC4(9-12) • Kitchen Labs CCE3(9-12)	
Teacher Resources: The Culinary Professional text - Google slides - Comparison chart - Instructional videos - Other resources will be added as needed to accommodate current industry trends.	

Unit 7 - Pasta and Sauces

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
- 26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
- 27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
- 28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
- 29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
- 31. Describe and demonstrate the process for preparing various stocks, soups, and sauces.
- 32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
- 33. Describe and demonstrate the process for preparing various salads, dressings, marinades, and seasonings.
- 35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
- 36. Describe and demonstrate techniques for food presentation.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

Understandings: Students will understand that…

- Pasta is a cultural and culinary staple worldwide.
- Handmade pasta and sauce requires technique, consistency and creativity.
- Prior knowledge informs new recipes.

Essential Questions:

- What do different cultures call similar pastas from their own culture?
- How is fresh pasta different from dried?
- What makes a great sauce?

Students will know…	**Students will be able to…**
• Pasta types and associated cultures • Steps to make pasta, red sauce and pesto • How to cook dried and fresh pasta properly • What other sauces can be served with pasta other than red sauce	• Mix, roll and cut pasta • Prepare basic marinara and pesto sauce • Properly cook fresh and dried pasta
Key Vocabulary: Semolina, rollers, extruder, knead, laminate, reduction, al dente, rehydrate, sweat, translucent	
Assessment Evidence	
Performance Tasks: Summative: Fresh pasta and sauce lab	**Other Evidence:** Interim: Create your own pasta group project
Learning Plan	
• Compare and contrast dry and fresh pasta DE4(9-12) • Modeling CCE3(9-12) • Presentation on pasta origin from different cultures DE4(9-12) • Pasta making kitchen lab TCC4(9-12), CCE3(9-12) • Sauce simmering and seasoning exercises CCE1(9-12)	
Teacher Resources: The Culinary Professional text - Video tutorials on pasta and sauces - Other resources will be added as needed to accommodate current industry trends.	

CULINARY ARTS II CURRICULUM

(Refer to the Curriculum Template Explanation document while writing curriculum)



CULINARY ARTS

REGION 14 SCHOOL DISTRICT

VISION OF A LEARNER

Grade Level(s): 9 - 12	**Curriculum Author(s):** John Dominello

Course Description: Culinary Arts II is a semester-based course that builds on foundational skills developed in Culinary Arts I. Students refine their kitchen safety and sanitation practices, master a broader range of food preparation techniques, and explore topics in hospitality and food presentation.The course emphasizes critical thinking, collaboration, and real-world application through hands-on cooking labs and participation in school-based catering events.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Kitchen Safety, Sanitation and Kitchen Overview	Why are safety and sanitation essential to every step in food preparation?	Maintaining a safe, clean, and well-organized kitchen is fundamental to all culinary practices and is essential for preventing foodborne illnesses, ensuring efficiency, and upholding public health standards.	TCC4(9-12), CCE3(9-12), DE4(9-12), TI1(9-12), P1(9-12)
Starch Identification and Cookery	How do different starches (e.g., rice, pasta, potatoes) influence the flavor, texture, and structure of a dish and why is it important to understand the cooking properties of various starches?	Starches are foundational ingredients in global cuisines, and understanding their characteristics, functions, and cooking methods allow chefs to build structure, balance, and variety in culinary creations.	TCC3(9-12), TI2(9-12), P4(9-12), CCE4(9-12)
Vegetable Identification and Cookery	How do cooking methods affect the nutritional value, texture, and color of vegetables as well as understanding seasonality and sourcing when preparing a menu.	Vegetables contribute essential nutrients, color, texture, and flavor to dishes, and mastery of preparation and cooking techniques enhances both the taste and nutritional value of meals.	TCC1(9-12), DE1(9-12), AA2(9-12), CCE3(9-12)
Soups	How do different cultural traditions influence the ingredients and preparation of soups?	Soups are versatile dishes that reflect cultural identity and culinary skill, and their preparation reinforces	TCC2(9-12), CCE1(9-12), TI2(9-12), AA3(9-12)

	What foundational culinary skills are demonstrated through soup-making?	foundational techniques like flavor development, knife skills, and cooking methods.	
Salads and Dressings	What is the relationship between texture, temperature, and flavor in successful salad composition? How do emulsions function in salad dressings, and why are they important?	A well-composed salad demonstrates balance in texture, flavor, and presentation, while dressings introduce essential culinary principles such as emulsification and seasoning.	DE2(9-12), TCC3(9-12), TI3(9-12), AA1(9-12)
Fruit Identification and Preparation	What are the best practices for selecting, storing, and preparing fresh fruit? Why is understanding ripeness and seasonality critical in fruit preparation?	Fruits offer natural sweetness, acidity, and nutrition to dishes, and proper selection, handling, and preparation techniques enhance their appeal and culinary use in both savory and sweet contexts.	CCE1(9-12), DE4(9-12), TI3(9-12), P2(9-12)
Comfort Foods	What emotional and cultural significance do comfort foods hold in different communities?	Comfort foods evoke emotion and tradition, often reflecting cultural, familial, and regional heritage, and provide opportunities for chefs to innovate while honoring authenticity and nostalgia.	CCE3(9-12), TI1(9-12), P2(9-12), TCC4(9-12)
Hospitality, Table Service and Guest Relations	How does professional service impact a guest's dining experience? What communication and etiquette	Exceptional hospitality and attentive service are as vital to the dining experience as the food itself, requiring strong interpersonal skills,	DE4(9-12), CCE1(9-12), CCE2(9-12), TI4(9-12), AA1(9-12)

	skills are essential in hospitality roles?	professionalism, and an understanding of guest needs.	

Unit 1 - Kitchen Safety, Sanitation and Kitchen Overview

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Connecticut Career & Technical Education Performance Standards and Competencies & Common Core Standards

E. Food Safety: Evaluate factors that affect food safety, from production through consumption.
11. Determine conditions and practices that promote safe food handling, production, and consumption.
12. Identify characteristics of major food borne pathogens, their role in causing illness, foods involved in outbreaks, and methods of prevention.
13. Describe food borne illness as a health issue for individuals and families.

G. Safety Issues: Demonstrate procedures applied to safety issues.
16. Demonstrate procedures applied to safety issues.
17. Demonstrate skills in safe handling of knives, tools, and equipment.
18. Examine procedures for safe and secure storage for equipment and tools.

H. Food Safety and Sanitation: Demonstrate food safety and sanitation procedures.
19. Describe and practice good personal hygiene/health procedures, and report symptoms of illness.
20. Explain and demonstrate methods for properly handling and storing both raw and prepared foods.
21. Explain and demonstrate techniques for food handling and preparation that prevent cross contamination between raw, cooked, and ready-to-eat foods and between animal or fish sources and other food products.
22. Demonstrate procedures for cleaning and sanitizing small equipment, serving dishes, glassware, and utensils.

I. Food Production Equipment: Demonstrate selecting, using, and maintaining food production equipment.
23. Describe and demonstrate techniques for operating tools and equipment following safety procedures.
24. Describe and demonstrate the process for maintaining tools and equipment following safety procedures.
25. Describe and demonstrate the proper procedures for storing equipment and tools.

B. Food Safety and Sanitation: Demonstrate food safety and sanitation procedures.
3. Identify characteristics of major food-borne pathogens, their role in causing illness, foods involved in outbreaks, and methods of prevention.
4. Describe food service management safety and sanitation program procedures.
5. Demonstrate good personal hygiene and health procedures and report symptoms of illness.
6. Demonstrate proper purchasing, receiving, storage, and handling of both raw and prepared foods.
7. Demonstrate safe food handling and preparation techniques that prevent cross contamination from potentially hazardous foods, between raw and ready-to-eat foods, and between animal and fish sources and other food products.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.
P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.

Understandings: Students will understand that…

- Food safety and sanitation are foundational to any culinary environment.
- Proper equipment use and safety measures prevent accidents and contamination.
- Understanding basic kitchen systems are essential for efficient culinary operations.

Essential Questions:

1. How do sanitation and safety protocols impact food quality and health?
2. What foundational knowledge must a chef have before beginning food preparation?
3. Why are knife skills critical to kitchen safety and culinary outcomes?

Students will know...

- The difference between cleaning and sanitizing
- Sources and prevention of foodborne illness
- Parts of a standard recipe
- Common kitchen tools and their maintenance

Students will be able to...

- Identify and prevent cross-contamination
- Demonstrate proper hygiene and food handling
- Safely use and store knives and equipment
- Convert recipe measurements

Key Vocabulary: Sanitation, Cross-contamination, Mise en place, Knife cuts, Danger zone, Cleaning vs Sanitizing, Equipment Storage, Food Storage, Pathogens, Potentially Hazardous Foods

Assessment Evidence

Performance Tasks:
Summative: Sanitation and Safety Test
Formative: Pasta with Pink Sauce lab (graded on knife skills, recipe reading, sanitation, safety, team work)

Other Evidence:
Interim: Safety and sanitation group case study
Formative: Equipment identification worksheet
Formative: Kitchen lab pretest worksheet

Learning Plan
• Pretest and discussion CCE3(9-12) • Schema Activator: Demonstration table with sanitation tools and kitchen items for discussion TI1(9-12) • Food safety videos, group discussion, CIA video CCE3(9-12) • Identify and demonstrate knife skills and safe equipment usage CC4(9-12) • Lab: Pasta with pink sauce CCE3(9-12) DE4(9-12) • Written test and group case study TCC4(9-12) P1(9-12)
Teacher Resources: The Culinary Professional textbook, CIA Video: "Sanitation is not an Option", Safety & Sanitation Study Guide, Other resources will be added as needed to accommodate current industry trends.

Unit 2 - Starch Identification and Cookery

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES
J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
34. Describe and demonstrate the process for preparing baked goods and desserts.
35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

- TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
- TI2(9-12): I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
- P4(9-12): I can take-on challenges and continuously engage in my own long-term strategies to overcome them to demonstrate through personal experience that failures are more instructive than discouraging.

- CCE4(6-8): I can express my thoughts and ideas, both verbally and in writing, in order to defend my perspective. I can do this via essays, performance-based projects, whole group, and/or small group discussions.

Understandings: Students will understand that...	**Essential Questions:**
• Different starches require specific preparation and cooking methods. • Cooking method and liquid to rice ratios affect texture, nutrition, and visual appeal. • Accurate recipe interpretation is essential to successful food preparation.	1. Is all rice the same? 2. Are all potatoes the same? 3. Do the same ratios and methods apply to all starches? 4. How does cooking technique affect the nutritional and sensory properties of starches?
Students will know...	**Students will be able to...**
• Common varieties of potatoes and rice and their appropriate uses • Moist and dry heat cooking methods for starches • The effect of preparation techniques on nutrient retention	• Identify, store, and cook rice and potatoes using appropriate methods • Demonstrate correct cooking ratios and methods for starches • Apply sanitation procedures during preparation and cleanup

Key Vocabulary: Starch, Simmer, Pilaf, Steaming, Nutrient retention, Variety, Parboil, Al dente, Ratio, Stock, Broth, Bran layer

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative: Stir-Fried Rice Lab Interim: Baked Stuffed Potato Lab Formative: Spanish Rice, Dirty Rice, Au Gratin and Whipped Potato labs	Formative: Unit Pre-Test Interim: Written assessment on starch types, techniques, and tools

Learning Plan

- Schema Activator: display of potato varieties and rice types for discussion TCC3(9-12)
- Demonstrations: Cutting potatoes, Instructor and student demonstration of all rice dishes TI2(9-12)
- Stir-Fried Rice Lab, Baked Stuffed Potato Lab, Spanish Rice Lab, Dirty Rice Lab, Au Gratin and Whipped Potato Labs P4(9-12)
- Slideshow presentation, Study Guide and Class Discussion CCE4(6-8)
- Written quiz and exit slip CCE4(6-8)

Teacher Resources: The Culinary Professional textbook, Slideshow presentation with video vignettes, Recipe conversion and nutrition comparison charts, Other resources will be added as needed to accommodate current industry trends.

Unit 3 - Vegetable Identification and Cookery

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
34. Describe and demonstrate the process for preparing baked goods and desserts.
35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

- TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.
- DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.

- AA2(9-12): I can assess my past successes and mistakes to change my approach.
- CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

Understandings: Students will understand that...	**Essential Questions:**
• Cooking methods affect the flavor, texture, and nutrition of vegetables. • Knife skills impact safety and efficiency in preparation. • Seasonality and color, inform the visual and nutritional appeal of a dish.	1. How important is it to recognize and properly cook vegetables? 2. Are vegetables always healthy regardless of how they're prepared? 3. What is the difference between dry and moist heat cooking for vegetables? 4. What are the differences between vegetables and fruit?
Students will know…	**Students will be able to…**
• Cooking methods for various vegetables • Knife cuts appropriate for different recipes • Flavor, color, and nutrition principles in vegetable preparation	• Prepare vegetables using blanching, shocking, roasting, and braising techniques • Apply advanced knife skills to vegetable prep • Plate and evaluate vegetable dishes for appeal and quality

Key Vocabulary: Blanch, Shock, Concasse, Braise, Sauté, Sweat, Seasonal, Al dente, Color retention, Chiffonade, Julienne, Small/Medium Dice

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative: Ratatouille Lab Interim: Stir-Fried Szechuan Green Bean lab Formative: Corn Fritter lab	Formative: Vegetable Pre-Test and discussion Interim: Written Quiz

Learning Plan

- Schema Activator: unusual vegetable table display and discussion DE1(9-12)
- Knife skill demonstration and cutting practice TCC1(9-12)
- Labs: Corn fritter, Stir-fried green bean, and ratatouille TCC1(9-12) CCE3(9-12)
- Slideshow, instructional videos and study guide AA2(9-12)
- Written quiz and vegetable pre-test discussion DE1(9-12)

Teacher Resources: The Culinary Professional textbook, Knife skills videos, Vegetable identification cards, Other resources will be added as needed to accommodate current industry trends.

Unit 4 - Soups

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
31. Describe and demonstrate the process for preparing various stocks, soups, and sauces.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
18. Prepare various stocks, soups, and sauces using safe handling and professional preparation techniques.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
TI2(9-12): I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
AA3(9-12): I can adjust my expectations and behaviors to succeed in a changing and unpredictable environment.

Understandings: Students will understand that… ● Soups are categorized by preparation, origin and texture (clear, purée, cream, unusual). ● Stocks and broths are foundational to soup flavor. ● Temperature control and timing are essential to quality and safety.	**Essential Questions:** 1. Are all soups the same? 2. How do you thicken and flavor a soup without compromising taste and nutrition? 3. What defines a regional or cultural soup?
Students will know… ● How to prepare stock and broth ● Soup classifications and preparation techniques ● Safe cooling, storage and reheating procedures	**Students will be able to…** ● Prepare a variety of soups including cream, speciality and clear ● Identify, prepare and use thickening agents ● Present soups attractively with garnishes
Key Vocabulary: Mirepoix, Broth, Stock, Roux, Slurry, Purée, Simmer, Sweat, Sachet, Translucent, Knife skills	
Assessment Evidence	
Performance Tasks: Summative: Maryland Corn Chowder Lab Interim: Puree of Lentil Soup Lab Formative: Group Case Study	**Other Evidence:** Interim: Cream of Broccoli Soup and Chicken Noodle Soup Labs Formative: Pre-test Interim: Written Assessment on soup terminology and preparation
Learning Plan	
● Schema Activator: Canned Soup, Stock and Broth display and discussion CCE1(9-12) TCC2(9-12) ● Demonstrations: cutting mirepoix and demonstration each category of soup TCC2(9-12) ● Soup Labs AA3(9-12) ● Pre-Test and discussion CCE1(PK-2) TI2(9-12)	
Teacher Resources: The Culinary Professional textbook, CIA instructional videos, Other resources will be added as needed to accommodate current industry trends.	

Unit 5 - Salads and Dressings

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
33. Describe and demonstrate the process for preparing various salads, dressings, marinades, and seasonings.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
20. Prepare various salads, dressings, marinades, and seasonings using safe handling and professional preparation techniques
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

DE2(9-12): I can honor my own feelings and show empathy toward others through my actions.
TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
TI3(9-12): I can formulate and investigate probing questions to further my learning.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that… ● Salads serve different purposes in meals (appetizer, side, main course, dessert). ● Dressings influence nutrition, presentation, texture and guest perception. ● Proper sanitation is essential in salad prep.	**Essential Questions:** 1. What are the different purposes of salads on a menu? 2. Are all salad greens the same? 3. What defines a well-balanced and sanitary salad? 4. Do all salads contain lettuce?
Students will know… ● Types of greens and common salad categories ● Emulsion and dressing preparation ● The difference between bound and marinated salads ● Proper storage and serving techniques	**Students will be able to…** ● Prepare tossed, bound, marinated and composed salads ● Make vinaigrette and creamy dressings ● Present salads with attention to detail and safety
Key Vocabulary: Vinaigrette, Emulsion, Mesclun, Romaine, Bound, Marinated, Salad Spinner, Garnish, Ratio	
Assessment Evidence	
Performance Tasks: Interim: Pasta Caprese Salad Lab Summative: Mediterranean Grain & Bean Salad Lab	**Other Evidence:** Formative: Salad Analysis Grid (Think/Pair/Share) Interim: Written assessment
Learning Plan	
● Schema Activator: comparing salad greens and oils/vinegars on demonstration table AA1(9-12) ● Dressing demonstration and tasting analysis TCC3(9-12) ● Lab rotations through various salad types AA1(9-12), DE2(9-12) ● Salad Analysis Grid and discussion TI3(9-12) ● Written Assessment AA1(9-12)	
Teacher Resources: The Culinary Professional textbook, The Professional Chef textbook, Slideshow and Instructional videos, Other resources will be added as needed to accommodate current industry trends.	

Unit 6 - Fruit Identification and Preparation

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
31. Describe and demonstrate the process for preparing various stocks, soups, and sauces.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
34. Describe and demonstrate the process for preparing baked goods and desserts.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
22. Prepare breads, baked goods, and desserts using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
TI3(9-12): I can formulate and investigate probing questions to further my learning.

P2(9-12): I can strengthen my weaknesses by identifying, initiating, and practicing appropriate strategies to become confident in my ability to overcome my challenges.

