Marking Period	Unit Title	Recommended Instructional Days
1	OSHA 10	5

CTE
Disciplinary Concept:
Design/Pre-Construction
Maintenance/Operations
Food Product and Processing Systems
Construction
Arts, A/V Technology & Communications
Education & Training
Early Childhood Development & Services
Restaurants & Food/Beverage Services

Core Ideas and Performance Expectation:

Design/Pre-Construction
9.3.12.AC-DES.2
Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.
9.3.12.AC-DES.4
Apply building codes, laws and rules in the project design.

Maintenance/Operations
9.3.12.AC-MO.1
Recognize and employ universal construction signs and symbols to function safely in the workplace
9.3.12.AC-MO.5
Plan and practice preventative maintenance activities to service existing buildings.

Food Product and Processing Systems
9.3.12.AG-FD.1
Develop and implement procedures to ensure safety, sanitation and quality in food product and processing facilities.

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

Construction
9.3.12.AC-CST.5
Apply practices and procedures required to maintain jobsite safety

Arts, A/V Technology & Communications
9.3.12.AR.2
Analyze the importance of health, safety and environmental management systems, policies and procedures common in arts, audio/video technology and communications activities and facilities.

Education & Training
9.3.12.ED.4
Evaluate and manage risks to safety, health and the environment in education and training settings.

Early Childhood Development & Services
9.3.HU-ED.5
Evaluate safety and sanitation procedures associated with the early childhood education environment to assure compliance and prevent potential hazards.

Restaurants & Food/Beverage Services
9.3.HT-RFB.2
Demonstrate safety and sanitation procedures in food and beverage service facilities

Life Literacy & Key Skills
Disciplinary Concept:
Creativity and Innovation
Digital Citizenship
Information and Media Literacy

Core Ideas and Performance Expectation:

Creativity and Innovation
Innovative ideas or innovation can lead to career opportunities.

Essential Question/s:
Why is it important to practice safety?
What do safe practices look like in my industry?
How can I keep myself and others safe?

9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).

Digital Citizenship
Laws govern many aspects of computing, such as privacy, data, property, information, and identity. These laws can have beneficial and harmful effects, such as expediting or delaying advancements in computing and protecting or infringing upon people's rights.
9.4.12.DC.3: Evaluate the social and economic implications of privacy in the context of safety, law, or ethics (e.g., 6.3.12.HistoryCA.1).

Information and Media Literacy
Advanced search techniques can be used with digital and media resources to locate information and to check the credibility and the expertise of sources to answer questions, solve problems, and inform the decision-making.
9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.

Career Awareness, Exploration, Preparation, & Training
Disciplinary Concept:
Career Awareness and Planning

Core Ideas and Performance Expectation:

Career Awareness and Planning
There are strategies to improve one's professional value and marketability.
9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs.
9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.

Career planning requires purposeful planning based on research, self-knowledge, and informed choices.
9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.

Activity Description:
Activity: Safety Consequences Brainstorm

- Divide students into small groups
- Each group brainstorms potential consequences of not following safety procedures in various workplace scenarios
- Groups present their findings to the class
- Discuss the physical, emotional, and financial impacts of workplace accidents

Activity: Industry-Specific Safety Poster Creation

- Assign different industries to student groups (construction, healthcare, manufacturing, etc.)
- Students research OSHA standards for their assigned industry
- Create informative posters highlighting key safety practices for that industry
- Present posters to the class, explaining the rationale behind each safety practice

Activity: Safety Hazard Identification Walk

- Conduct a supervised walk through the school, or a simulated workplace
- Students identify potential safety hazards and suggest mitigation strategies
- Discuss the importance of speaking up about safety concerns
- Practice using proper communication techniques for reporting hazards

Activity: Guest Speaker Q&A

- Invite a local safety professional or someone who has experienced a workplace injury
- Students prepare questions in advance about the importance of workplace safety
- Conduct a Q&A session, allowing students to understand real-world implications of safety practices

Activity: Safety Equipment Demonstration

- Bring in various pieces of personal protective equipment (PPE)

9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.
9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.

Personal Financial Literacy
Disciplinary Concept:

Social and Emotional Learning:

Competencies and Sub-Competencies

Self-Awareness
• Recognize one's feelings and thoughts
• Recognize the impact of one's feelings and thoughts on one's own behavior
• Recognize one's personal traits, strengths, and limitations
• Recognize the importance of self-confidence in handling daily tasks and challenges

Self-Management
• Understand and practice strategies for managing one's own emotions, thoughts, and behaviors
• Recognize the skills needed to establish and achieve personal and educational goals
• Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

Social Awareness
• Recognize and identify the thoughts, feelings, and perspectives of others
• Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
• Demonstrate an understanding of the need for mutual respect when viewpoints differ
• Demonstrate an awareness of the expectations for social interactions in a variety of settings.

- Demonstrate proper use and maintenance of PPE
- Students practice putting on and taking off PPE correctly
- Discuss scenarios where each piece of equipment would be necessary

Activity: Safety Scenario Role-Play

- Create cards with different workplace safety scenarios
- Students act out the scenarios, demonstrating both unsafe and safe behaviors
- Class discusses the differences and potential outcomes of each approach
- Emphasize the importance of looking out for coworkers' safety as well as one's own

Activity: Safety Statistics Analysis

- Provide students with workplace injury and illness statistics from OSHA
- In groups, students analyze the data and create visual representations (graphs, charts)
- Present findings to the class, discussing trends and implications
- Relate statistics to the importance of safety practices in reducing these numbers

Interdisciplinary Connections:
Math
ELA

Content:
Walking working surfaces
Emergency action plans
Fire protection
Electrocution hazards
Personal protective equipment
Hazard communication
Materials handling, storage, use and disposal.

Responsible Decision-Making • Develop, implement, and model effective problem-solving and critical thinking skills • Identify the consequences associated with one's actions in order to make constructive choices • Evaluate personal, ethical, safety, and civic impact of decisions **Relationship Skills** • Establish and maintain healthy relationships • Utilize positive communication and social skills to interact effectively with others	**CLKS:** *Consider the environmental, social and economic impacts of decisions.* Students understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization. *Plan education and career paths aligned to personal goals.* Students take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.
Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
Formative Assessments: Teacher Observation Do Now Homework Class Participation Portfolio Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations	**Benchmarks:** Quiz Exam **Summative Assessments:** Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations OSHA 10 Assessment and Certificate

Differentiated Student Access to Content: Teaching and Learning *Resources/Materials*			
Core Resources	**Alternate Core Resources *IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**
Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners Audio versions of texts for auditory learners or struggling readers Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for experiments	Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape Highlighted text Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs Individualized Options: Independent study options Compacting the curriculum for advanced learners Varied timelines or check-in points	Keep material concept-focused and principle-driven. Allow the use of digital translation or grouping students together. Provide multiple means of action and expression.	Advanced Technical Materials: Provide access to OSHA's full regulatory standards and technical manuals Offer industry white papers on emerging safety technologies and practices Share case studies of complex workplace safety incidents and their resolutions Project-Based Learning: Design challenges to create innovative safety solutions for real-world scenarios Independent research projects on topics like ergonomics or industrial hygiene Opportunities to develop new safety tools or technologies

Art supplies for creative projects Building materials for engineering challenges	Choice of review activities ESL-Specific Resources: Bilingual dictionaries or glossaries Sentence frames and language scaffolds Visual supports for key vocabulary		

Supplemental Resources

Technology:

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector

Other:

- Plumbing materials

Differentiated Student Access to Content:
Recommended *Strategies & Techniques*

Core Resources	**Alternate Core Resources *IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core**
Content Differentiation: Tiered content at different complexity levels Variety of textbooks at different reading levels	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners	Content Differentiation: Advanced, above-grade level textbooks and materials Supplementary resources on complex or specialized topics