Understandings: Students will understand that…	**Essential Questions:**
• Fruit selection and preparation are influenced by seasonality, purpose, and presentation. • Proper handling and cutting techniques enhance flavor and appearance. • Fruit-based dishes can serve as starters, entrees, desserts, or snacks.	1. Is the quality of fruit consistent all year? 2. How do cutting techniques affect flavor and presentation? 3. What are the major categories of fruit and how are they best prepared?
Students will know…	**Students will be able to…**
• Fruit classifications • Garnishing tools and techniques • Color preservation methods	• Prepare and present fresh fruit in a variety of formats • Demonstrate proper cutting techniques • Store and serve fruit safely and attractively

Key Vocabulary: Zest, Garnish, Segment, Supreme, Acidulated Water, Pith, Pulp, Peel, Core

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative: Fresh Fruit Salad Lab	Formative: Garnishing and cutting demonstration worksheet Formative: Student-created chapter quiz questions

Learning Plan

- Schema Activator: exotic fruit cutting demonstration, tasting and discussion DE4, TI3(9-12)
- Salad assembly and platter design CCE1(9-12)
- Student reflection and group quiz creation TI3 9-12)
- Garnishing and cutting demonstration worksheet P2(9-12)
- Fresh Fruit Salad Lab CCE1(9-12)

Teacher Resources: The Culinary Professional textbook, Garnishing tools and Food Garnishing text, Instructional videos, Other resources will be added as needed to accommodate current industry trends.

Unit 7 - Comfort Foods

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
31. Describe and demonstrate the process for preparing various stocks, soups, and sauces.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
34. Describe and demonstrate the process for preparing baked goods and desserts.
35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
Prepare various stocks, soups, and sauces using safe handling and professional preparation techniques.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
22. Prepare breads, baked goods, and desserts using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.
P2(9-12): I can strengthen my weaknesses by identifying, initiating, and practicing appropriate strategies to become confident in my ability to overcome my challenges.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

Understandings: Students will understand that…	**Essential Questions:**
• Comfort foods reflect personal, cultural, and regional values. • They can be adapted to meet modern nutritional standards. • Recipe and portion adjustments influence health outcomes.	1. What defines a comfort food? 2. Can comfort foods be healthy? 3. How do tradition and memory influence food preferences?
Students will know…	**Students will be able to…**
• Characteristics and origins of comfort foods • Recipe adjustment strategies for health-conscious meals • Proper reheating and storage for leftovers	• Prepare and serve traditional comfort foods • Adapt recipes using healthier ingredients and techniques • Reflect on food's emotional and cultural significance

Key Vocabulary: Comfort food, Nostalgia, Portion control, Saturated fat, Substitution, Satisfaction, Culture

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative: Chocolate Lava Cake lab Interim: Yeast Raised Pizza and Sauce lab	Formative: Macaroni & Cheese lab Interim: Comfort Food Group Project

Learning Plan

- Entrance Slip: What is Comfort Food? CCE3(9-12)
- Comfort Food Group Project CCE3(9-12)
- Lab prep and collaborative cooking (CCE3) TCC4(9-12)
- Peer review and reflection TI1(9-12) P2(9-12)

Teacher Resources: The Culinary Professional textbook, The Professional Chef textbook, A Global Food textbook, Nutritional Analysis Chart, Other resources will be added as needed to accommodate current industry trends.

Unit 8 - Hospitality and Table Service

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

F. Career Paths: Analyze career paths within hospitality, food production and services, and food science.
- 14. Determine education and training requirements and opportunities for career paths in food production and services.
- 15. Identify opportunities for employment.

A. Career Paths: Analyze career paths within the food production and food services industries.
- 1. Explain the roles, duties, and functions of individuals engaged in food production and service careers.
- 2. Summarize education and training requirements and opportunities for career paths in food production and services.

F. Customer Service: Demonstrate the concept of internal and external customer service.
- 25. Demonstrate quality services that meet industry standards in the food service industry.
- 26. Analyze the relationship between employees and customer satisfaction.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that…

- Hospitality involves anticipating and meeting guest needs with professionalism.
- Table setting, guest service, and communication are critical to the dining experience.
- Guest interactions shape reputation and return visits.

Essential Questions:

1. What makes someone feel like a guest vs. a customer?
2. What communication skills matter in hospitality?
3. How does professionalism impact service?

Students will know…	**Students will be able to…**
• Front-of-house roles and responsibilities • Principles of professional guest interaction • Formal and informal table service styles	• Demonstrate proper table setting and service techniques • Interact with guests using professional language and demeanor • Reflect on hospitality as a transferable skill
Key Vocabulary: Hospitality, Guest vs.Customer, Mise en place, Table setting, FOH (front-of-house), BOH (back-of-house), Service etiquette	
Assessment Evidence	
Performance Tasks: Summative: Table Service project	**Other Evidence:** Formative: Table setting demonstration Formative: Guest service role-play scenarios Formative: Peer feedback and reflection sheet
Learning Plan	
• Entrance slip and discussion: personal best/worst dining experiences CCE1(9-12) • Role-play and team feedback cycles CCE2(9-12) • Table service during class meal, students rotate DE4(9-12) CCE1(9-12) • Feedback and reflection exercise TI4(9-12) CCE2(9-12) • Video analysis of real service interactions AA1(9-12)	
Teacher Resources: The Culinary Professional textbook, The Professional Chef textbook, Video samples of table service techniques, Other resources will be added as needed to accommodate current industry trends.	

FARM TO TABLE CURRICULUM

(Refer to the Curriculum Template Explanation document while writing curriculum)



Grade Level(s): 9 - 12

Curriculum Author(s): John Dominello

Course Description:
This interdisciplinary course integrates agricultural science, culinary arts, and environmental sustainability. Students engage in the full cycle of food production from seed to plate by managing gardens, a greenhouse, hydroponic systems, and food labs. Through hands-on learning, students cultivate, prepare, and preserve a wide range of foods while exploring the scientific, cultural, and environmental dimensions of agriculture and food systems.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Greenhouse, Garden, and Kitchen Safety, Sanitation, and Management	How does responsible management of tools, environments, and systems impact food production and safety?	Safe, efficient, and sustainable practices are essential to both food production and kitchen operation.	TI1(9-12), CCE1(9-12), P3(9-12)
Fruit, Vegetable, and Herb Cultivation, Identification, and Preparation	How do environment and preparation methods affect food growth and flavor?	Understanding cultivation and cooking techniques empowers individuals to make informed food choices and reduce waste.	TCC3(9-12), TI4(9-12), CCE4(9-12)
Fish and Shellfish Production and Preparation	How do sustainable practices in aquaculture affect ecosystems and food systems?	Aquaculture offers opportunities for sustainable food production when environmental, health, and safety factors are managed effectively.	TCC2(9-12), DE1(9-12), CCE3(9-12)
Meat and Dairy Products	How do fabrication and preparation techniques influence food quality, sustainability, and ethics?	Knowledge of animal product sourcing, processing, and preparation is key to sustainable and ethical consumption.	AA1(9-12), TI2(9-12), CCE2(9-12)
Basic Cooking Techniques and Recipe Reading	How do basic techniques and accurate recipe interpretation influence culinary success?	Mastering foundational cooking methods and recipe reading promotes independence and culinary creativity.	TI3(9-12), P1(9-12), CCE4(9-12)
Foraged and Local Foods	What role do natural ecosystems play in local food systems?	Forest ecosystems provide diverse food sources that require responsible harvesting and deep ecological knowledge.	DE4(9-12), AA4(9-12), TCC4(9-12)

Unit 1 - Greenhouse, Garden, and Kitchen Safety, Sanitation, and Management

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

AFNR CAREER CLUSTER CONTENT STANDARDS

- PS.01. CCTC Standard: Develop and implement a crop management plan for a given production goal that accounts for environmental factors.
- PS.01.01. Performance Indicator: Determine the influence of environmental factors on plant growth.
- PS.01.02.01.a. Describe the major forms of growing media (e.g., hydroponics, soil, greenhouse potting mix, rockwool, etc.).
- PS.01.01.02.c. Design, implement and evaluate a plan to maintain optimal air and temperature conditions for plant growth
- PS.01.02. Performance Indicator: Prepare and manage growing media for use in plant systems.
- PS.01.02.02.c. Formulate and prepare growing media for specific plants or crops.
- PS.03. CCTC Standard: Propagate, culture and harvest plants and plant products based on current industry standards.
- PS.03.02. Performance Indicator: Develop and implement a management plan for plant production.
- PS.03.02.04.b. Monitor the progress of plantings and determine the need to adjust environmental conditions.
- PS.03.02.05.b. Demonstrate proper techniques to control and manage plant growth through mechanical, cultural or chemical means.
- PS.03.02.07.b. Compare and contrast the types of systems used in hydroponic and aquaponic plant production.

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

E. Food Safety: Evaluate factors that affect food safety, from production through consumption.
11. Determine conditions and practices that promote safe food handling, production, and consumption.
12. Identify characteristics of major food borne pathogens, their role in causing illness, foods involved in outbreaks, and methods of prevention.
13. Describe food borne illness as a health issue for individuals and families.

G. Safety Issues: Demonstrate procedures applied to safety issues.
16. Demonstrate procedures applied to safety issues.
17. Demonstrate skills in safe handling of knives, tools, and equipment.
18. Examine procedures for safe and secure storage for equipment and tools.

H. Food Safety and Sanitation: Demonstrate food safety and sanitation procedures.
19. Describe and practice good personal hygiene/health procedures, and report symptoms of illness.
20. Explain and demonstrate methods for properly handling and storing both raw and prepared foods.
21. Explain and demonstrate techniques for food handling and preparation that prevent cross contamination between raw, cooked,

and ready-to-eat foods and between animal or fish sources and other food products.
22. Demonstrate procedures for cleaning and sanitizing small equipment, serving dishes, glassware, and utensils.

I. Food Production Equipment: Demonstrate selecting, using, and maintaining food production equipment.
23. Describe and demonstrate techniques for operating tools and equipment following safety procedures.
24. Describe and demonstrate the process for maintaining tools and equipment following safety procedures.
25. Describe and demonstrate the proper procedures for storing equipment and tools.

D. Menu Planning: Demonstrate menu planning principles and techniques based on standardized recipes to meet customer needs.
11. Apply menu-planning principles to develop and modify menus.
12. Analyze food, equipment, and supplies needed for menus.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
17. Prepare various meats, seafood, and poultry using safe handling and professional preparation techniques.
18. Prepare various stocks, soups, and sauces using safe handling and professional preparation techniques.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
20. Prepare various salads, dressings, marinades, and seasonings using safe handling and professional preparation techniques
21. Prepare sandwiches, canapés, and appetizers using safe handling and professional preparation techniques.
22. Prepare breads, baked goods, and desserts using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

TI1(9-12): I can implement a realistic plan and adapt when necessary to achieve my goals.
CCE1(9-12): I can initiate discussions with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.
P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.

Understandings: Students will understand that… ● Safe practices in kitchens, gardens, and greenhouses are vital to the success and sustainability of food systems. ● Environmental conditions must be monitored and adjusted to promote healthy plant and fish growth. ● Sanitation prevents foodborne illness and ensures a safe working environment.	**Essential Questions:** ● Why is sanitation essential in a food preparation environment? ● How can safety practices impact plant and food production outcomes? ● How do we create and maintain optimal growing and cooking environments?
Students will know... ● Types of hydroponic systems and equipment. ● Basic environmental requirements for plant growth. ● Food safety hazards and how to prevent cross-contamination. ● Proper storage, sanitation, and cleaning protocols.	**Students will be able to...** ● Maintain and troubleshoot greenhouse and aquaculture systems. ● Operate basic agricultural and kitchen equipment safely. ● Apply best practices for food handling, sanitation, and hygiene. ● Monitor air, temperature, and moisture to maintain healthy plant environments.
Key Vocabulary: Hydroponics, aquaponics, sanitation, cross-contamination, pathogens, nitrification, danger zone, germination, irrigation, recirculating aquaculture, growing media	
Assessment Evidence	
Performance Tasks: Summative: Safety and Sanitation Lab Practical: Students demonstrate sanitation protocols and equipment use. Interim: Greenhouse Operations Project: Students design and document management of a hydroponic system.	**Other Evidence:** Interim: Quizzes on food safety and greenhouse equipment. Formative: Daily participation and self-assessment of sanitation and safety behaviors.
Learning Plan	
Safety demonstrations and hands-on practice using kitchen equipment CCE1(9-12)	

Greenhouse system set-up, monitoring and data tracking TI1(9-12) Aquaponics troubleshooting lab and peer coaching P3(9-12) Cross-contamination simulation with case study review CCE1(9-12) Kitchen station setup and rotation TI1(9-12), P3(9-12)
Teacher Resources: The Culinary Professional textbook, CIA Video: "Sanitation is not an Option", Safety & Sanitation Study Guide, National FFA Safety and Environmental Science modules, ServSafe sanitation training materials, Hydroponics equipment manuals and greenhouse management guides, Other resources will be added as needed to accommodate current industry trends.

Unit 2 - Fruit, Vegetable, and Herb Cultivation, Identification, and Preparation

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

AFNR CAREER CLUSTER CONTENT STANDARDS

- PS.02.01.02.a: Describe the morphological characteristics used to identify agricultural and herbaceous plants.
- PS.03.05.04.a: Identify and categorize plant preparation methods for storing and shipping plants and plant products.
- PST.02.02.02.b: Apply safety principles and applicable regulations to operate equipment and machinery.

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.

28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
34. Describe and demonstrate the process for preparing baked goods and desserts.
35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.

13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
- TI4(9-12): I can apply my strengths and anticipate challenges to reach my current and future goals.
- CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

Understandings: Students will understand that…	**Essential Questions:**
• Plants have distinct characteristics that allow for classification, cultivation, and culinary use. • Safe and effective planting, harvesting, handling, and preparation methods preserve food quality and safety. • Culinary techniques influence the flavor, texture, and nutritional value of fruits, vegetables, and herbs.	• How do different growing environments and media affect the characteristics and yield of produce? • Why do we use different preservation and cooking methods for different plant products? • What knowledge and skills are necessary to transform raw produce into edible, appealing dishes?
Students will know...	**Students will be able to...**
• Key characteristics of common fruits, vegetables and herbs. • Optimal conditions for greenhouse and field crop cultivation. • Cooking and preservation techniques for plant products. • Universal agricultural and kitchen safety protocols.	• Grow crops under optimal conditions from seed to harvest. • Identify and classify produce based on categories. • Clean, cut, prepare, preserve and produce recipes with appropriate kitchen equipment and cooking techniques. • Operate farm equipment safely and efficiently.

Key Vocabulary: Root crop, leafy green, herb, fruiting crop, dice, julienne, chiffonade, sauté, braise, steam, bake, simmer, pickle, preserve, knife cuts, orchard, NFT table, growing media, irrigation

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative: Vegetable Tart Lab Interim: Plant Identification Project:	Formative: Equipment safety checklist and reflection.

Learning Plan
● Guided greenhouse and field modeling, planting and cultivation TI4(9-12) ● Produce identification stations with peer discussion CCE4(9-12) ● Cooking labs focused on knife skills, baking techniques and preservation TCC3(9-12) ● Orchard field trip with identification activity and proper harvesting modeling TI4(9-12) ● Recipe modification lab using local produce TCC3(9-12), CCE4(9-12)
Teacher Resources: Primary agricultural extension publications, Herb and vegetable identification flashcards, The Culinary Professional textbook, Other resources will be added as needed to accommodate current industry trends.

Unit 3 - Fish and Shellfish Production and Preparation

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

AFNR CAREER CLUSTER CONTENT STANDARDS

- CT-AQ.07.03.02.a: Identify equipment and handling facilities used in modern aquaculture production.
- CT-AQ.04.01.03.b: Evaluate the health and productivity of fish and shellfish populations.
- K33, L34, L44: Monitor recipe modifications; demonstrate knife and equipment handling; food presentation.

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

B. Food Safety and Sanitation: Demonstrate food safety and sanitation procedures.
3. Identify characteristics of major food-borne pathogens, their role in causing illness, foods involved in outbreaks, and methods of prevention.
4. Describe food service management safety and sanitation program procedures.
6. Demonstrate proper purchasing, receiving, storage, and handling of both raw and prepared foods.
7. Demonstrate safe food handling and preparation techniques that prevent cross contamination from potentially hazardous foods, between raw and ready-to-eat foods, and between animal and fish sources and other food products.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
17. Prepare various meats, seafood, and poultry using safe handling and professional preparation techniques.
18. Prepare various stocks, soups, and sauces using safe handling and professional preparation techniques.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

Understandings: Students will understand that…

- The difference between aquaculture and hydroponic systems and how they must be monitored for biological and environmental health.
- Shellfish and fish require safe handling procedures from harvest to preparation.
- Cooking methods affect the texture, safety, and presentation of seafood.

Essential Questions:

- What are the benefits and limitations of aquaculture and hydroponic systems?
- How do we ensure fish and shellfish are safe and sustainable to consume?
- What skills are needed to process and prepare seafood?

Students will know...

- Major species of fish and shellfish and how they are raised or harvested.
- Safe seafood handling protocols and cooking techniques.

Students will be able to...

- Shuck shellfish and fillet finfish properly.
- Apply correct food safety and sanitation practices for seafood.
- Cook seafood using methods such as steaming, sautéing, roasting, and frying.

Key Vocabulary: Finfish, shellfish, aquaculture, hydroponic, bivalve, mollusk, fillet, shuck, dredge, marinade, steam, sear, seafood safety

Assessment Evidence

Performance Tasks:
Summative: Tilapia Cake Lab
Interim: Filleting fish and shucking shellfish lab

Other Evidence:
Formative: Shellfish identification quiz
Formative: Peer evaluation of lab sanitation

Learning Plan
• Aquaculture and Hydroponic system health checklist project TCC2(9-12) • Seafood ID lab and cooking demonstration CCE3(9-12) • Seafood cooking labs CCE3(9-12) • Field Trip to DEEP facility TCC2(9-12)
Teacher Resources: Aquaculture equipment manuals, Seafood handling and HACCP guidelines, Culinary seafood preparation videos, The Culinary Professional textbook, Other resources will be added as needed to accommodate current industry trends.

Unit 4 - Meat and Dairy Products

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

AFNR CAREER CLUSTER CONTENT STANDARDS

- AS.02.02.01.a.Identify technology and equipment used in animal systems that support a safe and abundant food supply.
- FPP.03.01.04.a.Describe foods and byproducts derived from different classifications of food products (e.g., meat, egg, poultry, fish, dairy, fruits, vegetables, grains, legumes, oilseeds,

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

B. Food Safety and Sanitation: Demonstrate food safety and sanitation procedures.
3. Identify characteristics of major food-borne pathogens, their role in causing illness, foods involved in outbreaks, and methods of prevention.
4. Describe food service management safety and sanitation program procedures.
6. Demonstrate proper purchasing, receiving, storage, and handling of both raw and prepared foods.
7. Demonstrate safe food handling and preparation techniques that prevent cross contamination from potentially hazardous foods, between raw and ready-to-eat foods, and between animal and fish sources and other food products.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
17. Prepare various meats, seafood, and poultry using safe handling and professional preparation techniques.
18. Prepare various stocks, soups, and sauces using safe handling and professional preparation techniques.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)
AA1(9-12): I can evaluate different approaches and justify the best pathway to success.
TI2(9-12): I can evaluate my objectives and a variety of credible resources to find the best solutions for any challenge.
CCE2(9-12): I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

Understandings: Students will understand that...

- Butchery, dairy processing, and cooking methods impact the quality, taste, and safety of animal products.
- Equipment use and technique are essential for accurate fabrication and preparation.
- Responsible sourcing and safety protocols protect both animals and consumers.

Essential Questions:

- How does fabrication affect meat product usage?
- What is the difference between types of dairy products and how are they made?
- How do we ensure meat and dairy are prepared safely?

Students will know…

- Different types of meat cuts and dairy processes.
- Proper techniques for butchery and cheese making.
- Food safety practices related to animal products.

Students will be able to...

- Fabricate basic cuts from whole poultry or meat.
- Prepare mozzarella and ricotta cheeses.
- Apply food safety techniques during meat/dairy handling.
- Use meats and dairy in original recipes.

Key Vocabulary: Primal/subprimal cut, pasteurization, homogenization, whey, curd, rendering, searing, pan-fry, foodborne illness

Assessment Evidence

Performance Tasks:
Summative: Poultry carcass breakdown and fabrication labs
Interim: Cheese making labs and recipe creation

Other Evidence:
Formative: Butchery diagram quiz
Formative: Sensory evaluation of dairy textures/flavors

Learning Plan

- Butchery demonstration and students labs TI2(9-12)
- Dairy production video, demonstration and labs CCE2(9-12)
- Taste test with ethical sourcing discussion AA1(9-12)

- Kitchen Lab AA1(9-12)
- Written Assessment TI2(9-12)

Teacher Resources: Meat fabrication guides and charts, USDA meat/dairy inspection handbook/guidelines, The Culinary Professional textbook, Other resources will be added as needed to accommodate current industry trends.

Unit 5 - Basic Cooking Techniques and Recipe Reading

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

E. Food Safety: Evaluate factors that affect food safety, from production through consumption.
11. Determine conditions and practices that promote safe food handling, production and consumption.

G. Safety Issues: Demonstrate procedures applied to safety issues.
16. Demonstrate procedures applied to safety issues.

C. Food Service Equipment: Demonstrate industry standards in selecting,using, and maintaining food production and food service equipment.
8. Operate and maintain tools and equipment following safety procedures and OSHA requirements.
9. Demonstrate procedures for cleaning, sanitizing, and storing equipment, tools, serving dishes, glassware, and utensils to meet industry standards and OSHA requirements.
10. Identify a variety of equipment used for food processing, cooking, holding, storing, and serving, including hand tools and smallwares.

D. Menu Planning: Demonstrate menu planning principles and techniques based on standardized recipes to meet customer needs.
12. Analyze food, equipment, and supplies needed for menus.

E. Professional Food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods.
22. Prepare breads, baked goods, and desserts using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

TI3(9-12): I can formulate and investigate probing questions to further my learning.
P1(9-12): I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.
CCE4(9-12): I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

Understandings: Students will understand that...

- Cooking methods, timing, and accurate measurement directly impact food quality.
- Recipes are tools for consistency, but they must be interpreted and adjusted.
- Knowledge of culinary language supports independent and collaborative success in the kitchen.

Essential Questions:

- Why are time and temperature important in cooking?
- How do we read and adapt recipes for different purposes?
- What tools and methods help us cook safely and precisely?

Students will know...

- Cooking terms and techniques
- Measurement tools and conversions
- Proper procedures for using kitchen equipment

Students will be able to...

- Read and scale recipes accurately
- Select appropriate tools for tasks
- Apply cooking methods such as sautéing, roasting, and simmering
- Evaluate final products based on texture, flavor, and presentation

Key Vocabulary: Mise en place, volume, weight, tare, sauté, stir fry, roast, bake, steam, simmer, scale, conversion, standardized recipe, dry measurements, liquid measurements

Assessment Evidence

Performance Tasks:
Interim: Recipe Reading Quiz

Other Evidence:
Formative: Tool ID and Measurement Quiz

Summative: Portuguese Kale, chorizo and herb soup lab	Formative: Peer critique of recipe execution
Learning Plan	
• Recipe reading mini-lessons TI3(9-12) • Kitchen Lab P1(9-12) • Peer tasting and reflection CCE4(9-12) • Written Assessment P1(9-12)	
Teacher Resources: The Culinary Professional textbook, Standardized recipe templates, Instructional cooking and measurement videos, Other resources will be added as needed to accommodate current industry trends.	

Unit 6 - Foraged and Local Foods

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

AFNR CAREER CLUSTER CONTENT STANDARDS

- AS.09.01.01.a–07.a: Identify bees and mushroom types; explain pollination; use tools and harvesting practices.
- NRS.01.02.02.a. Define the characteristics used to identify herbaceous plants.

CONNECTICUT CAREER & TECHNICAL EDUCATION PERFORMANCE STANDARDS & COMPETENCIES

J. Planning Menu Items: Demonstrate menu planning based on standardized recipes.
26. Describe and apply menu planning principles to develop, adjust, and modify recipes and menus.
27. Analyze food, equipment, and supplies needed for menus.

K. Food Preparation: Demonstrate preparation for all menu categories to produce a variety of food products.
28. Describe and demonstrate a variety of cooking methods such as roasting, baking, broiling, smoking, grilling, sautéing, frying, deep frying, braising, stewing, poaching, steaming, and convection.
29. Describe the fundamentals of time and temperature as they relate to cooking, cooling, and reheating of a variety of foods.
31. Describe and demonstrate the process for preparing various stocks, soups, and sauces.
32. Describe and demonstrate the process for preparing various fruits, vegetables, starches, and farinaceous items.
34. Describe and demonstrate the process for preparing baked goods and desserts.
35. Describe and demonstrate the process for preparing eggs, grains, and batter products.
36. Describe and demonstrate techniques for food presentation.

E. Professional food Preparation Methods and Techniques: Demonstrate professional food preparation methods and techniques for all menu categories to produce a variety of food products that meet customer needs.
13. Demonstrate professional skills in safe handling of knives, tools, and equipment.
14. Demonstrate professional skills for a variety of cooking methods including roasting, broiling, smoking, grilling, sautéing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies.
15. Utilize weight and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques.
16. Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding a variety of foods. Prepare various stocks, soups, and sauces using safe handling and professional preparation techniques.
19. Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation

techniques.
22. Prepare breads, baked goods, and desserts using safe handling and professional preparation techniques.
23. Prepare breakfast meats, eggs, cereal grains, and batter products using safe handling and professional preparation techniques.
24. Demonstrate professional plating, garnishing, and food presentation techniques.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)
DE4(9-12): I can work respectfully with all members of my community and support the needs of others.
AA4(9-12): I can create opportunities to extend my learning by remaining open-minded in any situation.
TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

Understandings: Students will understand that...	**Essential Questions:**
• Foraging connects us to local ecology and seasonal food sources. • Food safety is critical when working with wild products. • Honey and maple syrup are the results of complex biological and environmental systems.	• How can we responsibly harvest food from natural ecosystems? • What knowledge is needed to safely forage mushrooms and forest plants? • What can we learn about sustainability through beekeeping and syrup production?
Students will know...	**Students will be able to...**
• How to identify edible wild plants of the Northeast • Steps for making maple syrup, harvesting honey and seasonal plants • Foraging safety guidelines • How to identify hardwood and softwood tree species • Equipment related to the production of maple syrup • How to retrieve honey	• Identify trees and edible forest plants • Properly tap sugar maple trees and process maple sap • Use forest foods in recipes • Safely harvest and process honey • Inoculate hardwood logs with shiitake mushroom spawn • Produce recipes using forest foods • Harvest honey from a hive

Key Vocabulary: Sapwood, heartwood, evaporator, drone, nectar, pollination, shiitake, fiddlehead, ramps, chives, autumn olive berries, wild violets, dandelion, apiary

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Summative: Maple Syrup Production Lab Formative; Maple Syrup Lab Interim: Beekeeping/Honey Lab	Formative: Violet/Dandelion Lab Formative: Student-created foraging safety posters Formative: Tree identification Quiz

Interim: Ramp Lab	
Learning Plan	
• Sugar maple tree identification, tapping walkthrough and student tapping lab AA4(9-12) • Maple syrup production and maple syrup lab DE4(9-12) • Identification of locally available foraged foods including instructional videos and demonstrations TCC4(9-12) • Beekeeping demonstration, harvesting honey and honey lab DE4(9-12) • Field trip to local goat farm for tour and to purchase supplies for foraging/local foods labs DE4(9-12) AA4(9-12) • Edible flower identification, harvesting and lab DE4(9-12) • Inoculate hardwood logs with shiitake mushroom spawn, grow and harvest TCC4(9-12)	
Teacher Resources: CT DEEP tree identification tools, beekeeping guides and local apiary videos, wild edible field books and recipes, The Culinary Professional textbook, Instructional cooking videos, other resources will be added as needed to accommodate current industry trends.	

LEADERSHIP DEVELOPMENT CURRICULUM

LEADERSHIP DEVELOPMENT

REGION 14 SCHOOL DISTRICT
VISION OF A LEARNER

Grade Level(s): 11-12

Curriculum Author(s): Kathleen Gorman

Course Description:
This course is designed to equip students with the leadership, communication, and organizational skills necessary for success in agriculture-related careers and participation in the National FFA Organization. Through hands-on activities, students will develop teamwork, public speaking, problem-solving, and decision-making abilities while exploring key leadership principles in the context of agriscience. Topics covered will include goal setting, time management, parliamentary procedure, advocacy, and event planning. Students will also engage in leadership projects, career exploration, and service-learning opportunities to enhance their personal growth and professional readiness. Whether aspiring to be agricultural entrepreneurs, educators, or industry leaders, this course provides the foundation for students to become effective advocates for agriculture and their communities. Every student must maintain and document an approved supervised agriculture experience (SAE) project and actively participate in the Woodbury FFA Chapter to develop premier leadership, personal growth, and career success through attending FFA meetings and participating in chapter events and planning.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Leadership Foundations	What does it mean to be an effective leader, and how can self-awareness improve leadership potential?	Effective leadership is rooted in self-awareness, understanding leadership principles, and identifying personal strengths and areas for growth.	CCE3(9-12), CCE4(9-12), TI1(9-12), P1(9-12)
Communication Mastery	How can effective communication build trust and influence in leadership roles?	Communication is a critical skill that involves listening, delivering clear messages, and adapting to different audiences and contexts.	CCE1(9-12), CCE3(9-12), CCE4(9-12), DE1(9-12), P2(9-12), P3(9-12)
Teamwork and Collaboration	What makes a team successful, and how can leaders foster collaboration and resolve conflict?	Successful teamwork relies on trust, clear communication, and a leader's ability to guide diverse individuals toward a shared goal.	TCC3(9-12), TCC4(9-12), CCE1(9-12), CCE3(9-12), DE1(9-12)
Leadership Application in Agriculture	How do leadership roles within FFA and other agricultural organizations prepare students for real-world challenges?	Leadership opportunities in agri-science organizations provide practical experiences that build confidence, decision-making skills, and the ability to lead others effectively.	TI1(9-12), CCE1(9-12), CCE2(9-12), CCE4(9-12), DE2(9-12), AA1(9-12)
Ethics and Advocacy	How can leaders balance ethical decision-making with advocating for change in agriculture?	Ethical leadership requires integrity and thoughtful decision-making, while advocacy involves using one's voice to influence policies and support the agricultural industry.	CCE2(9-12), CCE3(9-12), CCE4(9-12), DE1(9-12), DE4(9-12)
Capstone Leadership Project	How can leaders create meaningful change by applying their	Leadership is about action and impact; applying skills to meaningful projects demonstrates the ability to inspire and influence change.	TI1(9-12), CCE4(9-12), DE1(9-12), AA1(9-12)

UNIT 1 - LEADERSHIP FOUNDATIONS

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

ECL.05.01 Identify characteristics and behaviors that constitute ethical, efficient, and effective leadership.

ECL.05.02 Demonstrate leadership through advocacy for AFNR-related issues.

Common Core State Standards

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

W.11-12.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

COLLABORATE AND COMMUNICATE EFFECTIVELY

CCE3: I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

CCE4: I can express my thoughts and ideas, both verbally and in writing, in order to defend my perspective. I can do this via essays, performance-based projects, whole group, and/or small group discussions.

TAKE INITIATIVE

TI1: I can implement a realistic plan and adapt when necessary to achieve my goals.

PERSEVERE

P1: I can self-reflect and seek feedback to build upon my strengths, apply those strengths to overcome obstacles, and share my strategies with others.

Understandings: Students will understand that…

- Effective leadership is rooted in self-awareness, understanding leadership principles, and identifying personal strengths and areas of growth.

Essential Questions:

- What does it mean to be a leader in agriscience and beyond?
- How can understanding personal leadership traits and styles improve effectiveness as a leader?

• Leadership involves the ability to inspire, guide, and influence others toward achieving common goals.	• Why is self-awareness important for personal and professional growth?
Students will know... • The definition and importance of leadership in agriculture and related fields. • Traits and characteristics of effective leaders. • Different leadership styles (e.g., autocratic, democratic, transformational) and their applications. • The value of self-awareness in identifying leadership strengths and areas for development.	**Students will be able to...** • Define leadership and describe its importance in personal, professional, and agriculture. • Identify and analyze personal leadership style through self-assessment tools. • Reflect on leadership traits and set specific goals for growth as a leader.
Key Vocabulary: accountability, autocratic leadership, charisma, collaboration, decision-making, democratic leadership, empathy, goal-setting, influence, integrity, leadership, leadership styles, leadership traits, motivation, resilience, responsibility, self-awareness, servant leadership, transformational leadership, vision	
Assessment Evidence	
Performance Tasks: *Classwork:* Students will explore their personal leadership traits and styles to better understand how they influence others. **P1** *Classwork:* Students will demonstrate their understanding of leadership traits through creative teamwork. **AA3** *Classwork:* Students will practice leadership skills in a hands-on, collaborative activity. **CCE3** *Interim:* Students will analyze the traits and leadership styles for an influential leader in agriculture or other fields.	**Other Evidence:** *Interim:* Students will reflect on their leadership development and set actionable goals. **TI1** *Summative:* Students will create a portfolio showcasing their understanding of leadership foundations. **CCE4**
Learning Plan	
• Students will self-evaluate to identify their personal leadership traits and styles. • Students will showcase their understanding of the concepts of individual leadership.	
Teacher Resources: Habitudes, FFA Edition Teacher Created Resources	

UNIT 2 - COMMUNICATION MASTERY

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

CRP.12.01 Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.

CRP.12.02 Create and implement strategies to engage team members to work toward team and organizational goals in a variety of workplace and community situations (e.g., meetings, presentations, etc.).

Common Core State Standards

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively

SL.11-12.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing stance, premises, links among ideas, word choice, points of emphasis, and tone used.

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

Collaborate and Communicate Effectively

CCE1 I can initiate discussion with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.

CCE3 I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

CCE4 I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

Demonstrate Empathy

DE1 I can acknowledge, process, and respond appropriately to others' comments and perspectives.

Persevere

P2 I can strengthen my weaknesses by identifying, initiating, and practicing appropriate strategies to become confident in my ability to overcome my challenges.

P3 I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.

Understandings: Students will understand that… ● Effective communication is critical for building trust, inspiring others, and leading teams successfully. ● Active listening and nonverbal communication are as important as verbal skills in leadership. ● Adapting communication styles to suit different audiences enhances clarity and impact.	**Essential Questions:** ● How does effective communication influence leadership success? ● Why is active listening essential for building relationships and trust as a leader? ● How can nonverbal communication impact the way a message is received? ● What strategies can leaders use to tailor their communication to diverse audiences?
Students will know… ● The components of effective communication include verbal, nonverbal, and written skills. ● Techniques for active listening and providing constructive feedback. ● The role of nonverbal communication, such as body language, facial expressions, and tone of voice ● Strategies for adapting communication styles to meet the needs of various audiences. ● Common barriers to effective communication and how to overcome them.	**Students will be able to…** ● Demonstrate active listening by summarizing and responding to others' points during discussions. ● Identify and use appropriate nonverbal cues to reinforce verbal messages. ● Deliver a clear, engaging, and well-organized speech on a leadership-related topic. ● Tailor written and verbal communication to suit different audiences, such as peers, professionals, or community members. ● Evaluate the effectiveness of their own communication and identify areas of improvement.
Key Vocabulary: active listening, audience, barrier to communication, body language, clarity, constructive feedback, empathy, feedback, message, nonverbal communication, paralanguage, perception, professional communication, public speaking, receiver, sender, tone, verbal communication, visual aids, written communication	
Assessment Evidence	
Performance Tasks: *Classwork:* Students will practice active listening and providing constructive feedback. **CCE1** *Classwork:* Students will identify and practice effective nonverbal communication strategies. *Classwork:* Students will adapt their communication style to different audiences. **CCE4**	**Other Evidence:** *Summative:* Students will reflect on their growth in communication skills during the unit. **DE1**

Classwork: Students will identify and solve common communication barriers in leadership. *Interim*: Students will demonstrate professional written communication skills. **CCE3** *Summative*: Students will deliver a clear and engaging speech on a leadership topic. **P2**	

Learning Plan

- Students will write a reflection piece on their personal communication skills and identify areas for improvement in their communication style. **P3**
- Students will deliver a clear and engaging speech on a topic. **P2**

Teacher Resources:
Habitudes, FFA Edition
Teacher Created Resources

UNIT 3 - TEAMWORK AND COLLABORATION

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

CRP.12.01 Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.

CRP.12.02 Create and implement strategies to engage team members to work toward team and organizational goals in a variety of workplace and community situations (e.g., meetings, presentations, etc.).

Common Core State Standards

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively

SL.11-12.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing stance, premises, links among ideas, word choice, points of emphasis, and tone used.

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

Think Critically and Creatively

TCC3 i can integrate relevant information to produce multiple valid solutions.

TCC4 I can integrate my learning to adapt to experiences in the classroom, career, and life.

Collaborate and Communicate Effectively

CCE1 I can initiate discussion with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.