Supplemental materials like videos, podcasts, and interactive modules Compacting curriculum for advanced learners Choice boards allowing students to select learning activities Varied resources/texts on the same topic Process Differentiation: Flexible grouping (whole group, small group, individual) Learning contracts tailored to student needs Interest centers focused on different aspects of a topic Varied instructional strategies (visual, auditory, kinesthetic) Scaffolded support like graphic organizers and writing frames Technology-enabled instruction (synchronous or asynchronous options) Product Differentiation: Multiple options for demonstrating learning (reports, presentations, models, etc.) Varied assessment methods based on student learning preferences Adjusting product expectations based on student readiness	Leveled readers at different reading levels Bilingual materials for ESL students Visual aids, infographics, and multimedia resources Process Differentiation: Flexible grouping based on readiness levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of assistive technology (text-to-speech, speech-to-text tools) Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on IEP/504 goals Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time	Leveled readers at different reading levels Bilingual materials and resources1 Visual aids, infographics, and multimedia resources Modified texts with rewording, reduced extraneous information, and added visuals Process Differentiation: Flexible grouping based on language proficiency levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of gestures and total physical response to support verbal instruction Incorporation of students' native language or culture when possible Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on English proficiency levels Alternative assessments aligned with student abilities	Interdisciplinary curriculum connecting multiple subject areas Primary source documents and advanced readings Access to college-level coursework or materials Process Differentiation: Accelerated pacing of instruction Independent study options on topics of interest Problem-based and project-based learning opportunities Socratic seminars and philosophical discussions Mentorship programs with experts in fields of interest Product Differentiation: Open-ended, creative project options Real-world application of learning through authentic tasks Opportunities for original research and experimentation Multimedia presentations and publications Portfolio development to showcase depth of learning

Learning Environment Differentiation: Flexible seating arrangements Options for individual, paired, or group work Varied time allocations for task completion Use of technology to support different learning needs	Learning Environment Differentiation: Flexible seating arrangements Quiet spaces for individual work Sensory tools or fidgets as needed Visual schedules and routines Specialized Supports Implementation of IEP accommodations and modifications ESL supports like sentence frames and vocabulary guides Interventions for at-risk students (e.g. reading interventions) Social-emotional learning supports Ongoing Assessment Frequent formative assessments to monitor progress Data-driven adjustments to instruction Progress monitoring aligned with IEP goals	Use of portfolios to showcase progress over time Learning Environment Differentiation: Flexible seating arrangements Use of learning centers or stations focused on different aspects of a topic Visual schedules and routines Incorporation of culturally relevant materials and examples Specialized Supports: ESL supports like sentence frames and vocabulary guides Use of students' native language for clarification when needed Frequent opportunities for speaking and listening practice Integration of all four language skills (listening, speaking, reading, writing) Instructional Strategies: Slowing down speech and using clear enunciation Rephrasing and clarifying instructions Using visuals to support verbal instruction Providing content in multiple formats (visual, auditory, kinesthetic)	Learning Environment Differentiation: Flexible grouping with intellectual peers Access to advanced technology and lab equipment Field trips and off-campus learning experiences Online courses and virtual learning options Competitions and academic challenges Specialized Supports: Critical and creative thinking skill development Training in research methods and academic writing Guidance on social-emotional needs of gifted learners College and career planning tailored to advanced learners Opportunities to explore passions and develop talents Instructional Strategies: Inquiry-based and discovery learning approaches

		Connecting content to students' interests and cultural backgrounds Utilizing music, melodies, or songs to enhance learning Ongoing Assessment: Frequent formative assessments to monitor progress Data-driven adjustments to instruction Accommodated assessments (e.g., simplified language, added visuals)	Higher-order questioning techniques Abstract and complex problem-solving tasks Emphasis on depth and complexity of content Integration of multiple disciplines and perspectives Assessment Options: Pre-assessments to determine readiness levels Performance-based and authentic assessments Self-assessment and reflection opportunities Above-grade level standardized testing Credit by examination options

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)											
	Amistad Law: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*		Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*		Standards in Action: *Climate Change*		Erin's Law: *A-769/S-1130*

Marking Period	Unit Title	Recommended Instructional Days
1	Advanced Equipment Set up and Operation	35

CTE
Disciplinary Concept:
Architecture & Construction

Core Ideas and Performance Expectation:

Architecture & Construction

9.3.12.AC.1 Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC.2 Use architecture and construction skills to create and manage a project.
9.3.12.AC.3 Comply with regulations and applicable codes to establish and manage a legal and safe workplace.
9.3.12.AC.4 Evaluate the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction in society and the economy.
9.3.12.AC.5 Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships.
9.3.12.AC.6 Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC.7 Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways.

Life Literacy & Key Skills
Disciplinary Concept:
Creativity and Innovation
Critical Thinking and Problem-solving

Core Ideas and Performance Expectation:

Creativity and Innovation

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

Essential Question/s:

What are the appropriate steps to ensure accurate and safe production of parts using CNC equipment?

With a growth mindset, failure is an important part of success. 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a). Innovative ideas or innovation can lead to career opportunities. 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8). 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1). **Critical Thinking and Problem-solving** *Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.* 9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3). 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a). 9.4.12.CT.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice). 9.4.12.CT.4: Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.	Why is orientation of stock important to the integrity of the machined component? How was advanced woodworking machinery used in concentration camps? How can we design and set up carpentry equipment and workstations to accommodate diverse body types, heights, and physical abilities, ensuring accessibility and inclusivity for all users? **Activity Description**: Unit 1 provides students with an advanced understanding of safe setup and operating procedures for various CNC machining equipment. This will include but not limited to: stock/jig setup, material clamping, establishment of reference axes, tool references, and tool changing procedures. Following these steps and protocols will ensure safe and accurate output by the CNC machine. Students will learn the relevant set-up procedures to ensure safe machine operation in the class as well as the workplace. Discuss how advanced woodworking machinery was used in concentration camps, highlighting the skills of Jewish craftsmen who were forced to work under extreme conditions Teach students to consider accessibility and inclusivity when setting up equipment. Discuss how different body types, heights, and physical abilities might require adjustments to workstations
Career Awareness, Exploration, Preparation, & Training **Disciplinary Concept:** **Career Awareness and Planning**	
Core Ideas and Performance Expectation: **There are strategies to improve one's professional value and marketability.** 9.2.12.CAP.1: Analyze unemployment rates for workers with different levels of education and how the economic, social, and political conditions of a time period are affected by a recession. 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. 9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.	**Interdisciplinary Connections:** Math ELA SS **CLKS:** Act as a Responsible and contributing Citizen and Employee Apply Appropriate Academic and Technical Skills Attend to Personal Health and Financial Well-Being Communicate Clearly, Effectively and with Reason

Career planning requires purposeful planning based on research, self-knowledge, and informed choices.
9.2.12.CAP.4: Evaluate different careers and develop various plans (e.g., costs of public, private, training schools) and timetables for achieving them, including educational/training requirements, costs, loans, and debt repayment.
9.2.12.CAP.10: Identify strategies for reducing overall costs of postsecondary education (e.g., tuition assistance, loans, grants, scholarships, and student loans).

Understanding income involves an analysis of payroll taxes, deductions and earned benefits.
9.2.12.CAP.19: Explain the purpose of payroll deductions and why fees for various benefits (e.g., medical benefits) are taken out of pay, including the cost of employee benefits to employers and self-employment income.

Personal Financial Literacy
Disciplinary Concept:
Civic Financial Responsibility
Risk Management and Insurance
Planning and Budgeting
Financial Psychology
Credit Profile

Core Ideas and Performance Expectation:

Risk Management and Insurance
A person's tolerance for investment risk can change depending on factors such as life circumstances, financial goals, and economic conditions.
9.1.12.RM.1: Describe the importance of various sources of income in retirement, including Social Security, employer-sponsored retirement savings plans, and personal investments.
9.1.12.RM.2: Identify types of investments appropriate for different objectives such as liquidity, income, and growth.

Planning and Budgeting
A budget may need to be modified as an individual's career, financial goals (e.g., education, home ownership, retirement), and/or other life situations change.

Consider the Environmental, Social and Economic Impacts of Decisions
Demonstrate creativity and innovation
Employ valid and reliable research strategies
Utilize critical Thinking to make sense of problems and persevere in solving them
Model Integrity, ethical leadership and effective management
Plan education and career path aligned to personal goals
Use technology to enhance productivity
Work productively in teams while using cultural/ global competence

9.1.12.PB.5: Analyze how changes in taxes, inflation, and personal circumstances can affect a personal budget.
Money management requires understanding of cash flow systems and business practices.
9.1.12.PB.6: Describe and calculate interest and fees that are applied to various forms of spending, debt and saving.

Financial Psychology
To be fiscally responsible, an individual's finances should align with his or her values and goals.
9.1.12.FP.2: Explain how an individual's financial values and goals may change across a lifetime and the adjustments to the personal financial plan that may be needed.