CCE3 I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

Demonstrate Empathy

DE1 I can acknowledge, process, and respond appropriately to others' comments and perspectives.

Understandings: Students will understand that...	**Essential Questions:**
● Effective teamwork requires trust, communication, and shared goals.	● What are the qualities of an effective team, and how can leaders contribute to team success?

• Leaders play a key role in fostering collaboration and resolving conflicts within a team. • Diverse perspectives within a team can lead to better decision-making and innovation. • Collaboration involves balancing individual contributions with the needs of the group.	• How can communication and trust be built within a team? • What strategies can leaders use to resolve conflicts and encourage collaboration? • How does diversity within a team enhance its performance? • Why is accountability important in a collaborative setting?
Students will know... • The characteristics of effective teams (e.g., trust, communication, shared goals, accountability). • Common team roles (e.g., leader, facilitator, recorder) and their importance. • Strategies for resolving conflicts in a team setting. • The importance of trust and mutual respect in fostering collaboration. • How diversity of perspectives and skills contributes to team success. • Barriers to teamwork and how to overcome them.	**Students will be able to...** • Identify and describe the key elements of an effective team. • Demonstrate the ability to take on various roles within a team, including leadership and support roles. • Resolve team conflicts using effective communication and problem-solving strategies. • Foster collaboration by building trust, setting shared goals, and encouraging participation. • Evaluate their own performance and the performance of their team in collaborative settings. • Reflect on how diversity and individual strengths contribute to the success of a team.
Key Vocabulary: accountability, active listening, collaboration, conflict resolution, consensus, diversity, facilitator, feedback, goal setting, group dynamics, mutual respect, problem-solving, roles, shared goals, supportive environment, team accountability, team building, team leader, trust, workload distribution	
Assessment Evidence	
Performance Tasks: *Classwork:* Students will demonstrate their understanding of team roles and practice working collaboratively. **CCE3** *Classwork:* Students will practice resolving conflicts and fostering collaboration within a team. **CCE3** *Classwork:* Students will engage in activities that build trust and improve team dynamics. *Classwork:* Students will create a shared vision and mission statement for their team.	**Other Evidence:** *Summative*: Students will evaluate their team's collaboration and their personal contributions. **DE1**

Interim: Students will explore the value of diversity in teamwork and demonstrate how diverse perspectives enhance outcomes. **DE1** *Summative:* Students will work as a team to solve a real-world agricultural problem. **CCE1**	

Learning Plan

- Students will participate in activities that simulate team conflict and apply strategies to resolve issues and foster collaboration. **CCE1**
- Students will complete exercises designed to build trust, strengthen communication, and improve overall team dynamics.
- Students will apply collaboration and critical thinking to solve a real-world agricultural problem. **TCC3, TCC4**
- Students will evaluate their team's collaboration process and reflect on their personal contributions and growth throughout the unit. **DE1**

Teacher Resources:
Habitudes, FFA Edition
Teacher Created Resources

UNIT 4 - LEADERSHIP APPLICATION IN AGRICULTURE

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

ECL.05.02 Demonstrate leadership through advocacy for AFNR-related issues.

CRP.02.01 Use strategic thinking to connect and apply academic learning, technical knowledge, and skills to solve problems in the workplace and community.

CRP.05.01 Assess, identify, and synthesize the information and resources needed to make decisions that positively impact the workplace and community.

CRP.05.02 Make, defend and evaluate decisions at work and in the community using information about the potential environmental, social and economic impacts.

CPR.06.01 Synthesize information, knowledge, and experience to generate original ideas and challenge assumptions in the workplace and community.

CRP.06.03 Create a nd execute a plan of action for new ideas and introduce innovations to workplace and community organizations.

Common Core State Standards

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively

SL.11-12.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing stance, premises, links among ideas, word choice, points of emphasis, and tone used.

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

Take Initiative

TI1 I can implement a realistic plan and adapt when necessary to achieve my goals.

Collaborate and Communicate Effectively

CCE1 I can initiate discussion with my peers and teachers about a variety of topics, respecting differing viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.

CCE2 I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

CCE4 I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

Demonstrate Empathy

DE2 I can honor my own feelings and show empathy toward others through my actions.

Adapt and Adjust

AA1 I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that... ● Leadership opportunities in FFA and other agricultural organizations provide practical experiences that enhance leadership skills and prepare students for real-world challenges. ● Parliamentary procedure and meeting facilitation are essential tools for organized and effective leadership. ● Leadership roles require responsibility, collaboration, and the ability to inspire and guide others toward shared goals.	**Essential Questions:** ● How can leadership roles in FFA and other agricultural organizations prepare students for future success? ● Why is parliamentary procedure important for effective leadership and meeting facilitation? ● What qualities and skills make a leader successful in agriculture-related organizations? ● How can taking on leadership roles positively impact personal growth and the success of a group? ● What opportunities exist for students to practice and apply leadership in agriculture?
Students will know... ● The structure, purpose, and opportunities within FFA and other agricultural organizations. ● The fundamentals of parliamentary procedure, including motions, amendments, and voting processes. ● The responsibilities and expectations of various leadership roles (e.g., president, vice president, secretary). ● Strategies for effectively facilitating meetings and leading group discussions. ● The importance of setting goals and inspiring others in leadership roles.	**Students will be able to...** ● Identify and describe leadership opportunities available in FFA and other agriculture organizations. ● Demonstrate basic parliamentary procedure skills, including making and seconding motions, debating, and voting. ● Take on and fulfill specific leadership roles in a mock or real FFA meeting. ● Plan, organize, and lead a small group activity or event related to agriculture. ● Reflect on their performance as a leader and identify areas for improvement. ● Set goals for their involvement in agricultural leadership and plan steps to achieve them.

Key Vocabulary:
amendment, chairperson, debate, delegation, FFA, facilitation, goal setting, leadership role, main motion, meeting agenda, minutes, parliamentary procedure, point of order, presiding officer, quorum, second (a motion), service leadership, teamwork, voting, youth leadership development

Assessment Evidence	
Performance Tasks: *Classwork:* Students will research and understand various leadership roles in FFA and other agricultural organizations. *Classwork:* Students will practice basic parliamentary procedure skills. **TI2** *Interim:* Students will demonstrate their ability to plan and facilitate a small meeting. **CCE1** *Interim:* Students will create a detailed leadership plan for an agricultural event or initiative. **CCE4** *Summative:* Students will demonstrate mastery of parliamentary procedure and leadership skills in a realistic setting. **AA1**	**Other Evidence:** *Interim:* Students will reflect on their experience in a leadership role. **DE2** *Summative:* Students will compile a portfolio showcasing their understanding and application of leadership skills during the unit. **CCE2**

Learning Plan

- Participate in a series of in-class activities to practice motions, amendments, voting, and other basic parliamentary procedure skills. **TI1**
- Plan an agenda and facilitate a short meeting using parliamentary procedure. **CCE1**
- Create a written leadership plan for an agricultural event or initiative. **CCE4**

Teacher Resources:
Habitudes, FFA Edition
Teacher Created Resources

UNIT 5 - ETHICS AND ADVOCACY

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

CRP.09.01 Model characteristics of ethical and effective leaders in the workplace and community (e.g., integrity, self-awareness, self-regulation, etc.).

CRP.09.02 Implement personal management skills to function effectively in the workplace (e.g., time management, planning, prioritizing, etc.).

CRP.09.03 Demonstrate behaviors that contribute to a positive morale and culture in the workplace and community (e.g., positively influencing others, effectively communicating, etc.).

Common Core State Standards

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.

W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

W.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches, effectively; assess the strengths and limitations of each source in terms of task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and reliance on any one source and following a standard format of citation.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

Collaborate and Communicate Effectively

CCE2 I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.
CCE3 I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.
CCE4 I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

Demonstrate Empathy

DE1 I can acknowledge, process, and respond appropriately to others' comments and perspectives.
DE4 I can work respectfully with all members of my community and support the needs of others.

Understandings: Students will understand that...

- Ethical leadership involves making decisions guided by integrity, fairness, and respect for others.
- Advocacy is a powerful tool for leaders to influence change and promote important causes in agriculture and beyond.
- Ethical dilemmas often raise in leadership roles, requiring thoughtful decision-making and consideration of diverse perspectives.
- Leaders have a responsibility to use their influence to support their communities and industries.

Essential Questions:

- What does it mean to be an ethical leader, and why is ethical decision-making important?
- How can leaders use advocacy to influence change in agriculture and their communities?
- What are common ethical challenges leaders face in agriculture, and how can they address them?
- How can a leader balance personal values with the needs of their organization or community?
- What strategies can leaders use to advocate effectively for issues they care about?

Students will know...

- The definition and importance of ethical leadership and advocacy.
- Common ethical dilemmas in agriculture and strategies for resolving them.
- The steps involved in advocating for a cause include research, communication, and influencing decision-makers.
- The role of personal and organizational values in ethical leadership.
- Tools and strategies for effectively communicating and promoting advocacy messages.

Students will be able to...

- Identify and analyze ethical dilemmas and propose fair and just solutions.
- Reflect on personal values and how these influence their decision-making as leaders.
- Develop and deliver and advocacy message or campaign for an agricultural or community issue.
- Demonstrate strategies for influencing decision-makers and engaging audiences in advocacy efforts.
- Collaborate with peers to create and present solutions to ethical challenges.
- Evaluate the ethical dimensions of leadership decisions and their impact on individuals, organizations, and communities.

Key Vocabulary: advocacy, bias, code of ethics, conflict of interest, credibility, decision-making, dilemma, empathy, ethical leadership, ethics, fairness, integrity, moral compass, objectivity, persuasion, responsibility, stakeholder, transparency, values, voice, whistleblower

Assessment Evidence	
Performance Tasks: *Classwork:* Students will analyze and discuss ethical dilemmas to practice ethical decision-making. **DE1** *Classwork:* Students will develop an advocacy message for an agricultural or community issue. **CCE4** *Interim:* Students will write a professional advocacy letter to influence a decision-maker. **CCE3** *Interim:* Students will analyze a case study to apply ethical leadership principles. **DE4** *Interim:* Students will debate an ethical issue in agriculture, demonstrating their understanding of diverse perspectives and viewpoints. *Summative:* Students will design and present an advocacy campaign on an agricultural or community issue. **CCE4**	**Other Evidence:** *Classwork:* Students will reflect on their personal values and how they influence leadership decisions. *Summative*: Students will compile a portfolio showcasing their understanding of ethics and advocacy. **DE4**
Learning Plan	
• Develop a clear and persuasive advocacy message (e.g., slogan, social media post, or infographic) addressing an agricultural or community issue of your choice. **CCE3** • Compose a formal letter advocating for change or awareness on a selected issue. **CCE3** • Participate in a classroom debate on a controversial agricultural issue. **CCE4** • Write a one-page reflection on personal values and how they influence your decision-making as a leader. **CCE2** • Work individually or in teams to create a comprehensive advocacy campaign that includes a mission, key messages, target audience materials, and an implementation plan. **CCE4**	
Teacher Resources: Habitudes, FFA Edition Teacher Created Resources	

Unit 6 - CAPSTONE LEADERSHIP PROJECT

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

ECL.03.03 Analyze similarities and differences between verbal, nonverbal, written, and visual communication methods.
ECL.04.01 Develop a communication plan that includes purpose, target audience, message, medium, and outcome evaluation.
ECL.04.02 Identify, apply, and demonstrate communication skills and methods per the communications plan.
ECL.05.01 Identify characteristics and behaviors that constitute ethical, efficient, and effective leadership.
ECL.05.02 Demonstrate leadership through advocacy for AFNR-related issues.
CRP.09.01 Model characteristics of ethical and effective leaders in the workplace and community (e.g., integrity, self-awareness, self-regulation, etc.).
CRP.09.02 Implement personal management skills to function effectively in the workplace (e.g., time management, planning, prioritizing, etc.).
CRP.09.03 Demonstrate behaviors that contribute to a positive morale and culture in the workplace and community (e.g., positively influencing others, effectively communicating, etc.).

Common Core State Standards

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively
SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.
SL.11-12.6 Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.
W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
W.11-12.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

Vision of A Learner Attributes: Students will be able to independently use their learning to…

Take Initiative

TI1 I can implement a realistic plan and adapt when necessary to achieve my goals.

Collaborate and Communicate Evaluate

CCE4 I can communicate and express my understanding in an authentic, respectful and relevant way, using the most effective mode of expression.

Demonstrate Empathy

DE1 I can acknowledge, process, and respond appropriately to others' comments and perspectives.

Adapt and Adjust

AA1 I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that...

- Applying leadership skills in a real-world project demonstrates the ability to inspire change and lead effectively.
- Successful leadership projects require careful planning, teamwork, and adaptability.
- Leaders must evaluate the impact of their initiatives and reflect on lessons learned for future growth.
- Presenting and communicating a leadership project effectively is essential for inspiring others and creating meaningful change.

Essential Questions:

- How can leaders apply their skills to develop and execute a successful leadership project?
- What challenges might arise during a leadership project, and how can they be overcome?
- How does teamwork contribute to the success of a leadership initiative?
- Why is reflection important in leadership development?
- What strategies can leaders use to effectively present and communicate their projects to stakeholders?

Students will know...

- The steps involved in planning and executing a leadership project.
- Methods for evaluating the success and impact of a leadership initiative.
- The importance of teamwork, delegation, and collaboration in leadership.
- Effective presentation and communication techniques for sharing project outcomes.
- Strategies for reflecting on leadership experiences and setting future goals.

Students will be able to...

- Design and implement a leadership project that addresses a specific need or challenge.
- Work collaboratively with peers to organize and execute their initiative.
- Adapt to obstacles and challenges that arise during the project.
- Assess the effectiveness and impact of their leadership efforts.
- Present their project findings and leadership experience to an audience.
- Reflect on their growth as a leader and identify areas for continued development.

Key Vocabulary:

accountability, adaptability, collaboration, delegation, evaluation, feedback, implementation, impact assessment, innovation, leadership initiative, milestones, obstacles, outcomes, peer review, planning phase, presentation skills, reflection, stakeholders, sustainability, team dynamics

Assessment Evidence	
Performance Tasks: *Classwork:* Students will collaborate with their project teams to finalize details and prepare for implementation. **TI1** *Interim:* Students will evaluate their progress and troubleshoot any challenges in their leadership project. **AA1** *Summative:* Students will implement and document their leadership project. **P4**	**Other Evidence:** *Classwork:* Students will develop a structured proposal outlining their capstone leadership project. **CCE4** *Summative:* Students will present their leadership project, sharing key insights and results. **CCE4** *Summative:* Students will compile a portfolio showcasing their leadership journey throughout the capstone project. **DE1**
Learning Plan	
• Develop a structured written proposal for a leadership project, including the project's purpose, goals, timeline, resources needed, team roles, and evaluation plan. **CCE4** • Complete a progress report that assesses a project's current status, identifies any challenges faced, and outlines action steps for overcoming obstacles. **AA1** • Prepare and deliver a formal presentation summarizing a project's purpose, implementation process, challenges, results, and personal/team growth. **CCE4**	
Teacher Resources: Habitudes, FFA Edition Teacher Created Resources	

EXPLORATION INTO ANIMAL ASSISTED THERAPY CURRICULUM

Grade Level(s): 10-12	**Curriculum Author(s):** Kathleen Gorman

Course Description:
This course introduces students to the growing field of animal-assisted therapy (AAT) and its role in supporting human physical, emotional and psychological well-being. Students will explore the history, theory, and practical application of AAT across a variety of settings including healthcare, education, rehabilitation, and mental health services. Through a combination of classroom instruction, guest speakers, case studies and hands-on activities, students will learn about the human-animal bond, animal behavior and welfare, and the selection and training of therapy animals. Students will also examine ethical considerations, career pathways, and certifications processes related to animal-assisted therapy interventions. The course is designed to build empathy, communication, and observation skills while offering meaningful insights into the therapeutic value of animals. Students must be enrolled in the Ellis Clark Regional Agriscience and Technology Center to enroll in this course.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
The Human-Animal Bond	What makes the connection between humans and animals powerful enough to promote healing and improve well-being?	The human-animal bond is a deeply rooted relationship that can have measurable psychological, emotional, and physiological benefits when applied in therapeutic settings.	**TCC2(9-12), TCC3(9-12), CCE1(9-12), CCE3(9-12)**
Therapy in Action: Roles, Settings, and Impact	How are therapy animals used to meet the needs of diverse populations in various environments?	Animal-assisted therapy is a versatile and impactful tool that supports individuals across a range of settings, from hospitals to classrooms, but enhancing healing, motivation, and emotional support.	**CCE3(9-12), DE2(9-12), TI1(9-12), P4(9-12), AA1(9-12)**
Partners in Healing: Animal Selection, Care, and Ethics	How do we ensure that therapy animals are safe, effective, and ethically treated in their work?	Successful animal-assisted therapy relies on selecting suitable animals, prioritizing their welfare, and maintaining ethical standards that protect both the animals and the people they serve.	**TCC2(9-12), CCE2(9-12), CCE3(9-12), DE2(9-12), DE4(9-12), AA1(9-12)**

Unit 1 - THE HUMAN ANIMAL BOND

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Agriculture, Food, and Natural Resource Standards

AS.01.01 Evaluate the development and implications of animal origin, domestication, and distribution on production practices and the environment.

AS.01.03 Analyze laws and sustainable practices that impact animal agriculture from a local, tribal, state, national, and global perspective.

AS.02.01 Explain management techniques that ensure animal welfare.

AS.06.01 Classify animals according to taxonomic classification systems and use (e.g., agricultural, companion, etc.).

Common Core State Standards

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

W.11-12.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

National Health Science Standards

2.1.1 Model verbal and nonverbal therapeutic communication.

2.3.2 Prepare examples of technical and informative writing.

3.1.1 Differentiate healthcare delivery systems and healthcare-related agencies.

3.1.3 Analyze the impact of emerging issues on healthcare delivery systems.

6.2.1 Discuss religious, social, and cultural values as they impact healthcare.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

THINK CRITICALLY AND CREATIVELY

TCC2: I can evaluate evidence from multiple perspectives and recognize their limitations and implications, in order to justify new conclusions.

TCC3: I can integrate relevant information to produce multiple valid solutions.

COLLABORATE AND COMMUNICATE EFFECTIVELY

CCE1: I can initiate discussions with my peers and teachers about a variety of topics, respecting different viewpoints, actively listening to others, and responding thoughtfully with peer-reviewed evidence that is free of bias.

CCE3: I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

Understandings: Students will understand that…

- The human-animal bond is a unique and meaningful relationship that can have a profoundly positive impact on emotional, social, and physical well-being.
- Animal-assisted therapy has evolved over time, shaped by cultural, medical, and social developments.
- Animal-assisted therapy, activities, and service animals play distinct roles in supporting people with varying needs.
- Interacting with animals can cause measurable changes in human brain chemistry, stress levels, and overall health.
- A person's background, personality, and life experiences shape how they bond with animals.
- The human-animal bond can be intentionally integrated into therapeutic practices to support healing and development.

Essential Questions:

- What is the human-animal bond, and why does it matter?
- How has the role of animals in therapy changed throughout history?
- What are the differences between therapy animals, service animals, and emotional support animals?
- What does science say about how animals affect human health?
- How do individual factors impact the human-animal bond?
- How is the human-animal bond used in real-life therapeutic settings?

Students will know...

- The definition and characteristics of the human-animal bond.
- Basic theories that explain why humans bond with animals.
- Key historical figures and events in the development of AAT.
- The timeline of major milestones in animal-assisted interventions.
- Definitions and legal distinctions among AAT, AAA, service animals, and emotional support animals.
- Appropriate contexts and uses for each type of animal support.
- Key physiological responses to human-animal interaction (e.g., oxytocin release, lowered cortisol).
- Psychological and emotional benefits of animal contact.
- How age, culture, trauma, and personal history influence relationships with animals.
- The role of animals in helping people cope with stress, grief, and isolation.

Students will be able to...

- Identify examples of the human-animal bond in everyday life.
- Describe how this bond can influence human emotions and behaviors.
- Trace the evolution of therapy animal use across different time periods and cultures.
- Analyze how public perception of animals in healthcare has changed.
- Classify the animals into the appropriate therapy category based on a given scenario.
- Explain the purpose and training requirements of each therapy category of animal.
- Summarize scientific findings that support the benefits of AAT.
- Interpret basic data or research outcomes related to AAT effectiveness.
- Analyze how different populations experience and benefit from

• Examples of programs and professions that use AAT. • Populations and conditions that commonly benefit from animal-assisted interventions.	animal interventions. • Explain why AAT might be more effective for some individuals than others. • Identify how the human-animal bond is applied in different professional settings. • Evaluate the effectiveness of real AAT programs using criteria such as outcomes, feedback and ethical standards.
Key Vocabulary: anthropomorphism, animal rights philosophy, animal welfare philosophy, domestication, animal-assisted interventions, animal-assisted therapy, biophilia, companion animals, human-animal bond, human-animal interactions	
Assessment Evidence	
Performance Tasks: *Classwork:* Students will create a visual representation of how animals influence human well-being. **TCC3** *Classwork:* Students will identify one key moment in AAT history and explain its impact. **CCE3** *Classwork:* Students will read and summarize a short research article or infographic on AAT benefits. **TCC2** *Interim:* Conduct and summarize a peer interview about their experiences with animals. **CCE1** *Summative:* Students will research and present on a real-world AAT program (e.g, prison dog training, hospital therapy dogs). **TCC3**	**Other Evidence:** *Classwork:* Students will describe a personal or observed experience that demonstrates the human-animal bond in a reflection journal entry. *Classwork:* Students will reflect on which AAT application resonated most and why. *Interim:* Students will complete a written assessment on the terminology and roles of animal-assisted therapy categories.
Learning Plan	
• Review the historic progression of the human-animal bond throughout history. **TCC3** • Differentiate between animal-assisted therapy (AAT), animal-assisted activities (AAA), service animals, and emotional support animals. • Research current animal-assisted therapy programs and their functions in society. **TCC3**	
Teacher Resources: Handbook on Animal-Assisted Therapy, Fifth Edition	

Unit 2 - THERAPY IN ACTION: ROLES, SETTINGS AND IMPACT

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

AS.01.01 Evaluate the development and implications of animal origin, domestication, and distribution on production practices and the environment.

AS.01.03 Analyze laws and sustainable practices that impact animal agriculture from a local, tribal, state, national, and global perspective.

AS.02.01 Explain management techniques that ensure animal welfare.

AS.05.01 Design and evaluate animal housing, equipment, and handling facilities for the major systems of animal production.

AS.05.02 Comply with government regulations and safety standards for facilities used in animal production.

AS.06.02 Apply principles of comparative anatomy and physiology to use within various animal systems.

Common Core State Standards

RI.11-12.1 Cite strong and thorough textural evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

RI.11-12.2 Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

W.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format

for citation.

W.11-12.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

National Health Science Standards

2.1.1 Model verbal and nonverbal therapeutic communication.

2.3.2 Prepare examples of technical and informative writing.

3.1.1 Differentiate healthcare delivery systems and healthcare-related agencies.

3.1.3 Analyze the impact of emerging issues on healthcare delivery systems.

6.2.1 Discuss religious, social, and cultural values as they impact healthcare.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

COLLABORATE AND COMMUNICATE EFFECTIVELY

CCE3: I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

DEMONSTRATE EMPATHY

DE2: I can honor my own feelings and show empathy toward others through my actions.

TAKE INITIATIVE

TI1: I can implement a realistic plan and adapt when necessary to achieve my goals.

PERSEVERE

P4: I can take on challenges and continuously engage in my own long-term strategies to overcome them to demonstrate through personal experience that failures are more instructive than discouraging.

ADAPT AND ADJUST

AA1: I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that...

- Animal-assisted therapy (AAT) and animal-assisted activities (AAA) both support human well-being but differ in purpose, structure, and outcomes.
- Animal-assisted interventions can be adapted for a wide variety of environments to meet different human needs.
- In healthcare settings, therapy animals can promote healing, reduce stress, and improve patient outcomes.
- Animals can support student learning, social-emotional development, and behavior in education settings.
- AAT is not limited to hospitals and schools; unconventional environments can also benefit from structured animal interaction.
- The success of animal-assisted therapy can be measured through outcomes, feedback, and client progress toward goals.

Essential Questions:

- What are the key differences between animal-assisted therapy and animal-assisted activities?
- Where and how are animal-assisted interventions used to improve human lives?
- How do therapy animals contribute to patient care and recovery in medical settings?
- In what ways do therapy animals impact students and teachers in schools?
- What are some surprising or unconventional environments where animal-assisted therapy is making a difference?
- How do we evaluate whether an animal-assisted therapy program is truly effective?

Students will know...	**Students will be able to...**
• The definitions and distinctions between AAT and AAA. • Examples of settings where AAT and AAA are applied. • Roles of professionals in AAT versus AAA. • Common settings for AAT/AAA (hospitals, schools, prisons, nursing homes, mental health clinics). • Population needs and goals in each of the common settings for AAT/AAA. • Types of healthcare settings that use therapy animals. • Benefits and limitations of AAT in hospitals, rehab centers, and long-term care facilities. • AAT applications for literacy, emotional regulations, and special education. • Challenges and benefits of using therapy animals in schools. • Unique settings in which AAT/AAA is applied (e.g., prisons, corporate offices, disaster relief zones, libraries). • Adaptations required for different environments applying AAT/AAA techniques. • Methods for assessing AAT success (e.g., surveys, observation, behavior change). • Importance of data collection, feedback and program adaptation.	• Compare and contrast AAT and AA using specific criteria. • Identify the appropriate setting for AAT or AA based on client needs. • Match intervention goals to appropriate intervention settings. • Describe how animal-assisted services are tailored to unique populations. • Analyze how AAT supports physical and emotional healing. • Identify considerations and precautions for using animals in health care. • Design a basic plan for incorporating a therapy animal into a school environment. • Evaluate how animals can address specific student needs. • Identify unconventional uses of AAT and explain their impact. • Create a plan for a nontraditional AAT program. • Interpret sample data to draw conclusions about a program's success. • Propose improvements to an existing AAT program based on evidence.

Key Vocabulary:
animal-assisted activities (AAA), animal-assisted interventions (AAI), animal-assisted therapy (AAT), assessment, client, documentation, ethics, evaluation, facility, handler, intervention, outcome, population, professional, program, progress notes, protocol, setting, stakeholder, therapy animal

Assessment Evidence

Performance Tasks:	**Other Evidence:**
Classwork: Students will create a visual guide showing setting, population served, and intervention goals for an AAT/AAA site. **CCE3** *Classwork:* As a group, students will review and give feedback on a real or mock AAT program's evaluation methods.**TI1** *Interim:* Students will create a brochure for a hypothetical hospital for an	*Classwork:* Students will create a T-chart comparison of AAT versus AAA. *Classwork:* Students will evaluate the effectiveness of an AAT program in a hospital setting through the use of case studies. **TI1** *Classwork:* Students will answer the reflection question: "How could a

AAT program launching. **CCE3** *Summative:* Students will plan a mobile AAT unit for a disaster relief scenario. **DE2, P4**	therapy animal have helped you or a peer during school?" *Classwork:* Students will complete a data analysis worksheet that examines sample AAT results and recommend adjustments. **AA1**

Learning Plan

- Students will compare animal-assisted therapy and animal-assisted activities including definitions, goals, personnel involved, and documentation required. **CCE3**
- Students will analyze scenarios to determine if AAT, AAA or service animal is in use.
- Students will research how AAT is used in multiple therapeutic settings. **TI1**
- Students will design a mock therapy session tailored to a specific setting population that includes session goals, animals used, safety measures, and expected outcomes. **DE2, P4**

Teacher Resources:
Handbook on Animal-Assisted Therapy, Fifth Edition
Pet Partners Handler Guide

Unit 3 - PARTNERS IN HEALING: ANIMAL SELECTION, CARE, AND ETHICS

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

National Agriculture, Food, and Natural Resources

AS.01.03 Analyze laws and sustainable practices that impact animal agriculture from a local, tribal, state, national, and global perspective.

AS.06.02 Apply principles of comparative anatomy and physiology to uses within various animal systems.

AS.06.03 Select animals for specific purposes and maximum performance based on anatomy and physiology.

AS.07.01 Design programs to prevent animal diseases, parasites, and other disorders and ensure animal welfare.

Common Core State Standards

RI.11-12.1 Cite strong and thorough textural evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

RI.11-12.2 Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

RI.11-12.7 Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

W.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

W.11-12.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

National Health Science Standards

2.1.1 Model verbal and nonverbal therapeutic communication.
2.3.2 Prepare examples of technical and informative writing.
3.1.1 Differentiate healthcare delivery systems and healthcare-related agencies.
3.1.3 Analyze the impact of emerging issues on healthcare delivery systems.
6.2.1 Discuss religious, social, and cultural values as they impact healthcare.

Vision of A Learner Attributes: Students will be able to independently use their learning to...

THINK CRITICALLY AND CREATIVELY

TCC2: I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

COLLABORATE AND COMMUNICATE EFFECTIVELY

CCE2: I can give and receive actionable and relevant feedback with openness to be able to determine meaningful revisions for success.

CCE3: I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

DEMONSTRATE EMPATHY

DE2: I can honor my own feelings and show empathy toward others through my actions.

DE4: I can work respectfully with all members of my community and support the needs of others.

ADAPT AND ADJUST

AA1: I can evaluate different approaches and justify the best pathway to success.

Understandings: Students will understand that...

- The effectiveness and safety of animal-assisted therapy depend on selecting animals with the appropriate temperament, behavior, and training potential.
- Therapy animals must undergo specialized training and evaluation to ensure safe, controlled interactions with people.
- Protecting the physical and emotional well-being of therapy animals is essential to ethical and sustainable animal assisted work.
- Ethical decision-making in AAT ensures safety, dignity, and respect of both clients and animals.
- Handlers are critical to the success of animal-assisted interventions, ensuring safety, communication, and effective delivery of services.
- A safe environment for both animals and clients enhances the

Essential Questions:

- What makes an animal suitable for therapeutic work?
- How are therapy animals trained and certified to work with people?
- How can we ensure therapy animals are treated with respect, care, and compassion?
- What ethical issues arise in animal-assisted therapy, and how can they be addressed?
- What is the handler's role, and how do they support both the animal and the client during AAT?
- How can we design spaces and routines that promote safety and well-being in AAT sessions?

success and sustainability of AAT programs.	
Students will know... ● Common species and breeds used in animal-assisted therapy. ● Characteristics of a good therapy animal (temperament, socialization, health). ● Basic eligibility and evaluation criteria for therapy animals. ● The steps involved in training therapy animals. ● Key skills and behaviors animals must learn. ● Organizations that certify therapy animals and their requirements. ● Signs of stress and burnout in therapy animals. ● The Five Freedoms of animal welfare. ● Best practices for scheduling, rest, and health care. ● Common ethical challenges (e.g., consent, animal stress, handler responsibility). ● Ethical standards and guidelines for practitioners. ● The importance of informed consent and appropriate boundaries. ● Core duties of a handler before, during, and after a session. ● How handlers communicate with both animals and clients. ● The importance of handler training and self-awareness. ● Key elements of a safe therapy environment (space, noise level, exits, animal access). ● How to prevent and respond to incidents (e.g., bits, fear reactions, allergies). ● Safety protocols and emergency procedures in AAT settings.	**Students will be able to...** ● Identify traits of suitable therapy animals. ● Explain why certain animals may or may not be appropriate for AAT. ● Describe the training process for therapy animals. ● Compare the standards of different therapy animal certification organizations. ● Recognize when a therapy animal may be overstressed or unfit to work. ● Create a basic wellness plan for a therapy animal. ● Analyze ethical dilemmas and propose appropriate actions. ● Explain how ethical practices protect both the client and the animal. ● Simulate basic handler responsibilities in mock sessions. ● Identify signs of stress in the animal and client and respond appropriately. ● Assess a mock environment for AAT readiness and safety. ● Develop a basic emergency response plan for AAT incidents.
Key Vocabulary: animal-assisted therapy (AAT), breed suitability, burnout, certification, ethics, evaluation, handler, health screening, informed consent, overstimulation, professional standards, selection criteria, service animal, socialization, stress signals, temperament, therapy animal, welfare, wellness plan, work/rest balance	
Assessment Evidence	
Performance Tasks: *Classwork:* Students will evaluate profiles of various animals to determine their suitability for animal-assisted therapy work. **DE4**	**Other Evidence:** *Classwork:* Students will outline the process from animal selection to certification.

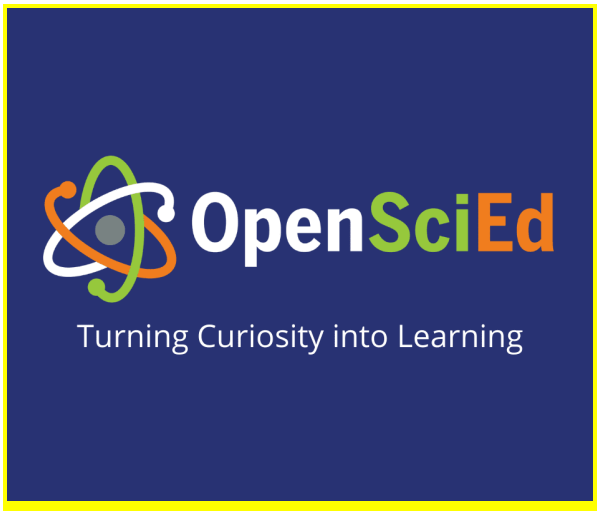
Classwork: Students will create a weekly care and work schedule for a therapy animal. **AA1** *Classwork:* Students will evaluate peers in a handler simulation role. **CCE2** *Classwork:* Students will evaluate a sample floor and recommend improvements. **TCC2** *Interim:* Students will do small group research presentations on major certifying organizations of animal-assisted therapy animals (e.g., Pet Partners, Therapy Dogs International). **CCE3**	*Classwork:* Students will identify welfare concerns and suggest improvements. **DE2** *Classwork:* Students will answer the reflection question: "What responsibility do humans have to therapy animals?" *Interim:* Students will complete a written assessment on characteristics and selection criteria of animal-assisted therapy candidates. *Summative:* Students will complete a cumulative written assessment of course material.

Learning Plan

- Students evaluate animal profiles (species, breed, temperament, behavior) to determine suitability for therapy work.
- Students will research certifying organizations and their requirements to certify animal-assisted therapy animals. **CCE3**
- Students will assess instances where therapy animal welfare is compromised and address concerns and propose solutions. **CCE2**

Teacher Resources:
Pet Partners Handler Guide

7th GRADE SCIENCE CURRICULUM

	
Grade Level(s): 7th Grade	**Curriculum Author(s):** Kari McCarthy and Taryn Fernandez
Course Description: 7th grade science is a combination of physical science, earth and space science, and life science designed to prepare students for continued studies in science via phenomena-based learning. The units are designed utilizing resources from OpenSciEd, a state-endorsed hub for high quality science teaching and learning materials. Through investigation, problematizing, and putting pieces together, students will gain understanding of chemical reactions, human body interactions, photosynthesis and matter cycling, plate tectonics and the rock cycle.	

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
Atomic Structure & the Periodic Table	What Makes Up Everything Around Us?	A substance is made of the same type of molecules (or atoms throughout). The number, type, and arrangement of atoms in the molecules that make up a substance are unique to that substance.	TCC2 (6-8) CCE3 (6-8) TI2 (6-8) P4 (6-8)
Chemical Reactions and Matter	How can we make something new that was not there before?	In a chemical reaction, the particles that make up old substances can be broken apart and the atoms that make them up can be rearranged to form new molecules to make new substances. We can use properties to help identify different substances.	TCC2 (6-8) CCE3 (6-8) TI3 (6-8) P4 (6-8)
Chemical Reactions and Energy	How can we use chemical reactions to design a solution to a problem?	Energy transfers from the system of atoms that rearrange during the chemical reaction to surrounding systems. The more reactants we use in a chemical reaction, the more energy is being transferred into or out of the system. The evidence of this is a greater temperature change. Engineers use a cyclical process (Define, Develop, Optimize) to design solutions. Designs and instructions need to be peer tested to inform modifications that will lead to a better solution.	TCC1 (6-8) CCE2 (6-8) DE4 (6-8) TI1 (6-8) P2 (6-8)

Metabolic Reactions	How do things inside our bodies work together to make us feel the way we do?	In a healthy digestive system, multiple subsystems, or organs, work together to help the body break large food molecules down into smaller food molecules. A chemical reaction happens in the cells of the body to provide them with energy. The reaction helps us explain why certain materials that we take into our bodies, like oxygen and food, are different from the materials that leave our bodies, like carbon dioxide and water. If our activity level increases, the chemical reaction happens faster to meet cells' needs.	TCC3 (6-8) CCE4 (6-8) DE2 (6-8) AA4 (6-8)
Matter Cycling and Photosynthesis	Where does food come from, and where does it go next?	The outputs of living things become the inputs of other living things and part of the nonliving components of the system. Systems consist of living (producers, consumers, and decomposers) and nonliving (air and water) components where atoms are continuously recycled between these components.	TCC4 (6-8) CCE3 (6-8) DE1 (6-8) P1 (6-8)
Plate Tectonics and Rock Cycling	What causes Earth's surface to change?	Movement in the mantle with movement of plates at Earth's surface and determine causal and correlational relationships between plate movement, earthquakes, volcanoes, erosion, and magma movement along with their related energy sources.	TCC2 (6-8) CCE1 (6-8) TI2 (6-8) AA1 (6-8)

Unit 1 - Atomic Structure and the Periodic Table

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

This unit is designed to build foundational understanding of atomic structure and how it connects to the periodic table, supporting the following NGSS performance expectations:

- **MS-PS1-1:** Develop models to describe the atomic composition of simple molecules and extended structures.
- **MS-PS1-2:** Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.
- **MS-PS1-3:** Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- **TCC2 (6-8):** Evaluate data gathered from multiple perspectives and draw conclusions.
- **CCE3 (6-8):** Participate in collaborative conversations by actively listening, formulating questions, making connected comments, and providing feedback.
- **TI2 (6-8):** Identify lesson objectives and apply the best resources to support learning.
- **P4 (6-8):** Step outside their comfort zone because they recognize that mistakes are opportunities to learn and grow.