Credit Profile
Building and maintaining a good credit history is a process.
9.1.12.CP.3: Summarize factors that affect a positive credit rating, including on-time payments, debt versus available credit, length of open credit, and how often you apply for credit.
9.1.12.CP.4: Identify the skill sets needed to build and maintain a positive credit profile.
9.1.12.CP.5: Create a plan to improve and maintain an excellent credit rating

Social and Emotional Learning:

Competencies and Sub-Competencies

Self-Awareness
• Recognize one's feelings and thoughts
• Recognize the impact of one's feelings and thoughts on one's own behavior
• Recognize one's personal traits, strengths, and limitations
• Recognize the importance of self-confidence in handling daily tasks and challenges

Self-Management
• Understand and practice strategies for managing one's own emotions, thoughts, and behaviors

• Recognize the skills needed to establish and achieve personal and educational goals • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals **Social Awareness** • Recognize and identify the thoughts, feelings, and perspectives of others • Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds • Demonstrate an understanding of the need for mutual respect when viewpoints differ • Demonstrate an awareness of the expectations for social interactions in a variety of settings. **Responsible Decision-Making** • Develop, implement, and model effective problem-solving and critical thinking skills • Identify the consequences associated with one's actions in order to make constructive choices • Evaluate personal, ethical, safety, and civic impact of decisions **Relationship Skills** • Establish and maintain healthy relationships • Utilize positive communication and social skills to interact effectively with others	
Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
<u>Formative Assessments:</u> Teacher Observation Do Now Homework Class Participation Portfolio	**<u>Benchmarks:</u>** Quiz Exam Students will be able to safely use/operate tools and equipment With little to no instruction. Students will be able to verbally explain a process when asked.

Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations Shop and classroom etiquette Housekeeping critique	Students will be periodically add to their portfolios **<u>Summative Assessments:</u>** Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations Teacher administered a general shop safety test on the topic discussed during that unit. Completed project Performance test on equipment or tool.

Differentiated Student Access to Content:
Teaching and Learning *Resources/Materials*

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**
Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners Audio versions of texts for auditory learners or struggling readers	Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape Highlighted text	Keep material concept-focused and principle-driven. Allow the use of digital translation or grouping students together. Provide multiple means of action and expression.	Advanced Textbooks: "Residential Construction Academy: Plumbing" by Michael Joyce and Ray Holder PHCC Educational Foundation's Plumbing Series (higher levels) Online Learning Platforms: NCCER's Plumbing curriculum (advanced modules)

Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for experiments Art supplies for creative projects Building materials for engineering challenges	Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs Individualized Options: Independent study options Compacting the curriculum for advanced learners Varied timelines or check-in points Choice of review activities ESL-Specific Resources: Bilingual dictionaries or glossaries Sentence frames and language scaffolds Visual supports for key vocabulary		Khan Academy for advanced math concepts related to plumbing calculations Hands-On Materials: Advanced plumbing simulation software 3D modeling tools for creating detailed plumbing layouts Enrichment Activities: Independent research projects on emerging plumbing technologies Design challenges for innovative plumbing solutions Technology Integration: CAD software for designing advanced plumbing systems Virtual reality programs for exploring complex plumbing installations Problem-Solving Challenges: Complex troubleshooting scenarios using real-world plumbing issues Advanced math problems related to pipe sizing and water pressure calculations Industry Certifications: NCCER Plumbing Level One certification

			OSHA-30 Construction Industry certification Accelerated Curriculum: Cover topics from higher-level plumbing courses Introduce concepts from Plumbing Technology II

Supplemental Resources

Technology:

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector

Other:

- Edgebander
- CNC machine
- Edgebander, CNC machine, Computers, software and various woodworking machinery.
- Various woodworking machinery.

Technical Skill Assessments: ***License/Certification/CTE Assessment/ Industry Valued Credential / Stackable Credential***	**Name of Assessment(s):** Skills Usa Competition **Type of Assessment(s):** Skills Usa
Autodesk fusion 360 credential/certification Hudson community college credential (TBD)	

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core**
Content Differentiation: Tiered content at different complexity levels Variety of textbooks at different reading levels Supplemental materials like videos, podcasts, and interactive modules Compacting curriculum for advanced learners Choice boards allowing students to select learning activities Varied resources/texts on the same topic Process Differentiation: Flexible grouping (whole group, small group, individual) Learning contracts tailored to student needs Interest centers focused on different aspects of a topic Varied instructional strategies (visual, auditory, kinesthetic) Scaffolded support like graphic organizers and writing frames	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled readers at different reading levels Bilingual materials for ESL students Visual aids, infographics, and multimedia resources Process Differentiation: Flexible grouping based on readiness levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of assistive technology (text-to-speech, speech-to-text tools)	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners Leveled readers at different reading levels Bilingual materials and resources1 Visual aids, infographics, and multimedia resources Modified texts with rewording, reduced extraneous information, and added visuals Process Differentiation: Flexible grouping based on language proficiency levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of gestures and total physical response to support verbal instruction	Content Differentiation: Advanced, above-grade level textbooks and materials Supplementary resources on complex or specialized topics Interdisciplinary curriculum connecting multiple subject areas Primary source documents and advanced readings Access to college-level coursework or materials Process Differentiation: Accelerated pacing of instruction Independent study options on topics of interest Problem-based and project-based learning opportunities Socratic seminars and philosophical discussions Mentorship programs with experts in fields of interest Product Differentiation:

Technology-enabled instruction (synchronous or asynchronous options) Product Differentiation: Multiple options for demonstrating learning (reports, presentations, models, etc.) Varied assessment methods based on student learning preferences Adjusting product expectations based on student readiness Learning Environment Differentiation: Flexible seating arrangements Options for individual, paired, or group work Varied time allocations for task completion Use of technology to support different learning needs	Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on IEP/504 goals Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time Learning Environment Differentiation: Flexible seating arrangements Quiet spaces for individual work Sensory tools or fidgets as needed Visual schedules and routines Specialized Supports Implementation of IEP accommodations and modifications ESL supports like sentence frames and vocabulary guides Interventions for at-risk students (e.g. reading interventions) Social-emotional learning supports Ongoing Assessment	Incorporation of students' native language or culture when possible Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on English proficiency levels Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time Learning Environment Differentiation: Flexible seating arrangements Use of learning centers or stations focused on different aspects of a topic Visual schedules and routines Incorporation of culturally relevant materials and examples Specialized Supports: ESL supports like sentence frames and vocabulary guides Use of students' native language for clarification when needed Frequent opportunities for speaking and listening practice	Open-ended, creative project options Real-world application of learning through authentic tasks Opportunities for original research and experimentation Multimedia presentations and publications Portfolio development to showcase depth of learning Learning Environment Differentiation: Flexible grouping with intellectual peers Access to advanced technology and lab equipment Field trips and off-campus learning experiences Online courses and virtual learning options Competitions and academic challenges Specialized Supports: Critical and creative thinking skill development Training in research methods and academic writing

	Frequent formative assessments to monitor progress Data-driven adjustments to instruction Progress monitoring aligned with IEP goals	Integration of all four language skills (listening, speaking, reading, writing) Instructional Strategies: Slowing down speech and using clear enunciation Rephrasing and clarifying instructions Using visuals to support verbal instruction Providing content in multiple formats (visual, auditory, kinesthetic) Connecting content to students' interests and cultural backgrounds Utilizing music, melodies, or songs to enhance learning Ongoing Assessment: Frequent formative assessments to monitor progress Data-driven adjustments to instruction Accommodated assessments (e.g., simplified language, added visuals)	Guidance on social-emotional needs of gifted learners College and career planning tailored to advanced learners Opportunities to explore passions and develop talents Instructional Strategies: Inquiry-based and discovery learning approaches Higher-order questioning techniques Abstract and complex problem-solving tasks Emphasis on depth and complexity of content Integration of multiple disciplines and perspectives Assessment Options: Pre-assessments to determine readiness levels Performance-based and authentic assessments Self-assessment and reflection opportunities Above-grade level standardized testing Credit by examination options