Understandings: Students will understand that...

- All matter is made up of atoms, which are composed of protons, neutrons, and electrons.
- The periodic table is a tool that organizes elements based on patterns in atomic structure and properties.
- Patterns in atomic structure help predict how elements will behave in chemical reactions.

Essential Questions:

1. What are atoms made of and how do they differ from each other?
2. How does the periodic table help us understand the properties of elements?
3. Why do certain elements react with others?

Students will know...	**Students will be able to...**
● The basic structure of an atom (nucleus, protons, neutrons, electrons). ● Elements are organized on the periodic table by atomic number and similar properties. ● Group and period trends help predict element behavior.	● Develop models of atoms including subatomic particles. ● Use the periodic table to identify and compare elements. ● Analyze patterns in atomic structure to make predictions about reactivity. ● Communicate how atomic structure relates to the properties of elements.

Key Vocabulary: Atom, proton, neutron, electron, nucleus, element, atomic number, atomic mass, periodic table, group/family, period, reactivity, valence electron, isotope, molecule, compound, model, matter

Assessment Evidence

Performance Tasks:	**Other Evidence:**
● Atomic Model Construction Task ● Periodic Table Exploration Project	● Practice using the periodic table to determine atomic properties. ● Quizzes on subatomic particles and element identification. ● Modeling of atoms and elements using manipulatives. ● CER responses to reactivity comparisons

Learning Plan

COLLABORATE AND COMMUNICATE EFFECTIVELY

- **CCE3 (6-8):** I can participate in collaborative conversations by actively listening, formulating questions, making connected comments and providing various types of feedback to my peers.
    - *Atomic Model Construction Task*

TAKE INITIATIVE

- **TI2 (6-8)**: I can identify my objectives and apply the best resources to my learning
    - *Periodic Table Exploration Project*

PERSEVERE

- **P4 (6-8):** I can step outside my comfort zone because I recognize that my mistakes are not failures, but rather an opportunity to learn and grow.
    - *CER responses to reactivity comparisons*

Teacher Resources: Teacher developed lessons, Generation Genius, Gizmos, IXL

Unit 2 - Chemical Reactions and Matter

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

PS1.A: Structure and Properties of Matter

- Substances are made from different types of atoms, which combine with one another in various ways.
- Atoms form molecules that range in size from two to thousands of atoms.
- Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals).
- Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it.

PS1.B: Chemical Reactions

- Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.
- The total number of each type of atom is conserved, and thus the mass does not change.

LS1-D: Information Processing

- Each sense receptor responds to different inputs (electromagnetic, mechanical, chemical), transmitting them as signals that travel along nerve cells to the brain. The signals are then processed in the brain, resulting in immediate behaviors or memories.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

- **TCC2 (6-8):** Evaluate data gathered from multiple perspectives and draw conclusions.
- **CCE3 (6-8):** Participate in collaborative conversations by actively listening, formulating questions, making connected comments, and providing feedback
- **TI3 (6-8):** Compose specific questions that are relevant to a task to support learning.
- **P4 (6-8):** Step outside their comfort zone because they recognize that mistakes are opportunities to learn and grow.

Understandings: Students will understand that… ● In a closed system, no matter can get in or out, so the mass stays the same even when changes happen to the matter (such as becoming a gas). ● In an open system, matter can get in or out, so the mass can change if that happens. ● Properties don't change for a substance like flammability, melting/boiling point, and density. ● During a chemical reaction, new substances are produced from the old substances. Some of the particles that make up the original substances break apart and/or join to make new types of particles.	**Essential Questions:** ● Which combinations of the substances in a bath bomb produce a gas? ● What gas(es) could be coming from the bath bomb? ● How can particles of a new substance be formed out of the particles of an old substance? ● When energy from a battery was added to water, were the gases produced made of the same particles as were produced from heating the water? ● How can a new substance (a gas) be produced and the total mass of the closed system not change?
Students will know... ● Which substance(s) could or could not be produced in the process of substances being mixed together ● What tests could be done on gases to help identify substances ● Molecules are made of atoms and all the substances in our world are made of very few types of atoms. ● In a chemical reaction, the particles that make up old substances can be broken apart and the atoms that make them up can be rearranged to form new molecules to make new substances.	**Students will be able to...** ● Develop and revise models representing chemical reactions at the particle level. ● Plan and conduct investigations to gather and interpret data. ● Construct scientific explanations using evidence. ● Identify whether a chemical reaction has occurred based on properties and mass data.
Key Vocabulary: Claim, evidence, reasoning, atom,element, molecule, substance,compound, mixture, chemical reaction, physical change, property, density, flammability, solubility, conductivity, melting/boiling point, state of matter, reactant, product, mass conservation, particle model	

Assessment Evidence	
Performance Tasks: ● Explaining Another Phenomenon ● Constructing a Revised Explanation	**Other Evidence:** ● Chemical Reactions and Matter: End of Unit Summative Assessment ● Testing Combinations of Substances ● Chemical and Physical Changes STEM Case (Gizmos)

Learning Plan

THINK CRITICALLY AND CREATIVELY

- **TCC2 (6-8)** I can evaluate data gathered from multiple perspectives and draw conclusions.
  - *Explaining Another Phenomenon*

COLLABORATE AND COMMUNICATE EFFECTIVELY

- **CCE3 (6-8):** I can participate in collaborative conversations by actively listening, formulating questions, making connected comments and providing various types of feedback to my peers.
  - *Constructing a Revised Explanation*

PERSEVERE

- **P4 (6-8):** I can step outside my comfort zone because I recognize that my mistakes are not failures, but rather an opportunity to learn and grow.
  - *Testing Combinations of Substances*
  - *Chemical and Physical Changes STEM Case*

Teacher Resources: OpenSciEd Resources - Unit 7.1, Gizmos from Explore Learning, IXL

Unit 3 - Chemical Reactions and Energy

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

PS1.B: Chemical Reactions

- Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.
- The total number of each type of atom is conserved, and thus the mass does not change.
- Some chemical reactions release energy, others store energy

PS3.A: Definitions of Energy

- The term “heat” as used in everyday language refers both to thermal energy (the motion of atoms or molecules within a substance) and the transfer of that thermal energy from one object to another. In science, heat is used only for this second meaning; it refers to the energy transferred due to the temperature difference between two objects.
- The temperature of a system is proportional to the average internal kinetic energy and potential energy per atom or molecule (whichever is the appropriate building block for the system’s material). The details of that relationship depend on the type of atom or molecule and the interactions among the atoms in the material.

ETS1.B. Developing Possible Solution

- A solution needs to be tested, and then modified on the basis of the test results, in order to improve it.
- There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.
- Sometimes parts of different solutions can be combined to create a solution that is better than any of its predecessors.
- Models of all kinds are important for testing solutions.

ETS1.C. Optimizing the Design Solution

- Although one design may not perform the best across all tests, identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process - that is, some of the characteristics may be incorporated into the new design.
- The iterative process of testing the most promising solutions and modifying what is proposed on the basis of the test results leads to greater refinement and ultimately to an optimal solution.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- **TCC1 (6-8):** Ask relevant questions to evaluate possible solutions.
- **CCE2 (6-8):** Use feedback to revise work and increase learning.
- **DE4 (6-8)**: Be respectful and responsible and build positive relationships with all members of the school community.
- **TI1 (6-8):** Create a plan with manageable steps to reach goals.
- **P2 (6-8):** Monitor their learning through strategies and self-assessment for growth.

Understandings: Students will understand that...

- Energy transfers from the system of atoms that rearrange during the chemical reaction to surrounding systems
- Chemical reactions can absorb or release thermal energy (endothermic and exothermic reactions).
- The more reactants we use in a chemical reaction, the more energy is being transferred into or out of the system. The evidence of this is a greater temperature change.
- Engineers use a cyclical process (Define, Develop, Optimize) to design solutions.
- Design performance needs to be optimized by revising and retesting.
- Designs and instructions need to be peer tested to inform modifications that will lead to a better solution.

Essential Questions:

- How can we heat up food when we don't have our typical methods available?
- What other chemical reactions could we use to heat up food?
- How much of each reactant should we include in our homemade flameless heater?
- How can we use evidence of energy change to improve a design?
- What makes a design successful and how do we make it better?

Students will know…

- Temperature changes can indicate energy changes in chemical reactions.
- Endothermic reactions absorb heat; exothermic reactions release heat.

Students will be able to…

- Analyze data to determine energy changes in chemical reactions.
- Design, test, and revise a thermal energy device.

• Energy can be transferred into or out of a system.	• Collaboratively use criteria and constraints to improve a design. • Construct models to show energy transfer in chemical reactions.
Key Vocabulary: Thermal energy, endothermic, exothermic, temperature, chemical reaction, system, surroundings, energy transfer, criteria, constraints, design solution.	
Assessment Evidence	
Performance Tasks: • Design Challenge • Thermal Energy Explanation	**Other Evidence:** • Teamwork Self-Assessment • Peer Feedback on Designs • Feel the Heat Gizmo • Analyzing and Presenting Information (CER)
Learning Plan	

COLLABORATE AND COMMUNICATE EFFECTIVELY
• **CCE2 (6-8):** I can use rubrics, peer editing, conferences, and other feedback to revise my work and increase my learning
  ○ *Design Challenge and Thermal Energy Explanation*
 	
DEMONSTRATE EMPATHY
• **DE4 (6-8):** I can be respectful and responsible and build positive relationships with all members of the school community.
  ○ *Discussions and participation during presentation of guest speaker*
 	
PERSEVERE
• **P2 (6-8):** I can identify my relative strengths as well as areas for improvement. I can set goals, use strategies for improvement, and monitor my own learning through various means of self-assessment in order to experience growth.
  ○ *Teamwork Self-Assessment and Peer Feedback on Designs*	

Teacher Resources: OpenSciEd Resources - Unit 7.2, Gizmos from Explore Learning, IXL	

Unit 4 - Metabolic Reactions (A Medical Mystery)

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

LS1.A Structure and Function

- In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions.

LS1.B Growth and Development of Organisms

- The growth of an animal is controlled by genetic factors,* food intake, and interactions with other organisms, and each species has a typical adult size range.

LS1.C Organization for Matter and Energy Flow in Organisms

- Within individual organisms, food moves through a series of chemical reactions in which it is broken down and rearranged to form new molecules, to support growth, or to release energy.

PS3.D Energy in Processes and Everyday Life

- Cellular respiration in plants and animals involves chemical reactions with oxygen that release stored energy. In these processes, complex molecules containing carbon react with oxygen to produce carbon dioxide and other materials.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

- **TCC3 (6-8)**: Combine new information with their own ideas to generate solutions.
- **CCE4 (6-8):** Express ideas in a variety of ways, according to context, purpose, and audience.
- **DE2 (6-8):** Recognize feelings in themselves and others and respond with respect and empathy.
- **AA4 (6-8):** Seek opportunities to learn more and continue to push their thinking.

Understandings: Students will understand that… • In biology, there is a fundamental relationship between structure and function. • The human body is organized into different levels — cells, tissues, organs, and systems — and how these levels work together to perform functions like digestion and cellular respiration. • These levels work together to move molecules like oxygen and glucose to cells, where chemical reactions release energy. • Cells are the basic unit where energy is released from food.	**Essential Questions:** • How do things inside our bodies work together to make us feel the way we do? • How does food give us energy and help our bodies grow? • What happens to food after we eat it? • How do different parts of our body work together to use food as fuel?
Students will know… • Cells in the body carry out chemical reactions that break down food molecules. • These reactions produce energy or form new molecules for growth and repair. • Organs and subsystems in the body interact to digest and distribute nutrient • A chemical reaction happens in the cells of the body to provide them with energy. The reaction helps us explain why certain materials that we take into our bodies, like oxygen and food, are different from the materials that leave our bodies, like carbon dioxide and water.	**Students will be able to...** • Use arguments supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. • Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. • Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism. • Develop models to describe the atomic composition of simple molecules and extended structures. • Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

Key Vocabulary: Metabolism, metabolic reaction, digestion, chemical reaction, food molecule, nutrients, macronutrient, energy, glucose, oxygen, carbon dioxide, circulatory system, digestive system, cellular respiration, cell membrane, nucleus, mitochondria, system interaction, matter cycling, energy flow.

Assessment Evidence

Performance Tasks:
- Argue From Evidence What's Causing M'Kenna's Symptoms
- Brown Bear Hibernation Task

Other Evidence:
- Eliminate Possible Conditions and Identify Missing Evidence
- Digestive System Gizmos

Learning Plan

THINK CRITICALLY AND CREATIVELY
- **TCC2 (6-8**) I can evaluate data gathered from multiple perspectives and draw conclusions.
  - *Brown Bear Hibernation Task*

COLLABORATE AND COMMUNICATE EFFECTIVELY
- **CCE4 (6-8):** I can express my thoughts and ideas, both verbally and in writing, in order to defend my perspective. I can do this via essays, performance-based projects, whole group, and/or small group discussions
  - *Argue From Evidence What's Causing M'Kenna's Symptoms*

DEMONSTRATE EMPATHY
- **DE2 (6-8)** I can recognize feelings in myself and others and respond with respect and empathy.
  - *Eliminate Possible Conditions and Identify Missing Evidence*
  - *Classroom discussions around anchoring phenomena*

Teacher Resources: OpenSciEd Resources - Unit 7.3, BSCS Science Learning - A Medical Mystery, Teacher- developed Google Site, IXL

Unit 5 - Matter Cycling and Photosynthesis

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

LS1.C: Organization for Matter and Energy Flow in Organisms

- Plants, algae (including phytoplankton), and many microorganisms use the energy from light to make sugars (food) from carbon dioxide from the atmosphere and water through the process of photosynthesis, which also releases oxygen. These sugars can be used immediately or stored for growth or later use.

LS2.B: Cycle of Matter and Energy Transfer in Ecosystems

- Food webs are models that demonstrate how matter and energy is transferred between producers, consumers, and decomposers as the three groups interact within an ecosystem.
- Transfers of matter into and out of the physical environment occur at every level. Decomposers recycle nutrients from dead plant or animal matter back to the soil in terrestrial environments or to the water in aquatic environments.
- The atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem.

PS1.A: Structure and Properties of Matter

- Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it.

PS1.B: Chemical Reactions

- Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.

PS3.D: Energy in Chemical Processes and Everyday Life

- The chemical reaction by which plants produce complex food molecules (sugars) requires an energy input (i.e., from sunlight) to occur. In this reaction, carbon dioxide and water combine to form carbon-based organic molecules and release oxygen. (secondary)

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

- **TCC4 (6-8)**: Apply learning to new experiences, determine if it works, and adjust in the future.

- **CCE3 (6-8)**: Participate in collaborative conversations by actively listening, formulating questions, making connected comments, and providing feedback.
- **DE1 (6-8):** Search for and compare multiple perspectives.
- **AA2 (6-8):** Identify past successful strategies and apply them independently.
- **P1 (6-8):** Identify personal strengths and challenges and develop strategies to overcome obstacles.

Understandings: Students will understand that...

- Plants make their own food through photosynthesis by using sunlight, carbon dioxide, and water.
- Matter cycles and energy flows within ecosystems, starting with producers like plants.
- Growth in plants is due to the rearrangement of matter through chemical processes.
- If plants make sugar (through photosynthesis) faster than their cells use it for energy (through cellular respiration), they store up that extra food by converting it to starches (or fats). These can be used later for fuel or building blocks.
- Systems consist of living (producers, consumers, and decomposers) and nonliving (air and water) components where atoms are continuously recycled between these components.

Essential Questions:

- How do plants grow without eating food?
- How do matter and energy move through living systems?
- Where is the food (molecules) in plants coming from?
- Why do plants need light?
- Why don't plants die when they can't make food?
- What happens to food that doesn't get eaten?

Students will know …

- Photosynthesis converts light energy into stored chemical energy.
- Plants use photosynthesis to create the molecules that begin energy transfer in food chains.
- During the process of photosynthesis, energy is transferred from the sunlight to the plant. All plants make their own food molecules through the process of photosynthesis.

Students will be able to…

- Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.
- Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
- Gather and make sense of information to describe that synthetic

Photosynthesis occurs in the chloroplasts of plant cells. • Carbon, hydrogen, and oxygen atoms are rearranged to form glucose in plants. • Matter cycles between the air and living things. • Resource availability affects ecosystem populations.	materials come from natural resources and impact society. • Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function. (Specifically, chloroplasts and mitochondria.)
Key Vocabulary: Photosynthesis, matter, energy, glucose, carbon dioxide, water, sunlight, oxygen, food molecules, macronutrients, producers, consumers, decomposers, ecosystem, food chain, chemical reaction, cell wall, chloroplast, mitochondria, structure, function, carbon cycle, resource availability.	
Assessment Evidence	
Performance Tasks: • Matter Cycling: Mid-Unit Performance Task • Whale Fall Task	**Other Evidence:** • Comparing and Critiquing Arguments About Water In Plants • Ecosystems STEM Case on Gizmos • Discussions and Participation in field trip
Learning Plan	
COLLABORATE AND COMMUNICATE EFFECTIVELY • **CCE3 (6-8)**: I can participate in collaborative conversations by actively listening, formulating questions, making connected comments and providing various types of feedback to my peers. ○ *Matter Cycling: Mid-Unit Performance Task* ○ *Whale Fall Task* **ADAPT AND ADJUST** • **AA2 (6-8):** I can identify past successful strategies and apply them independently. ○ *Ecosystems STEM Case on Gizmos*	
Teacher Resources: OpenSciEd Resources - Unit 7.4, Gizmos from Explore Learning, IXL	

Unit 6 - Plate Tectonics and Rock Cycling

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

ESS1.C. The History of Planet Earth

- The geologic time scale interpreted from rock strata provides a way to organize Earth's history . Analyses of rock strata and the fossil record provide only relative dates, not an absolute scale.
- Tectonic processes continually generate new ocean sea floor at ridges and destroy old seafloor at trenches.

ESS2.A. Earth's Materials and Systems

- The planet's systems interact over scales that range from microscopic to global in size, and they operate over fractions of a second to billions of years. These interactions have shaped Earth's history and will determine its future.

ESS2.B. Plate Tectonics and Large-Scale System Interactions

- Maps of ancient land and water patterns, based on investigations of rocks and fossils, make clear how Earth's plates have moved great distances, collided, and spread apart. (

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- **TCC2 (6-8):** Evaluate data gathered from multiple perspectives and draw conclusions.
- **CCE1 (6-8):** Contribute to discussions with peers and teachers, respecting differing viewpoints and responding thoughtfully.
- **TI2 (6-8):** Identify objectives and apply the best resources to their learning.
- **AA1 (6-8):** Implement different pathways to success and recognize the pros and cons of each.

Understandings: Students will understand that...	**Essential Questions:**
• Earth's surface is shaped by both constructive (uplift, volcanoes) and destructive (weathering, erosion) geological processes. • Plate tectonics is the unifying theory that explains the movement of Earth's plates and associated phenomena like earthquakes, mountain formation, and seafloor spreading. • Rock cycling and Earth's internal energy contribute to the continual reshaping of Earth's surface. • Earth processes like earthquakes and volcanoes are correlated, however, both earthquakes and volcanoes are primarily caused by the movement and interaction of tectonic plates.	• What causes mountains to grow, shrink, or stay the same? • How do plate tectonics explain patterns in landforms and geologic activity? • How does Earth's surface change over time and space?
Students will know…	**Students will be able to…**
• Plate boundaries are sites of major geological activity. • Geological processes operate over various time and spatial scales. • Rocks are cycled through Earth's systems by energy flows and geologic activity. • The distribution of fossils and rocks provides evidence of plate motion. • Regions of different continents that share similar fossils and similar rocks suggest that, in the geologic past, those sections of the continent were once attached and have since separated. • Surface features will continue to change in the future as geoscience processes continue to occur.	• Develop models that show the cycling of Earth's materials and the flow of energy. • Analyze geologic and fossil data to infer past plate movements. • Construct explanations for how Earth's surface is shaped by internal and external processes. • Apply data to explain elevation changes in mountain ranges.

Key Vocabulary: magnitude, earthquake, earthquake depth, epicenter, causation, correlation, magma, lava, ore deposits, sediment, bedrock, sedimentary rock, metamorphic rock, igneous rock, crust, mantle, plate, oceanic, continental, destructive, constructive

Assessment Evidence

Performance Tasks:

- Mountain Elevation Model Task
- End of Unit - Performance Task Choice Board

Other Evidence:

- Student-created diagrams of tectonic plate boundaries.
- Seismic and volcanic activity data analysis tasks.
- Analyzing and Interpreting Earthquake and Volcano Data (Correlation vs. Causation)

Learning Plan

THINK CRITICALLY AND CREATIVELY

- **TCC2 (6-8):** I can evaluate data gathered from multiple perspectives and draw conclusions.
    - *Analyzing and Interpreting Earthquake and Volcano Data (Correlation vs. Causation)*

TAKE INITIATIVE

- **TI2 (6-8):** I can identify my objectives and apply the best resources to my learning.
    - *End of Unit - Performance Task Choice Board*

ADAPT AND ADJUST

- **AA1 (6-8):** I can implement different pathways to success and recognize the pros and cons of each.
    - *Mountain Elevation Model Task*

Teacher Resources: OpenSciED Resources -Unit 6.4, IXL

Regional School District 14 New Course Proposal

Course Title: French EEC (Eastern Early College)

Grade Level(s): 11th and 12th

Department: World Languages

Faculty Member(s) Submitting Course Proposal: Kate Peterson

Course Description: The French EEC course is year long, including 2 equivalent semesters at Eastern (FRE 210 and FRE 211). Students will be able to engage in conversations and give presentations in the target language, using tenses in the past, present, and future. They will improve their proficiency from a novice high level to an intermediate low level (AATF standards) with practice in reading, writing, and speaking throughout the year, focusing on 6 themes including: family and traditions, beauty, science and technology, the search for oneself, daily living, and world issues. The graduation requirements would help meet the Humanities/WL requirements for graduation.

Rationale for Offering this New Course: Students will have the opportunity to earn college credit before enrolling in a university, in a supportive and enriching environment, providing them an opportunity to delve more deeply into the subject in a meaningful setting. It will give the students an opportunity to prepare themselves to be a global citizen, with second language proficiency (French) that is spoken by over 300 million people worldwide. This course would incentivize students to continue their French studies by adding credit earning opportunities as well as growing their skills and proficiencies.

Prerequisites: French 3 Honors and/or French 4 Honors or any AP French students who have not yet taken advantage of this new course offering.

Long-Term Course Outcomes: Students will be able to converse and write in French at an Intermediate Low level (AATF standards) as well as present a current event in French. They will be able to ask and answer questions on a variety of topics and narrate present and past events. They will be able to write a professional email and persuasive essay on a given topic in French, including global challenges or the use of science and technology.

Scope and Sequence:

FRE 210:
Families and Communities- 3 to 5 Weeks. Comprehend written, audio, audiovisual, and visual text related to families in the target culture.

- Make interdisciplinary and cultural connections related to the variety of what makes up a family in the target culture.
- Interpret the content of written or audio text related to families and communities, including education, traditions and dress in the target culture
- Make meanings from words and expressions related to families in the target culture.
- Communicate interpersonally with others related to families in the target culture.
- Communicate through presentations related to families and communities in the target culture.

TCC4(9-12): I can integrate my learning to adapt to experiences in the classroom, career and life.

CCE3(9-12): I can show initiative in prompting group discourse and fostering collaboration among others, providing actionable feedback, and working with others to solve problems and/or design products.

The Influence of Beauty and Art- 3 to 5 Weeks. Comprehend written, audio, audiovisual, and visual text related to the Arts in the target culture.

- Make interdisciplinary and cultural connections related to the influence of beauty in the target culture.
- Interpret the content of written or audio text related to beauty and the arts in the francophone world.
- Make meanings from words and expressions related to beauty in the target culture.
- Communicate interpersonally with others related to the arts in the francophone world.
- Communicate through presentations in French related to the influence of Beauty and the arts in the francophone world.

DE1(9-12): I can acknowledge, process, and respond appropriately to others' comments and perspectives.
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

Science and Technology 3 to 5 Weeks. Comprehend written, audio, audiovisual, and visual text related to science and technology in francophone countries.
● Make interdisciplinary and cultural connections related to science and technology in the target culture.
● Interpret the content of written or audio text related to science and technology in the French, building vocabulary to help comprehend the subject matter.
● Make meanings from words and expressions related to science and technology in the French.
● Communicate interpersonally with others related to science and technology in the French language.
● Communicate through presentations related to science and technology in francophone countries globally.

TCC3(9-12): I can integrate relevant information to produce multiple valid solutions.
TCC2(9-12): I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.

FRE 211:
The Influence of Language and Culture on Identity 3 to 5 Weeks. Comprehend written, audio, audiovisual, and visual text related to the influence of language and culture on identity in francophone countries.

- Make interdisciplinary and cultural connections related to the evolution of one's identity in the target culture.
- Interpret the content of written or audio text related to one's identity in the French, building vocabulary to help comprehend the subject matter.
- Make meanings from words and expressions related to the influence of language and culture in the French.
- Communicate interpersonally with others related to life's influences around the globe in the French language.
- Communicate through presentations related to the influence of language and culture in francophone countries globally.

TI3(9-12): I can formulate and investigate probing questions to further my learning.
DE2(9-12): I can honor my own feelings and show empathy toward others through my actions.

Contemporary Life- 3 to 5 Weeks. Comprehend written, audio, audiovisual, and visual text related to contemporary life in the target culture.

- Make interdisciplinary and cultural connections related to contemporary life in the target culture.
- Interpret the content of written or audio text related to contemporary life in the francophone world.
- Make meanings from words and expressions related to contemporary life in the target culture.
- Communicate interpersonally with others related to contemporary life in the francophone world.
- Communicate through presentations in French related to contemporary life.

P3(9-12): I can accept constructive feedback and use setbacks to adjust my learning journey in order to reach my goals.
TCC1(9-12): I can ask purposeful, insightful questions to find a variety of innovative solutions.

Global Challenges- 3 to 5 Weeks. Comprehend written, audio, audiovisual, and visual text related to global challenges in the target culture.

- Make interdisciplinary and cultural connections related to global challenges in the target culture.
- Interpret the content of written or audio text related to global challenges in the target culture
- Make meanings from words and expressions related to global challenges in the target culture.
- Communicate interpersonally with others related to global challenges in the target culture.
- Communicate through presentations related to global challenges in the target culture.

AA3(9-12): I can adjust my expectations and behaviors to succeed in a changing and unpredictable environment.

DE3(9-12): I can recognize my triggers, use appropriate coping strategies, and access relevant resources to help regulate my emotional response.

Required Resources and Projected Financial Needs: No new textbooks are needed at this time. Resources for the course will be provided by the teacher (from an extensive online and physical French library). The cost of credits at Eastern are TBD, although they have mentioned offering tuition waivers for high school students that take free/reduced lunch). Official registration for Eastern will be the 1st week in September. Substitute coverage for one day in early Fall is requested to be able to observe an EEC French teacher in CT.

Students

Connecticut School Climate Policy

Policy Statement

All schools must support and promote teaching and learning environments where all students thrive academically and socially, have a strong and meaningful voice, and are prepared for lifelong success.

Implementation of the following set of guiding principles and systemic strategies will promote a positive school climate, which is essential to achieving these goals.

This policy sets forth the framework for an effective and informed school climate improvement process, which includes a continuous cycle of (i) planning and preparation, (ii) evaluation, (iii) action planning, and (iv) implementation, and serves to actualize the Connecticut School Climate Standards, as detailed herein.

The Board recognizes that improving school climate is contextual. Each school needs to consider its history, strengths, needs, and goals. Furthermore, this policy will support and promote the development of restorative action plans that will create and sustain safe and equitable learning environments.

The Region 14 School District Board of Education adopts this policy.

Definitions

1. **"School climate"** means the quality and character of the school life, with a particular focus on the quality of the relationships within the school community, and which is based on patterns of people's experiences of school life and that reflects the norms, goals, values, interpersonal relationships, teaching, learning, leadership practices and organizational structures within the school community.

2. **"Positive Sustained School Climate"** is the foundation for learning and positive youth development and includes:

    a. Norms, values, and expectations that support people feeling socially, emotionally, culturally, racially, intellectually, and physically safe.
    b. People who treat one another with dignity and are engaged, respected and solve problems restoratively.
    c. A school community that works collaboratively together to develop, live, and contribute to a shared school vision.
    d. Adults who model and nurture attitudes that emphasize the benefits and satisfaction gained from learning; and
    e. A school community that contributes to the operations of the school and the care of the physical environment.

Students

Connecticut School Climate Policy

Definitions (continued)

3. **"Social and emotional learning"** means the process through which children and adults achieve emotional intelligence through the competencies of self-awareness, self-management, social awareness, relationship skills and responsible decision-making.

4. **"Emotional intelligence"** means the ability to (A) perceive, recognize, and understand emotions in oneself or others, (B) use emotions to facilitate cognitive activities, including, but not limited to, reasoning, problem solving and interpersonal communication, (C) understand and identify emotions, and (D) manage emotions in oneself and others.

5. **"Bullying"** means unwanted and aggressive behavior among children in grades kindergarten to twelve, inclusive, that involves a real or perceived power imbalance.

6. **"School environment"** means a school-sponsored or school-related activity, function or program, whether on or off school grounds, including at a school bus stop or on a school bus or other vehicle owned, leased or used by a local or regional board of education, and may include other activities, functions or programs that occur outside of a school-sponsored or school-related activity, function or program if bullying at or during such other activities, functions or programs negatively impacts the school environment.

7. **"Cyberbullying"** means any act of bullying through the use of the Internet, interactive and digital technologies, cellular mobile telephone or other mobile electronic devices or any other electronic communication.

8. **"Teen dating violence"** means any act of physical, emotional or sexual abuse, including stalking, harassing and threatening, that occurs between two students who are currently in or who have recently been in a dating relationship.

9. **"Mobile electronic device"** means any hand-held or other portable electronic equipment capable of providing data communication between two or more individuals, including, but not limited to, a text messaging device, a paging device, a personal digital assistant, a laptop computer, equipment that is capable of playing a video game or a digital video disk or equipment on which digital images are taken or transmitted.

10. **"Electronic communication"** means any transfer of signs, signals, writing, images, sounds, data or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photo-optical system.

Students

Connecticut School Climate Policy

Definitions (continued)

11. **"School climate improvement plan"** means a building-specific plan developed by the school climate committee, in collaboration with the school climate specialist, using school climate survey data and any other relevant information, through a process that engages all members of the school community and involves such members in a series of overlapping systemic improvements, school-wide instructional practices and relational practices that prevent, identify and respond to challenging behavior, including, but not limited to alleged bullying and harassment in the school environment.

12. **"Restorative practices"** means evidence and research-based system-level practices that focus on (A) building high-quality, constructive relationships among the school community, (B) holding each student accountable for any challenging behavior, and (C) ensuring each such student has a role in repairing relationships and reintegrating into the school community.

13. **"School climate survey"** means a research-based, validated and developmentally appropriate survey administered to students, school employees and families of students, in the predominant languages of the members of the school community, that measures and identifies school climate needs and tracks progress through a school climate improvement plan.

14. **"Connecticut school climate policy"** means the school climate policy developed, updated and approved by an association in the state that represents boards of education and adopted by the Social and Emotional Learning and School Climate Advisory Collaborative, established pursuant to section 10-222q of the general statutes, as amended by this act, that provides a framework for an effective and democratically informed school climate improvement process that serves to implement Connecticut school climate standards, and includes a continuous cycle of (A) planning and preparation, (B) evaluation, (C) action planning, and (D) implementation.

15. **"School employee"** means (A) a teacher, substitute teacher, administrator, school superintendent, school counselor, school psychologist, social worker, school nurse, physician, paraeducator or coach employed by a local or regional board of education, or (B) any other individual who, in the performance of his or her duties, has regular contact with students and who provides services to or on behalf of students enrolled in a public school, pursuant to a contract with a local or regional board of education.

16. **"School community"** means any individuals, groups, businesses, public institutions and nonprofit organizations that are invested in the welfare and vitality of a public school system and the community in which it is located, including, but not limited to, students and their families, members of the local or regional board of education, volunteers at a school and school employees.

Students

Connecticut School Climate Policy

Definitions (continued)

17. **"Challenging behavior"** means behavior that negatively impacts school climate or interferes, or is at risk of interfering, with the learning or safety of a student or the safety of a school employee.

18. **"Evidence Based Practices"** in education refers to instructional and school-wide improvement practices that systematic empirical research has provided evidence of statistically significant effectiveness.

19. **"Effective School Climate Improvement"** is a restorative process that engages all stakeholders in the following six essential practices:

    A. Promoting decision-making that is collaborative and actively involves all stakeholders (e.g., school personnel, students, families, community members) with varied and meaningful roles and perspectives where all voices are heard;

    B. Utilizing psychometrically sound quantitative (e.g., school climate survey, discipline data) and qualitative (e.g., interviews, focus groups) data to drive action planning, preventive and intervention practices and implementation strategies that continuously improve all dimensions of school climate, including regularly collecting data to evaluate progress and inform the improvement process;

    C. Tailoring improvement goals to the unique needs of the students, educators, and broader school community. These goals shall be integrated into overall school improvement efforts thereby leveraging school strengths to address evidence-based areas of need, while sustaining the improvement process over time;

    D. Fostering adult learning in teams and/or professional learning communities to build capacity building among school personnel and develop common staff skills to educate the whole child;

    E. Basing curriculum, instruction, student supports, and interventions on scientific research and grounding in cognitive, social-emotional, and psychological theories of youth development. Interventions include strength-based programs and practices that together represent a comprehensive continuum of approaches to promote healthy student development and positive learning environments as well as address individual student barriers to learning and adult barriers to teaching; and

    F. Strengthening policies and procedures related to:

        a. climate and restorative informed teaching and learning environments;
        b. infrastructure to facilitate data collection, analysis, and effective planning;
        c. implementation of school climate improvement plans with the goal of becoming restorative;
        d. evaluation of the school climate improvement process; and
        e. sustainability of school climate and restorative improvement efforts.

Students

Connecticut School Climate Policy (continued)

School Climate Coordinator Roles and Responsibilities

For the school year commencing July 1, 2025, and each school year thereafter, the superintendent of schools for each school district, or an administrator appointed by the superintendent, shall serve as the school climate coordinator for the school district.

The school climate coordinator shall be responsible for:

1. providing district-level leadership and support for the implementation of the school climate improvement plan for each school;

2. collaborating with the school climate specialist, for each school to (A) develop a continuum of strategies to prevent, identify and respond to challenging behavior, including, but not limited to, alleged bullying and harassment in the school environment, and (B) communicate such strategies to the school community, including, but not limited to, through publication in the district student handbook;

3. collecting and maintaining data regarding school climate improvement, including, but not limited to, school discipline records, school climate assessments, attendance rates, social and emotional learning assessments, academic growth data, types and numbers of alleged and verified bullying complaints submitted by members of the school community, types and numbers of challenging behaviors addressed using the restorative practices response policy, and data concerning the implementation and outcome of restorative practices; and

4. meeting with the school climate specialist for each school at least twice during the school year to (A) identify strategies to improve school climate, including, but not limited to, by responding to challenging behavior and implementing evidence and research-based interventions, such as restorative practices, (B) propose recommendations for revisions to the school climate improvement plan, and (C) assist with the completion of the school climate survey.

School Climate Specialist

For the school year commencing July 1, 2025, and each school year thereafter, the principal of each school, or a school employee who holds professional certification pursuant to section 10-145 of the general statutes, is trained in school climate improvement or restorative practices and is designated as the school climate specialist by the school principal, shall serve as the school climate specialist for the school.