Work-Based Learning Experiences (WBL)- *Previously called Structured Learning Experience (SLE) ***Each course within a CTE program is now required to include at least one WBL each year.*** **Work-Based Learning: Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.**		
WBL Integration/Activity:	**Duration:**	**Brief description of activities:**
Career Fair	1-3 day Event	• Annual School wide Career Fairs with various presentation in the Architecture and Constructions fields
Guest Speakers	1-2 hour a couple times throughout the year	• Guest Speakers ie Andrew Campell from Eastern MIllwork, Associate Dean of Architecture John M. Cays, Stacy Kliesh. R.A. etc,,
Career Related Competitions	Marking Period long	• Service Learning & Career Related Competitions such as skills usa
Internships (Paid or non-paid)	Summer Internships	• Internship Opportunities i.e. (Summer Internships with Gilbane, Eastern Millwork, DPR construction, etc.)
Informational Interviews /Guest Speakers	1-3 day Event	• Annual STEAM Day
Pre- Apprenticeship	Summer long	• Apprenticeship programs with Eastern Millwork
Career Related Competitions	1-3 day Event	• SkillsUSA Competitions
Interactive/Hands-on Demonstrations with industry	30-1hr per student throughout the year or one day	• (Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals

Professionals (online, in-person)		
Simulated Workbased Experience	Afterschool year long	Simulated Workbased Experience
WBL Partners:		
Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).		
CTSO:	**CTSO Advisor:**	

Freshman Level: Approximately 10 hours	**Sophomore Level: Approximately 20 hours**	**Junior Level: Approximately 50 hours**	**Senior Level: Approximately 75 hours**
Career Awareness- brief exposure to a variety of work settings needs.	Career Exploration- understand the nature of work through first-hand exposure to the workplace.	Career Preparation - builds basic workplace competence	Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.

Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksite visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)											
	Amistad Law: *N.J.S.A. 18A 52:16A-88*	X	Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*		Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*		Standards in Action: *Climate Change*		Erin's Law: *A-769/S-1130*

Marking Period	Unit Title	Recommended Instructional Days
2	**Advanced Fabrication Techniques - Mass Production Methods**	**45**

CTE
Disciplinary Concept:
Architecture & Construction

Core Ideas and Performance Expectation:

Architecture & Construction
9.3.12.AC.1 Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC.2 Use architecture and construction skills to create and manage a project.
9.3.12.AC.3 Comply with regulations and applicable codes to establish and manage a legal and safe workplace.
9.3.12.AC.4 Evaluate the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction in society and the economy.
9.3.12.AC.5 Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships.
9.3.12.AC.6 Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC.7 Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways.

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

Life Literacy & Key Skills
Disciplinary Concept:
Creativity and Innovation
Critical Thinking and Problem-Solving

Core Ideas and Performance Expectation:

Creativity and Innovation
With a growth mindset, failure is an important part of success.

Essential Question/s:
What are the challenges and opportunities posed by mass production processes?

9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).

Innovative ideas or innovation can lead to career opportunities.
9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).

Critical Thinking and Problen-Solving
Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.
9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).
9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
9.4.12.CT.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).
9.4.12.CT.4: Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.

Career Awareness, Exploration, Preparation, & Training
Disciplinary Concept:
Career Awareness and Planning

Core Ideas and Performance Expectation:

Career Awareness and Planning
There are strategies to improve one's professional value and marketability.
9.2.12.CAP.1: Analyze unemployment rates for workers with different levels of education and how the economic, social, and political conditions of a time period are affected by a recession.
9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs.

What are the implications of mass customization for the manufacturing industry?

How does one ensure quality work within a time constraint?

How have successful businesses in the carpentry and fabrication industry, owned or operated by LGBT individuals or people with disabilities, implemented innovative production methods and what can we learn from their approaches?

How were mass production techniques used by African Americans in the development of American industry?

Activity Description:
Unit 2 introduces the student to techniques in mass production, mass customization and lean manufacturing. They will then employ these techniques to mass produce a designed product. Working drawings will be generated; a bill of materials with procedure and an estimate of time and material will be completed before construction. From the initial design of the concept through to development of the final product, students will discover the interrelationship between a designed object, and the means by which it is produced. They will also further develop students' proficiency in the use of CAD/CAM operations though the translation of their designs into tool paths and other data, such as STL files, to communicate directly with output devices i.e. CNC router.

Students will design and mass-produce wooden display stands or frames for informational posters about sexual abuse prevention, combining carpentry skills with the law's educational goals.

Analyze successful businesses in the carpentry and fabrication industry that are owned or operated by LGBT individuals or people with disabilities, focusing on their production methods and innovations.

Discuss how mass production techniques were used by African Americans in the development of American industry, highlighting their contributions to carpentry and fabrication methods

Interdisciplinary Connections:
Math

9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth. *Career planning requires purposeful planning based on research, self-knowledge, and informed choices.* 9.2.12.CAP.4: Evaluate different careers and develop various plans (e.g., costs of public, private, training schools) and timetables for achieving them, including educational/training requirements, costs, loans, and debt repayment. 9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors. 9.2.12.CAP.10: Identify strategies for reducing overall costs of postsecondary education (e.g., tuition assistance, loans, grants, scholarships, and student loans)	ELA TECH SCI **CLKS:** Act as a responsible and contributing community member and employee. Attend to financial well-being. Consider the environmental, social and economic impacts of decisions. Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management. Plan education and career paths aligned to personal goals. Use technology to enhance productivity, increase collaboration, and communicate effectively. Work productively in teams while using cultural/global competence.
Personal Financial Literacy **Disciplinary Concept:** **Planning and Budgeting** **Financial Institutions**	
Core Ideas and Performance Expectation: **Planning and Budgeting** *A budget may need to be modified as an individual's career, financial goals (e.g., education, home ownership, retirement), and/or other life situations change.* 9.1.12.PB.5: Analyze how changes in taxes, inflation, and personal circumstances can affect a personal budget. *Money management requires understanding of cash flow systems and business practices.* 9.1.12.PB.6: Describe and calculate interest and fees that are applied to various forms of spending, debt and saving. **Financial Institutions** *There are factors you can use to select financial institutions and professionals that are best suited for your needs.*	

9.1.12.FI.3: Develop a plan that uses the services of various financial institutions to prepare for long term personal and family goals (e.g., college, retirement).	
Social and Emotional Learning: ***Competencies and Sub-Competencies***	
Self-Awareness • Recognize one's feelings and thoughts • Recognize the impact of one's feelings and thoughts on one's own behavior • Recognize one's personal traits, strengths, and limitations • Recognize the importance of self-confidence in handling daily tasks and challenges **Self-Management** • Understand and practice strategies for managing one's own emotions, thoughts, and behaviors • Recognize the skills needed to establish and achieve personal and educational goals • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals **Social Awareness** • Recognize and identify the thoughts, feelings, and perspectives of others • Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds • Demonstrate an understanding of the need for mutual respect when viewpoints differ • Demonstrate an awareness of the expectations for social interactions in a variety of settings. **Responsible Decision-Making** • Develop, implement, and model effective problem-solving and critical thinking skills • Identify the consequences associated with one's actions in order to make constructive choices • Evaluate personal, ethical, safety, and civic impact of decisions	

Relationship Skills • Establish and maintain healthy relationships • Utilize positive communication and social skills to interact effectively with others	
Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
Formative Assessments: Teacher Observation Do Now Homework Class Participation Portfolio Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations Shop and classroom etiquette Housekeeping critique Completion of safety assignments Examine handouts in notebook for completeness and accuracy of information Project critique and evaluation at completion Observe proper care and use of tools, equipment, and materials	**Benchmarks:** Quiz Exam Apply an Engineering Design Process Develop and Test a Solution Improve a Design through Iteration Develop Skills in Graphically Representing Ideas **Summative Assessments:** Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations Maintain Anecdotal Records/Notetaking Teacher administered a general shop safety test on the topic discussed during that unit. Completed project Performance test on equipment or tool.
Differentiated Student Access to Content: **Teaching and Learning *Resources/Materials***	

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**
Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners Audio versions of texts for auditory learners or struggling readers Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for experiments Supplies for creative projects Building materials for engineering challenges	Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape Highlighted text Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs Individualized Options: Independent study options Compacting the curriculum for advanced learners Varied timelines or check-in points Choice of review activities	Keep material concept-focused and principle-driven. Allow the use of digital translation or grouping students together. Provide multiple means of action and expression.	Advanced Project Design: Encourage students to design complex, multi-functional furniture pieces Introduce CAD software for detailed project planning and 3D modeling Historical Carpentry Techniques: Study and practice traditional joinery methods Explore the evolution of woodworking tools and techniques Sustainable Woodworking: Research and implement eco-friendly materials and practices Design projects focused on upcycling and repurposing wood Interdisciplinary Projects: Collaborate with art or engineering classes for cross-curricular projects Incorporate math and physics principles in advanced structural designs Mentorship Programs: Partner gifted students with local master carpenters or furniture makers Encourage participation in apprenticeship programs or internships Advanced Machinery Training:

	ESL-Specific Resources: Bilingual dictionaries or glossaries Sentence frames and language scaffolds Visual supports for key vocabulary		Provide in-depth training on CNC routers and laser cutters Teach programming skills for automated woodworking machinery Entrepreneurship in Carpentry: Develop business plans for custom furniture or woodworking services Learn about marketing, pricing, and client relations in the carpentry industry Architectural Woodworking: Study advanced architectural elements like staircases and built-in cabinetry Collaborate on school improvement projects to apply skills in real-world settings

Supplemental Resources

Technology:

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector
- 3D printer
- 1 to 1 desktops
- Chromebooks
- SMART Board
- Edgebander
- CNC machine
- Woodworking machinery

Other:

-

Differentiated Student Access to Content: **Recommended *Strategies & Techniques***			
Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core**
Content Differentiation: Tiered content at different complexity levels Variety of textbooks at different reading levels Supplemental materials like videos, podcasts, and interactive modules Compacting curriculum for advanced learners Choice boards allowing students to select learning activities Varied resources/texts on the same topic Process Differentiation: Flexible grouping (whole group, small group, individual) Learning contracts tailored to student needs Interest centers focused on different aspects of a topic Varied instructional strategies (visual, auditory, kinesthetic)	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled readers at different reading levels Bilingual materials for ESL students Visual aids, infographics, and multimedia resources Process Differentiation: Flexible grouping based on readiness levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of assistive technology (text-to-speech, speech-to-text tools)	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners Leveled readers at different reading levels Bilingual materials and resources1 Visual aids, infographics, and multimedia resources Modified texts with rewording, reduced extraneous information, and added visuals Process Differentiation: Flexible grouping based on language proficiency levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of gestures and total physical response to support verbal instruction	Content Differentiation: Advanced, above-grade level textbooks and materials Supplementary resources on complex or specialized topics Interdisciplinary curriculum connecting multiple subject areas Primary source documents and advanced readings Access to college-level coursework or materials Process Differentiation: Accelerated pacing of instruction Independent study options on topics of interest Problem-based and project-based learning opportunities Socratic seminars and philosophical discussions Mentorship programs with experts in fields of interest

Scaffolded support like graphic organizers and writing frames Technology-enabled instruction (synchronous or asynchronous options) Product Differentiation: Multiple options for demonstrating learning (reports, presentations, models, etc.) Varied assessment methods based on student learning preferences Adjusting product expectations based on student readiness Learning Environment Differentiation: Flexible seating arrangements Options for individual, paired, or group work Varied time allocations for task completion Use of technology to support different learning needs	Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on IEP/504 goals Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time Learning Environment Differentiation: Flexible seating arrangements Quiet spaces for individual work Sensory tools or fidgets as needed Visual schedules and routines Specialized Supports Implementation of IEP accommodations and modifications ESL supports like sentence frames and vocabulary guides Interventions for at-risk students (e.g. reading interventions) Social-emotional learning supports Ongoing Assessment	Incorporation of students' native language or culture when possible Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on English proficiency levels Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time Learning Environment Differentiation: Flexible seating arrangements Use of learning centers or stations focused on different aspects of a topic Visual schedules and routines Incorporation of culturally relevant materials and examples Specialized Supports: ESL supports like sentence frames and vocabulary guides Use of students' native language for clarification when needed Frequent opportunities for speaking and listening practice	Product Differentiation: Open-ended, creative project options Real-world application of learning through authentic tasks Opportunities for original research and experimentation Multimedia presentations and publications Portfolio development to showcase depth of learning Learning Environment Differentiation: Flexible grouping with intellectual peers Access to advanced technology and lab equipment Field trips and off-campus learning experiences Online courses and virtual learning options Competitions and academic challenges Specialized Supports: Critical and creative thinking skill development

	Frequent formative assessments to monitor progress Data-driven adjustments to instruction Progress monitoring aligned with IEP goals	Integration of all four language skills (listening, speaking, reading, writing) Instructional Strategies: Slowing down speech and using clear enunciation Rephrasing and clarifying instructions Using visuals to support verbal instruction Providing content in multiple formats (visual, auditory, kinesthetic) Connecting content to students' interests and cultural backgrounds Utilizing music, melodies, or songs to enhance learning Ongoing Assessment: Frequent formative assessments to monitor progress Data-driven adjustments to instruction Accommodated assessments (e.g., simplified language, added visuals)	Training in research methods and academic writing Guidance on social-emotional needs of gifted learners College and career planning tailored to advanced learners Opportunities to explore passions and develop talents Instructional Strategies: Inquiry-based and discovery learning approaches Higher-order questioning techniques Abstract and complex problem-solving tasks Emphasis on depth and complexity of content Integration of multiple disciplines and perspectives Assessment Options: Pre-assessments to determine readiness levels Performance-based and authentic assessments Self-assessment and reflection opportunities Above-grade level standardized testing

			Credit by examination options

Work-Based Learning Experiences (WBL)- *Previously called Structured Learning Experience (SLE) ***Each course within a CTE program is now required to include at least one WBL each year.*** **Work-Based Learning: Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.**		
WBL Integration/Activity:	**Duration:**	**Brief description of activities:**
Career Fair	1-3 day Event	• Annual School wide Career Fairs with various presentation in the Architecture and Constructions fields
Guest Speakers	1-2 hour a couple times throughout the year	• Guest Speakers ie Andrew Campell from Eastern MIllwork, Associate Dean of Architecture John M. Cays, Stacy Kliesh. R.A. etc,,
Career Related Competitions	Throughout the marking period	• Service Learning & Career Related Competitions such as skills usa
Internships (Paid or non-paid)	Summer Internships	• Internship Opportunities i.e. (Summer Internships with Gilbane, Eastern Millwork, DPR construction, etc.)
Informational Interviews /Guest Speakers	1-3 day Event	• Annual STEAM Day
Pre- Apprenticeship	Summer long	• Apprenticeship programs with Eastern Millwork

Career Related Competitions	1-3 day Event	• SkillsUSA Competitions
Interactive/Hands-on Demonstrations with industry Professionals (online, in-person)	30-1hr per student throughout the year or one day	• (Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals
Simulated Workbased Experience	Afterschool year long	• Simulated Workbased Experience
WBL Partners:		
Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).		
CTSO:	**CTSO Advisor:**	
ACE Mentorship Program		ACE Mentor Program is an after-school program whose mission is to engage, excite and enlighten high school students to pursue careers in Architecture, Construction, and Engineering through mentoring and to support their continued advancement in the industry.

Freshman Level: Approximately 10 hours Career Awareness- brief exposure to a variety of work settings needs.	**Sophomore Level: Approximately 20 hours** Career Exploration- understand the nature of work through first-hand exposure to the workplace.	**Junior Level: Approximately 50 hours** Career Preparation - builds basic workplace competence	**Senior Level: Approximately 75 hours** Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.

Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksite visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)											
X	Amistad Law: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*	X	LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*		Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*		Standards in Action: *Climate Change*	X	Erin's Law: *A-769/S-1130*

Marking Period	Unit Title	Recommended Instructional Days
3 & 4	**Collaborative Design/ Fabrication Project**	**90**

CTE
Disciplinary Concept:
Design/Pre-Construction
Science, Technology, Engineering & Mathematics
Engineering & Technology
Science & Mathematics

Core Ideas and Performance Expectation:

Design/Pre-Construction
9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.
9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues
9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.

Science, Technology, Engineering & Mathematics
9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.
9.3.ST.6 Demonstrate technical skills needed in a chosen STEM field.

Engineering & Technology
9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.
9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.
9.3.ST-ET.4 Apply the elements of the design process.
9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.
9.3.ST-ET.6 Apply the knowledge learned in the study of STEM to provide solutions to human and societal problems in an ethical and legal manner.

Science & Mathematics

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities. 9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems. 9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.	
Life Literacy & Key Skills **Disciplinary Concept:** **Creativity and Innovation** **Critical Thinking and Problem Solving** **Technology Literacy**	
Core Ideas and Performance Expectation: **Creativity and Innovation** With a growth mindset, failure is an important part of success. 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a). . **Critical Thinking and Problem Solving** *Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.* 9.4.12.CT.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice). **Technology Literacy** *Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.* 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6.). 9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.	**Essential Question/s:** How does a production plan help to manage the fabrication process? What role do prototypes play in the manufacturing process? **Activity Description**: Unit 3 allows students the opportunity to apply the knowledge and skills acquired throughout the program of study through a collaborative project. This group will consist of not only students from Wood Technology but also students majoring in other CTE areas. Large scale projects inevitably come with their set of challenges and opportunities. Students will have to navigate through deadlines, set-backs and budget constraints. From the initial proposal through to development of the final product, students will be confronted with the same design and manufacturing processes followed by industry. **Interdisciplinary Connections:** MATH TECH SCI HIST **CLKS**

Career Awareness, Exploration, Preparation, & Training **Disciplinary Concept:** **Career Awareness and Planning**	Act as a responsible and contributing community member and employee. Attend to financial well-being. Consider the environmental, social and economic impacts of decisions. Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management. Plan education and career paths aligned to personal goals. Use technology to enhance productivity, increase collaboration, and communicate effectively. Work productively in teams while using cultural/global competence.
Core Ideas and Performance Expectation: **Career Awareness and Planning** *Career planning requires purposeful planning based on research, self-knowledge, and informed choices.* 9.2.12.CAP.4: Evaluate different careers and develop various plans (e.g., costs of public, private, training schools) and timetables for achieving them, including educational/training requirements, costs, loans, and debt repayment.	
Personal Financial Literacy **Disciplinary Concept:** **Planning and Budgeting**	
Core Ideas and Performance Expectation: **Planning and Budgeting** *A budget may need to be modified as an individual's career, financial goals (e.g., education, home ownership, retirement), and/or other life situations change.* 9.1.12.PB.5: Analyze how changes in taxes, inflation, and personal circumstances can affect a personal budget. *Money management requires understanding of cash flow systems and business practices.* 9.1.12.PB.6: Describe and calculate interest and fees that are applied to various forms of spending, debt and saving.	
Social and Emotional Learning: ***Competencies and Sub-Competencies***	
Self-Awareness • Recognize one's feelings and thoughts • Recognize the impact of one's feelings and thoughts on one's own behavior • Recognize one's personal traits, strengths, and limitations • Recognize the importance of self-confidence in handling daily tasks and challenges	

Self-Management • Understand and practice strategies for managing one's own emotions, thoughts, and behaviors • Recognize the skills needed to establish and achieve personal and educational goals • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals **Social Awareness** • Recognize and identify the thoughts, feelings, and perspectives of others • Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds • Demonstrate an understanding of the need for mutual respect when viewpoints differ • Demonstrate an awareness of the expectations for social interactions in a variety of settings. **Responsible Decision-Making** • Develop, implement, and model effective problem-solving and critical thinking skills • Identify the consequences associated with one's actions in order to make constructive choices • Evaluate personal, ethical, safety, and civic impact of decisions **Relationship Skills** • Establish and maintain healthy relationships • Utilize positive communication and social skills to interact effectively with others	
Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
Formative Assessments: Teacher Observation Do Now Homework Class Participation	**Benchmarks:** Quiz Exam **Summative Assessments:**

Portfolio Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations Examine handouts in notebook for completeness and accuracy of information Project critique and evaluation at completion Observe proper care and use of tools, equipment, and materials	Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations Teacher administered a general shop safety test on the topic discussed during that unit. Completed project Performance test on equipment or tool.
Technical Skill Assessments: License/Certification/CTE Assessment/ Industry Valued Credential/ Stackable Credential	**Name of Assessment(s):** **Type of Assessment(s):**

Differentiated Student Access to Content:
Teaching and Learning *Resources/Materials*

Core Resources	**Alternate Core Resources** *IEP/504/At-Risk/ESL*	**ELL Core Resources**	**Gifted & Talented Core Resources**
Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners Audio versions of texts for auditory	Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape	Keep material concept-focused and principle-driven. Allow the use of digital translation or grouping students together. Provide multiple means of action and expression.	Advanced Project Design: Encourage students to design complex, multi-functional furniture pieces Introduce CAD software for detailed project planning and 3D modeling Historical Carpentry Techniques: Study and practice traditional joinery methods Explore the evolution of woodworking tools and techniques

learners or struggling readers Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for experiments Art supplies for creative projects Building materials for engineering challenges	Highlighted text Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs Individualized Options: Independent study options Compacting the curriculum for advanced learners Varied timelines or check-in points Choice of review activities ESL-Specific Resources: Bilingual dictionaries or glossaries Sentence frames and language scaffolds Visual supports for key vocabulary		Sustainable Woodworking: Research and implement eco-friendly materials and practices Design projects focused on upcycling and repurposing wood Interdisciplinary Projects: Collaborate with art or engineering classes for cross-curricular projects Incorporate math and physics principles in advanced structural designs Mentorship Programs: Partner gifted students with local master carpenters or furniture makers Encourage participation in apprenticeship programs or internships Advanced Machinery Training: Provide in-depth training on CNC routers and laser cutters Teach programming skills for automated woodworking machinery Entrepreneurship in Carpentry: Develop business plans for custom furniture or woodworking services Learn about marketing, pricing, and client relations in the carpentry industry Architectural Woodworking: Study advanced architectural elements like staircases and built-in cabinetry

			Collaborate on school improvement projects to apply skills in real-world settings

Supplemental Resources

Technology:

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector
- 3D printer
- Edgebander
- CNC machine
- Woodworking machinery

Other:

-

Differentiated Student Access to Content:
Recommended *Strategies & Techniques*

Core Resources	**Alternate Core Resources *IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core**
Content Differentiation: Tiered content at different complexity levels Variety of textbooks at different reading levels Supplemental materials like videos, podcasts, and interactive modules	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled readers at different reading levels	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners Leveled readers at different reading levels	Content Differentiation: Advanced, above-grade level textbooks and materials Supplementary resources on complex or specialized topics Interdisciplinary curriculum connecting multiple subject areas

Compacting curriculum for advanced learners Choice boards allowing students to select learning activities Varied resources/texts on the same topic Process Differentiation: Flexible grouping (whole group, small group, individual) Learning contracts tailored to student needs Interest centers focused on different aspects of a topic Varied instructional strategies (visual, auditory, kinesthetic) Scaffolded support like graphic organizers and writing frames Technology-enabled instruction (synchronous or asynchronous options) Product Differentiation: Multiple options for demonstrating learning (reports, presentations, models, etc.) Varied assessment methods based on student learning preferences Adjusting product expectations based on student readiness Learning Environment Differentiation:	Bilingual materials for ESL students Visual aids, infographics, and multimedia resources Process Differentiation: Flexible grouping based on readiness levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of assistive technology (text-to-speech, speech-to-text tools) Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on IEP/504 goals Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time Learning Environment Differentiation:	Bilingual materials and resources1 Visual aids, infographics, and multimedia resources Modified texts with rewording, reduced extraneous information, and added visuals Process Differentiation: Flexible grouping based on language proficiency levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of gestures and total physical response to support verbal instruction Incorporation of students' native language or culture when possible Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on English proficiency levels Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time	Primary source documents and advanced readings Access to college-level coursework or materials Process Differentiation: Accelerated pacing of instruction Independent study options on topics of interest Problem-based and project-based learning opportunities Socratic seminars and philosophical discussions Mentorship programs with experts in fields of interest Product Differentiation: Open-ended, creative project options Real-world application of learning through authentic tasks Opportunities for original research and experimentation Multimedia presentations and publications Portfolio development to showcase depth of learning Learning Environment Differentiation:

Flexible seating arrangements Options for individual, paired, or group work Varied time allocations for task completion Use of technology to support different learning needs	Flexible seating arrangements Quiet spaces for individual work Sensory tools or fidgets as needed Visual schedules and routines Specialized Supports Implementation of IEP accommodations and modifications ESL supports like sentence frames and vocabulary guides Interventions for at-risk students (e.g. reading interventions) Social-emotional learning supports Ongoing Assessment Frequent formative assessments to monitor progress Data-driven adjustments to instruction Progress monitoring aligned with IEP goals	Learning Environment Differentiation: Flexible seating arrangements Use of learning centers or stations focused on different aspects of a topic Visual schedules and routines Incorporation of culturally relevant materials and examples Specialized Supports: ESL supports like sentence frames and vocabulary guides Use of students' native language for clarification when needed Frequent opportunities for speaking and listening practice Integration of all four language skills (listening, speaking, reading, writing) Instructional Strategies: Slowing down speech and using clear enunciation Rephrasing and clarifying instructions Using visuals to support verbal instruction Providing content in multiple formats (visual, auditory, kinesthetic) Connecting content to students' interests and cultural backgrounds	Flexible grouping with intellectual peers Access to advanced technology and lab equipment Field trips and off-campus learning experiences Online courses and virtual learning options Competitions and academic challenges Specialized Supports: Critical and creative thinking skill development Training in research methods and academic writing Guidance on social-emotional needs of gifted learners College and career planning tailored to advanced learners Opportunities to explore passions and develop talents Instructional Strategies: Inquiry-based and discovery learning approaches Higher-order questioning techniques Abstract and complex problem-solving tasks

		Utilizing music, melodies, or songs to enhance learning Ongoing Assessment: Frequent formative assessments to monitor progress Data-driven adjustments to instruction Accommodated assessments (e.g., simplified language, added visuals)	Emphasis on depth and complexity of content Integration of multiple disciplines and perspectives Assessment Options: Pre-assessments to determine readiness levels Performance-based and authentic assessments Self-assessment and reflection opportunities Above-grade level standardized testing Credit by examination options

Work-Based Learning Experiences (WBL)- *Previously called Structured Learning Experience (SLE)

Each course within a CTE program is now required to include at least one WBL each year.

Work-Based Learning: Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.

WBL Integration/Activity:	Duration:	Brief description of activities:
Career Fair	1-3 day Event	• Annual School wide Career Fairs with various presentation in the Architecture and Constructions fields

Guest Speakers	1-2 hour a couple times throughout the year	• Guest Speakers ie Andrew Campell from Eastern MIllwork, Associate Dean of Architecture John M. Cays, Stacy Kliesh. R.A. etc,,
Career Related Competitions	Throughout the Marking Period	• Service Learning & Career Related Competitions such as skills usa
Internships (Paid or non-paid)	Summer Internships	• Internship Opportunities i.e. (Summer Internships with Gilbane, Eastern Millwork, DPR construction, etc.)
Informational Interviews /Guest Speakers	1-3 day Event	• Annual STEAM Day
Pre- Apprenticeship	Summer long	• Apprenticeship programs with Eastern Millwork
Career Related Competitions	1-3 day Event	• SkillsUSA Competitions
Interactive/Hands-on Demonstrations with industry Professionals (online, in-person)	30-1hr per student throughout the year or one day	• (Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals
Simulated Workbased Experience	Afterschool year long	• Simulated Workbased Experience
WBL Partners:		
Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).		
CTSO:	**CTSO Advisor:**	

ACE Mentorship Program		ACE Mentor Program is an after-school program whose mission is to engage, excite and enlighten high school students to pursue careers in Architecture, Construction, and Engineering through mentoring and to support their continued advancement in the industry.

Freshman Level: Approximately 10 hours Career Awareness- brief exposure to a variety of work settings needs.	**Sophomore Level: Approximately 20 hours** Career Exploration- understand the nature of work through first-hand exposure to the workplace.	**Junior Level: Approximately 50 hours** Career Preparation - builds basic workplace competence	**Senior Level: Approximately 75 hours** Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.
Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksite visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship

New Jersey Legislative Statutes and Administrative Code
(place an “X” before each law/statute if/when present within the curriculum map)

	Amistad Law: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*		Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*	X	Standards in Action: *Climate Change*		Erin's Law: *A-769/S-1130*

Marking Period	Unit Title	Recommended Instructional Days
4	**Assembly and Installation**	45

CTE
Disciplinary Concept:
Design/Pre-Construction
Science, Technology, Engineering & Mathematics
Engineering & Technology
Science & Mathematics

Core Ideas and Performance Expectation:

Design/Pre-Construction
9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.
9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues
9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.

Science, Technology, Engineering & Mathematics
9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.
9.3.ST.6 Demonstrate technical skills needed in a chosen STEM field.

Engineering & Technology
9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.
9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.
9.3.ST-ET.4 Apply the elements of the design process.
9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.
9.3.ST-ET.6 Apply the knowledge learned in the study of STEM to provide solutions to human and societal problems in an ethical and legal manner.

Science & Mathematics

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities. 9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems. 9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.	
Life Literacy & Key Skills **Disciplinary Concept:** **Creativity and Innovation** **Critical Thinking and Problem Solving** **Technology Literacy**	
Core Ideas and Performance Expectation: **Creativity and Innovation** *With a growth mindset, failure is an important part of success.* 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a). **Critical Thinking and Problem Solving** *Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.* 9.4.12.CT.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice). **Technology Literacy** *Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.* 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6.). 9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.	**Essential Question/s:** How can installation time be minimized during the initial design process? What are various ways to deal with inconsistencies in the field? How were carpentry skills used in concentration camps? How can our understanding of plumbing mathematics and science be enhanced by considering the contributions and needs of LGBT individuals and people with disabilities in the field? **Activity Description**: Once produced, cabinets and millwork must be installed on site. This requires specific techniques to minimize time, costs, and to ensure a successful final outcome. Unit 4 introduces to the many factors to be considered during installation including leveling, shoring, clearances and on-site modifications due to unforeseen variables. This will provide an opportunity to consider the relationship between a product's design, manufacturing and final installation. Discuss how carpentry skills were used in concentration camps, highlighting the resilience of prisoners who used their craft under extreme conditions Discuss the contributions of LGBT individuals and people with disabilities to plumbing mathematics and science theory.

Career Awareness, Exploration, Preparation, & Training
Disciplinary Concept:
Career Awareness and Planning

Core Ideas and Performance Expectation:

Career Awareness and Planning
There are strategies to improve one's professional value and marketability.
9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs.
9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth

Personal Financial Literacy
Disciplinary Concept:
Planning and Budgeting
Financial Institutions

Planning and Budgeting
A budget may need to be modified as an individual's career, financial goals (e.g., education, home ownership, retirement), and/or other life situations change.
9.1.12.PB.5: Analyze how changes in taxes, inflation, and personal circumstances can affect a personal budget.

Money management requires understanding of cash flow systems and business practices.
9.1.12.PB.6: Describe and calculate interest and fees that are applied to various forms of spending, debt and saving.

Financial Institutions
There are factors you can use to select financial institutions and professionals that are best suited for your needs.
9.1.12.FI.3: Develop a plan that uses the services of various financial institutions to prepare for long term personal and family goals (e.g., college, retirement).

Interdisciplinary Connections:
Math
ELA
SCI
HIST

CLKS
Act as a Responsible and contributing Citizen and Employee
Apply Appropriate Academic and Technical Skills
Attend to Personal Health and Financial Well-Being
Communicate Clearly, Effectively and with Reason
Consider the Environmental, Social and Economic Impacts of Decisions
Demonstrate creativity and innovation
Employ valid and reliable research strategies
Utilize critical Thinking to make sense of problems and persevere in solving them
Model Integrity, ethical leadership and effective management
Plan education and career path aligned to personal goals
Use technology to enhance productivity
Work productively in teams while using cultural/ global competence

Social and Emotional Learning: ***Competencies and Sub-Competencies***	
Self-Awareness • Recognize one's feelings and thoughts • Recognize the impact of one's feelings and thoughts on one's own behavior • Recognize one's personal traits, strengths, and limitations • Recognize the importance of self-confidence in handling daily tasks and challenges **Self-Management** • Understand and practice strategies for managing one's own emotions, thoughts, and behaviors • Recognize the skills needed to establish and achieve personal and educational goals • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals **Social Awareness** • Recognize and identify the thoughts, feelings, and perspectives of others • Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds • Demonstrate an understanding of the need for mutual respect when viewpoints differ • Demonstrate an awareness of the expectations for social interactions in a variety of settings **Responsible Decision-Making** • Develop, implement, and model effective problem-solving and critical thinking skills • Identify the consequences associated with one's actions in order to make constructive choices • Evaluate personal, ethical, safety, and civic impact of decisions	