The school climate specialist shall be responsible for:

1. leading in the prevention, identification, and response to challenging behavior, including, but not limited to, reports of alleged bullying and harassment;

Students

Connecticut School Climate Policy

School Climate Specialist (continued)

2. implementing evidence and research-based interventions, including, but not limited to, restorative practices;

3. scheduling meetings for and leading the school climate committee; and

4. leading the implementation of the school climate improvement plan.

School Climate Committee

For the school year commencing July 1, 2025, and each school year thereafter, each school climate specialist shall appoint members to the school climate committee who are diverse, including members who are racially, culturally, and linguistically representative of various roles in the school community.

The school climate committee shall consist of:

1. the school climate specialist;

2. a teacher selected by the exclusive bargaining representative for certified employees chosen pursuant to section 10-153b of the general statutes;

3. a demographically representative group of students enrolled at the school, as developmentally appropriate;

4. families of students enrolled at the school; and

5. at least two members of the school community, as determined by the school climate specialist.

Membership of the school climate committee shall be annually reviewed and approved by the school climate specialist, in coordination with the school climate coordinator.

The school climate committee shall be responsible for:

1. assisting in the development, annual scheduling, and administration of the school climate survey, and reviewing of the school climate survey data.

2. using the school climate survey data to identify strengths and challenges to improve school climate, and to create or propose revisions to the school climate improvement plan.

Students

Connecticut School Climate Policy

School Climate Committee (continued)

3. assisting in the implementation of the school climate improvement plan and recommending any improvements or revisions to the plan.

4. advising on strategies to improve school climate and implementing evidence and research-based interventions, including, but not limited to, restorative practices, in the school community.

5. annually providing notice of the uniform challenging behavior and/or bullying complaint form, or similar complaint form used by the school, to the school community.

School Climate Survey

For the school year commencing July 1, 2025, and biennially thereafter, the school climate committee, for each school, shall administer a school climate survey to students, school employees and families of students, provided the parent or guardian of each student shall receive prior written notice of the content and administration of such school climate survey and shall have a reasonable opportunity to opt such student out of such school climate survey.

School Climate Improvement Plan

For the school year commencing July 1, 2025, and each school year thereafter, the school climate specialist, for each school, in collaboration with the school climate coordinator, shall develop, and update as necessary, a school climate improvement plan. Such plan shall be based on the results of the school climate survey, any recommendations from the school climate committee, including the protocols, supports, and any other data the school climate specialist and school climate coordinator deem relevant. Such plan shall be submitted to the school climate coordinator for review and approval on or before December thirty-first of each school year. Upon approval of such plan, a written or electronic copy of such plan shall be made available to members of the school community and such plan shall be used in the prevention of, identification of and response to all challenging behavior.

Additionally, districts may place the school climate improvement plans into their district and school improvement plans.

Training

For the school year commencing July 1, 2024, and each school year thereafter, each local and regional Board of Education shall provide resources and training to school employees regarding:

1. social and emotional learning;
2. school climate and culture and evidence and research-based interventions; and
3. restorative practices.

Students

Connecticut School Climate Policy

Training (continued)

Such resources and training may be made available at each school under the jurisdiction of such board and include technical assistance in the implementation of a school climate improvement plan. Any school employee may participate in any such training offered by the board under this section. The school climate coordinator, shall select, and approve, the individuals or organizations that will provide such training.

Funding

The school district shall in its discretion allocate sufficient funding to satisfy the requirements of this policy for all schools in the district. Such funding shall be distributed accordingly, with Superintendent approval, for assessments and professional development, as well as for school community outreach, training, and technical assistance.

Accountability

The Board shall adopt and allocate adequate resources to support the Connecticut School Climate Policy and adhere to state regulations set forth in Public Act 23-167.

Connecticut School Climate Standards

1. The school district community[1] has a shared vision and plan for promoting and sustaining a positive school climate[2] that focuses on prevention, identification, and response to all challenging behavior[3].

2. The school district community adopts policies that promote:

    a. a sound school environment that develops and sustains academic, social, emotional, ethical, civic, and intellectual skills; and

    b. a restorative school environment focused on overcoming barriers to teaching and learning by building and supporting meaningful school-wide relationships, and intentionally re-engaging any disengaged students, educators, and families of students in the school community.

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[1] School Community means any individuals, groups or businesses, public institutions and nonprofit organizations invested in the welfare and vitality of a public school system and the community in which it is located, including, but not limited to, students and their families, members of the local or regional board of education, volunteers at a school and school employees.

[2] School climate means the quality and character of the school life, with a particular focus on the quality of relationships within the school community, and which is based on patterns of people's experiences of school life, and that reflects the norms, goals, values and interpersonal relationships, teaching, learning, leadership practices and organizational structures within the school community.

[3] Challenging behavior means behavior that negatively impacts school climate or interferes, or is at risk of interfering, with the learning or safety of a student or the safety of a school employee.

Students

Connecticut School Climate Policy

Connecticut School Climate Standards (continued)

3. The school community's practices are identified, prioritized, and supported to:
   a. promote learning and the positive academic, social, emotional, ethical, and civic development of students;
   b. enhance engagement in teaching, learning, and school-wide activities;
   c. address barriers to teaching and learning; and
   d. develop and sustain a restorative infrastructure that builds capacity, accountability, and sustainability.
4. The school community creates a school environment[4] where *everyone* is safe, welcomed, supported, and included in all school-based activities.
5. The school community creates a restorative system that cultivates a sense of belonging through norms and activities that promote social and civic responsibility, and a dedication to cultural responsiveness, diversity, equity, and inclusion.

Legal Reference: Connecticut General Statutes
10-222d Policy on bullying behavior as amended by PA 08-160, P.A. 11-232, P.A. 14-172 and PA 18-15 and PA 19-166.
10-222g Prevention and intervention strategy re bullying and teen dating violence
10-222h Analysis of school districts' efforts re prevention of and response to bullying in schools. School climate assessment instruments
10-222i State-wide safe school climate resource network. *[Repealed, Effective 7/1/2025 State-wide safe school climate resource network]*
10-222k District safe school climate coordinator. Safe school climate specialist. Safe school climate committee (as amended by PA 21-95, Section 14)
10-222p Review of safe school climate plans by Department of Education. Approval or rejection.
PA 23-167 An Act Concerning Transparency in Education

Policy adopted:
cps 11/23

[4] School environment means a school-sponsored or school-related activity, function or program, whether on or off school grounds, including at a school bus stop or on a school bus or other vehicle owned, leased or used by a local or regional board of education, and may include other activities, functions or programs if bullying at or during such other activities, functions, or programs negatively impacts the school environment.

Students

Connecticut School Climate Regulation

Tiered Response

Beyond the above protocols and supports, the new school climate policy defines a specific subset of challenging behavior that requires districts to respond with certain tiered interventions (referred to hereinafter as "tiered response incidents"). Pursuant to C.G.S. Sec. 10-222hh(b)(6), a tiered response (as detailed in the table below) is required for an incident of challenging behavior that meets any of the following criteria:

a. requires temporarily clearing a classroom or removing a majority of students to reduce the likelihood of injury;

b. indicates a credible intention to cause bodily harm to self or others; or

c. results in an injury requiring medical attention beyond first aid (or less severe injuries caused by the same person on more than one occasion, as verified by a school nurse or other medical professional). The law goes on to provide that, if a district determines that conduct meets the above criteria, school climate improvement plans must include the following responses:

Occasion Number – Tiered Response Incident	Tiered Intervention Required
First Offense	Principal must notify the parents/guardians of each student involved in a manner that complies with FERPA.
Second Offense	Principal must invite the parent/guardian of involved students to a meeting (virtual or in person) to discuss supports and interventions applicable to each student – including, but not limited to, restorative practices.
Multiple subsequent Offenses (or single incident that causes severe harm)	Principal must notify the parents/guardians of involved students of other resources for supports and interventions, including, but not limited to the following: the 2-1-1 Infoline Program; services/programs available through the Behavioral Health Partnership, established through C.G.S. Sec. 17a-22h: or other resources for professional services, support, or crisis intervention.

Students

Connecticut School Climate Regulation

Tiered Response (continued)

In addition, for tiered response incidents, there must be a meeting between an administrator and the school employee who witnessed the incident. The purpose of the meeting, which must occur within two days of the incident, is to determine the supports and interventions required to address the needs of students and school employees, although supports and interventions for special education students must be determined by the student's Planning and Placement Team (PPT).[2] In addition, protocols and supports must include a process by which a teacher may request a behavior intervention meeting.[3]

Regulation approved:
cps 4/25

[2] For special education students, notice of the incident must be submitted to the PPT no more than two days after the incident occurred.
[3] C.G.S. Sec. 10-236c(b) permits any teacher of record in a classroom to request a behavior intervention meeting with the school's crisis intervention team "for any student whose behavior has caused a serious disruption to the instruction of other students, or caused self-harm or physical harm to such teacher or another student or staff member in such teacher's classroom."

5131.911
Form 1

Challenging Behavior Reporting Form

This form is not required by law or policy but serves as a model challenging behavior reporting form that local and regional boards of education may adapt and adopt.

Instructions

This form is for **students, parents or guardians of students enrolled in the school, and school employees** to report any alleged challenging behavioral incidents. Challenging behavior is behavior that negatively impacts school climate or interferes, or is at risk with interfering, with the learning or safety of a student or the safety of a school employee. This form should also be used to report alleged bullying incidents, meaning: unwanted and aggressive behavior among children in grades kindergarten to twelve, inclusive, that involves a real or perceived power imbalance.

Complete this form electronically, or in writing, or go to your school climate specialist (principal, vice principal, or other certified administrator) who will assist you with completing this form. All completed reports require a response from the school climate specialist, and every student, parent or guardian, and school employee **who completed this form** will receive a copy of the "Response Process(es) Notification Form" describing the action steps taken, within three (3) school business days after an assessment has been completed.

The school climate specialist will assess the facts of a challenging behavior incident and complete the "Response Process(es) Notification Form" (located on page 5 of this document). A confirmation of receipt of the "challenging behavior reporting form" will be provided to the individual who completed this form within **three (3) school business days**, and the behavioral assessment will be finalized within a reasonable amount of time.

If this is an emergency, and you feel that you or someone else is in imminent danger, please call 911, or your municipal police department.

Name: First _____ Last _____ or check here ☐ for any **student** who would like to submit anonymously.

I am a: ☐ Student, ☐ Parent and/or Guardian or ☐ School Employee
Email: _____

Phone Number: _____

Contact me by: ☐ Phone ☐ Email

Was this previously reported to any school employee prior to this report? If yes, identify to whom, when, and what was reported? _____

Where did the incident occur? _____

Check any boxes that apply.

- ☐ On school property
- ☐ At a school-sponsored activity or off school property
- ☐ Electronic communication, internet, and social media
- ☐ On a school bus
- ☐ On the way to/from school
- ☐ Outside of school
- ☐ Other _____

Approximate date of incident (if known): _____

This form does not modify or eliminate any rights or obligations under state and federal laws, including, any constitutional and civil rights protections, or any applicable policies and procedures or collective bargaining agreements. All students' private and personal information will remain confidential throughout this process, subject to any wavier rights or disclosure responsibilities as permitted or required by law.

Please note: when a student exhibits challenging behavior, our priority is to ensure the safety of the students and the school, and to work with the student(s) to prevent the recurrence of such behavior, including making amends for any challenging behaviors that occurred. Federal law protects the privacy of each student. Therefore, you cannot be provided with any specific information concerning the student alleged to have engaged in the challenging behavior.

Please describe what happened?

_____

_____

_____

_____

_____

Of the following statement(s) check any that may describe or include what happened:

- ☐ Teasing, name-calling, intimidating, or threatening, in person or through electronic communication
- ☐ Spreading rumors or gossip
- ☐ Hitting, kicking, shoving, spitting, hair pulling, or throwing something or other acts of physical aggression
- ☐ Making intimidating, and/or threatening gestures or remarks
- ☐ Getting another person to do any of the behaviors listed above
- ☐ Unwanted contact of a sexual nature (verbal, non-verbal, physical)

Do you believe that the reported instance(s) of challenging behavior was in reference to a student's perceived or actual age, ancestry, color, learning disability, marital status, intellectual disability, national origin, physical disability, mental disability, race, religious creed, sex, gender identity or expression, sexual orientation, and status as a veteran? If so, why?

_____

_____

If known, provide the name(s) of any witness(es) of the alleged incident: _____

_____

Date form submitted: _____

***For school climate specialist use only:**

Date received by school climate specialist: _____

Signature of receipt by school climate specialist: _____

This form does not modify or eliminate any rights or obligations under state and federal laws, including, any constitutional and civil rights protections, or any applicable policies and procedures or collective bargaining agreements. All students' private and personal information will remain confidential throughout this process, subject to any wavier rights or disclosure responsibilities as permitted or required by law.

Please note: when a student exhibits challenging behavior, our priority is to ensure the safety of the students and the school, and to work with the student(s) to prevent the recurrence of such behavior, including making amends for any challenging behaviors that occurred. Federal law protects the privacy of each student. Therefore, you cannot be provided with any specific information concerning the student alleged to have engaged in the challenging behavior.

5131.911
Form 2

Investigation Form

The purpose of this form is to provide a streamlined process to assess reported instances of challenging behavior.

This form is to be completed by the school climate specialist within a reasonable amount of time. Pursuant to the Federal Education Confidentiality Law (FERPA), students, parents or guardians, and school employees that completed the challenging behavior reporting form **cannot** receive a copy of this "Investigation Form" but will be provided with a copy of the "Response Process(es) Notification Form" after an assessment is completed.

Date "Challenging Behavior Reporting Form" received: _____

Today's Date: _____

Name of school climate specialist who received the report: _____

Were these events already reported to any school employee? If yes, please identify to whom, when, and what was reported _____

Name of school community member who is reporting the incident: (student, parent or guardian, school or district employee, bystander, anonymous): _____

Name of student or students who were allegedly subjected to the challenging behavior: _____

_____

Name of person or persons who allegedly engaged in the challenging behavior: _____

_____

Where did the alleged incident occur? _____

Date and time alleged incident occurred: (if known): _____

Description of the alleged incident: _____

_____

What investigative processes occurred? Answer all of the following questions below. A single incident may require an assessment into multiple areas. Please check all that apply.

Was this investigated as bullying? YES ☐ NO ☐

Was this a verified act of bullying? YES ☐NO ☐

Was this investigated as cyberbullying? YES ☐ NO ☐

Was this a verified act of cyberbullying? YES ☐NO ☐

Was this investigated as teen dating violence? YES ☐ NO ☐

Was this verified teen dating violence? YES ☐ or NO ☐

Was this investigated as an assault? YES ☐ NO ☐

Was this a verified assault? YES ☐ or NO ☐

Was this investigated as an act of physical violence? YES ☐ NO ☐

Was this a verified act of physical violence? YES ☐ or NO ☐

Was this investigated as a protected class violation/ harassment? YES ☐ NO ☐

Was this a verified protected class violation/harassment? YES ☐ NO ☐

Was this investigated as a Title IX violation? YES ☐ NO ☐

Was this a verified Title IX violation? YES ☐ or NO ☐

Was this a verified act of challenging behavior not listed above? YES ☐ NO ☐

This form does not modify or eliminate any rights or obligations under state and federal laws, including, any constitutional and civil rights protections, or any applicable policies and procedures or collective bargaining agreements. All students' private and personal information will remain confidential throughout this process, subject to any wavier rights or disclosure responsibilities as permitted or required by law.

Please note: when a student exhibits challenging behavior, our priority is to ensure the safety of the students and the school, and to work with the student(s) to prevent the recurrence of such behavior, including making amends for any challenging behaviors that occurred. Federal law protects the privacy of each student. Therefore, you cannot be provided with any specific information concerning the student alleged to have engaged in the challenging behavior.

Form 2
(continued)

What was the response by the school climate specialist? (E.g., utilization of restorative practices, school-based threat assessment, safety plan, student support services) Additionally, provide the date of each response.

If applicable, please provide any additional notes, observations, or actions taken as a result of this incident:

Signature or E-signature of responding school climate specialist: _____

Printed name: _____

Date of response: _____

This form does not modify or eliminate any rights or obligations under state and federal laws, including, any constitutional and civil rights protections, or any applicable policies and procedures or collective bargaining agreements. All students' private and personal information will remain confidential throughout this process, subject to any wavier rights or disclosure responsibilities as permitted or required by law.

Please note: when a student exhibits challenging behavior, our priority is to ensure the safety of the students and the school, and to work with the student(s) to prevent the recurrence of such behavior, including making amends for any challenging behaviors that occurred. Federal law protects the privacy of each student. Therefore, you cannot be provided with any specific information concerning the student alleged to have engaged in the challenging behavior.

5131.911
Form 3

Response Process(es) Notification Form

The purpose of this form is to provide a template for transparency and accountability to a person(s) that submit(s) a report of challenging behavior.

The school climate specialist will complete and submit this form within three (3) school business days **after an assessment has been finalized** and submit it to the student(s), parent(s), or guardian(s), and/or school employee(s) who completed the "Challenging Behavior Reporting Form".

Describe the steps taken to address and prevent future instance(s) of challenging behavior(s). Responses may include:

- utilization of restorative practices;
- the completion of a school-based threat assessment;
- safety plan for student(s) involved in the instance of alleged challenging behavior;
- student support services;

_____

_____

_____

_____

_____

_____

Signature or E-signature of school climate specialist: _____

Printed name: _____

Date completed: _____

Definitions and Clarifying Terms

Restorative Practices: Evidence and research-based system-level practices that focus on (A) building high-quality, constructive relationships among the school community, (B) holding each student accountable for any challenging behavior, and (C) ensuring each such student has a role in repairing relationships and reintegrating into the school community.

School Based Threat Assessment: *A*n evidence-based systematic evaluation process used to prevent violence, help troubled students, and avoid over-reactions to challenging behavior.

This form does not modify or eliminate any rights or obligations under state and federal laws, including, any constitutional and civil rights protections, or any applicable policies and procedures or collective bargaining agreements. All students' private and personal information will remain confidential throughout this process, subject to any wavier rights or disclosure responsibilities as permitted or required by law.

Please note: when a student exhibits challenging behavior, our priority is to ensure the safety of the students and the school, and to work with the student(s) to prevent the recurrence of such behavior, including making amends for any challenging behaviors that occurred. Federal law protects the privacy of each student. Therefore, you cannot be provided with any specific information concerning the student alleged to have engaged in the challenging behavior.