Relationship Skills • Establish and maintain healthy relationships • Utilize positive communication and social skills to interact effectively with others	
Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
Formative Assessments: Teacher Observation Do Now Homework Class Participation Portfolio Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations Reverse Engineering Documentation Examine handouts in notebook for completeness and accuracy of information Project critique and evaluation at completion Observe proper care and use of tools, equipment, and materials	**Benchmarks:** Quiz Exam **Summative Assessments:** Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations Teacher administered a general shop safety test on the topic discussed during that unit. Completed project Performance test on equipment or tool.
Technical Skill Assessments: ***License/Certification/CTE Assessment/ Industry Valued Credential / Stackable Credential***	**Name of Assessment(s):** **Type of Assessment(s):**
Differentiated Student Access to Content: **Teaching and Learning *Resources/Materials***	

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**
Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners Audio versions of texts for auditory learners or struggling readers Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for experiments Art supplies for creative projects Building materials for engineering challenges	Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape Highlighted text Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs Individualized Options: Independent study options Compacting the curriculum for advanced learners Varied timelines or check-in points Choice of review activities	Keep material concept-focused and principle-driven. Allow the use of digital translation or grouping students together. Provide multiple means of action and expression.	Advanced Project Design: Encourage students to design complex, multi-functional furniture pieces Introduce CAD software for detailed project planning and 3D modeling Historical Carpentry Techniques: Study and practice traditional joinery methods Explore the evolution of woodworking tools and techniques Sustainable Woodworking: Research and implement eco-friendly materials and practices Design projects focused on upcycling and repurposing wood Interdisciplinary Projects: Collaborate with art or engineering classes for cross-curricular projects Incorporate math and physics principles in advanced structural designs Mentorship Programs: Partner gifted students with local master carpenters or furniture makers Encourage participation in apprenticeship programs or internships Advanced Machinery Training:

	ESL-Specific Resources: Bilingual dictionaries or glossaries Sentence frames and language scaffolds Visual supports for key vocabulary		Provide in-depth training on CNC routers and laser cutters Teach programming skills for automated woodworking machinery Entrepreneurship in Carpentry: Develop business plans for custom furniture or woodworking services Learn about marketing, pricing, and client relations in the carpentry industry Architectural Woodworking: Study advanced architectural elements like staircases and built-in cabinetry Collaborate on school improvement projects to apply skills in real-world settings

Supplemental Resources

Technology:

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector
- 3D printer
- Edgebander
- CNC machine
- Woodworking machinery

Differentiated Student Access to Content:
Recommended *Strategies & Techniques*

Core Resources	Alternate Core Resources	ELL Core Resources	Gifted & Talented Core

	IEP/504/At-Risk/ESL		
Content Differentiation: Tiered content at different complexity levels Variety of textbooks at different reading levels Supplemental materials like videos, podcasts, and interactive modules Compacting curriculum for advanced learners Choice boards allowing students to select learning activities Varied resources/texts on the same topic Process Differentiation: Flexible grouping (whole group, small group, individual) Learning contracts tailored to student needs Interest centers focused on different aspects of a topic Varied instructional strategies (visual, auditory, kinesthetic) Scaffolded support like graphic organizers and writing frames Technology-enabled instruction (synchronous or asynchronous options)	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled readers at different reading levels Bilingual materials for ESL students Visual aids, infographics, and multimedia resources Process Differentiation: Flexible grouping based on readiness levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of assistive technology (text-to-speech, speech-to-text tools) Product Differentiation:	Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners Leveled readers at different reading levels Bilingual materials and resources1 Visual aids, infographics, and multimedia resources Modified texts with rewording, reduced extraneous information, and added visuals Process Differentiation: Flexible grouping based on language proficiency levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of gestures and total physical response to support verbal instruction Incorporation of students' native language or culture when possible Product Differentiation:	Content Differentiation: Advanced, above-grade level textbooks and materials Supplementary resources on complex or specialized topics Interdisciplinary curriculum connecting multiple subject areas Primary source documents and advanced readings Access to college-level coursework or materials Process Differentiation: Accelerated pacing of instruction Independent study options on topics of interest Problem-based and project-based learning opportunities Socratic seminars and philosophical discussions Mentorship programs with experts in fields of interest Product Differentiation: Open-ended, creative project options

Product Differentiation: Multiple options for demonstrating learning (reports, presentations, models, etc.) Varied assessment methods based on student learning preferences Adjusting product expectations based on student readiness Learning Environment Differentiation: Flexible seating arrangements Options for individual, paired, or group work Varied time allocations for task completion Use of technology to support different learning needs	Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on IEP/504 goals Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time Learning Environment Differentiation: Flexible seating arrangements Quiet spaces for individual work Sensory tools or fidgets as needed Visual schedules and routines Specialized Supports Implementation of IEP accommodations and modifications ESL supports like sentence frames and vocabulary guides Interventions for at-risk students (e.g. reading interventions) Social-emotional learning supports Ongoing Assessment	Multiple options for demonstrating learning (oral presentations, projects, etc.) Adjusted expectations based on English proficiency levels Alternative assessments aligned with student abilities Use of portfolios to showcase progress over time Learning Environment Differentiation: Flexible seating arrangements Use of learning centers or stations focused on different aspects of a topic Visual schedules and routines Incorporation of culturally relevant materials and examples Specialized Supports: ESL supports like sentence frames and vocabulary guides Use of students' native language for clarification when needed Frequent opportunities for speaking and listening practice Integration of all four language skills (listening, speaking, reading, writing) Instructional Strategies:	Real-world application of learning through authentic tasks Opportunities for original research and experimentation Multimedia presentations and publications Portfolio development to showcase depth of learning Learning Environment Differentiation: Flexible grouping with intellectual peers Access to advanced technology and lab equipment Field trips and off-campus learning experiences Online courses and virtual learning options Competitions and academic challenges Specialized Supports: Critical and creative thinking skill development Training in research methods and academic writing Guidance on social-emotional needs of gifted learners

	Frequent formative assessments to monitor progress Data-driven adjustments to instruction Progress monitoring aligned with IEP goals	Slowing down speech and using clear enunciation Rephrasing and clarifying instructions Using visuals to support verbal instruction Providing content in multiple formats (visual, auditory, kinesthetic) Connecting content to students' interests and cultural backgrounds Utilizing music, melodies, or songs to enhance learning Ongoing Assessment: Frequent formative assessments to monitor progress Data-driven adjustments to instruction Accommodated assessments (e.g., simplified language, added visuals)	College and career planning tailored to advanced learners Opportunities to explore passions and develop talents Instructional Strategies: Inquiry-based and discovery learning approaches Higher-order questioning techniques Abstract and complex problem-solving tasks Emphasis on depth and complexity of content Integration of multiple disciplines and perspectives Assessment Options: Pre-assessments to determine readiness levels Performance-based and authentic assessments Self-assessment and reflection opportunities Above-grade level standardized testing Credit by examination options

Work-Based Learning Experiences (WBL)- *Previously called Structured Learning Experience (SLE) ***Each course within a CTE program is now required to include at least one WBL each year.*** **Work-Based Learning: Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.**		
WBL Integration/Activity:	**Duration:**	**Brief description of activities:**
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Pre- Apprenticeship	Summer long	• Apprenticeship programs with Eastern Millwork
Career Related Competitions	1-3 day Event	• SkillsUSA Competitions
Interactive/Hands-on Demonstrations with industry	30-1hr per student throughout the year or one day	• (Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals

Professionals (online, in-person)		
Simulated Workbased Experience	Afterschool year long	• Simulated Workbased Experience
WBL Partners:		
Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).		
CTSO:	**CTSO Advisor:**	
ACE Mentorship Program		ACE Mentor Program is an after-school program whose mission is to engage, excite and enlighten high school students to pursue careers in Architecture, Construction, and Engineering through mentoring and to support their continued advancement in the industry.

Freshman Level: Approximately 10 hours	**Sophomore Level: Approximately 20 hours**	**Junior Level: Approximately 50 hours**	**Senior Level: Approximately 75 hours**
Career Awareness- brief exposure to a variety of work settings needs.	Career Exploration- understand the nature of work through first-hand exposure to the workplace.	Career Preparation - builds basic workplace competence	Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.

Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksite visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)											
	Amistad Law: *N.J.S.A. 18A 52:16A-88*	X	Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*	X	Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*		Standards in Action: *Climate Change*		Erin's Law: *A-769/S-1130*