Unit 11: Climate Change Interdisciplinary Curriculum Units

Content Area: **Social Studies**
Course(s):
Time Period:
Length:
Status: **Not Published**

Summary of the Unit

In this 7th grade climate change curriculum unit, students will explore the causes, impacts and solutions through the lens of advocacy in research. Students will study the industrial revolution and how our past political leaders have impacted the environment we live in today, they will analyze data, then will research a current environmental issue and will write a letter to a government official expressing their concerns. This unit will take around 2-3 weeks. The interdisciplinary approach combines historical perspectives with environmental science to deepen students' understanding of climate change and empower them to become advocates within their society.

Enduring Understandings

- Climate change has played a critical role in shaping the development of societies, economies, and policies in US history.
- Historical responses to climate-related challenges can inform current and future strategies to mitigate the effects of climate change.
- The interaction between human activity and the environment has long-term consequences, and understanding these interactions is essential for sustainable development.
- The study of past climate events reveals patterns that can help predict and prepare for future climate challenges.
- Policy decisions influenced by historical climate events can have far-reaching social, economic, and political effects that continue to impact society today.
- The relationship between climate and migration is a key factor in understanding population shifts and cultural changes in US history.
- The evolution of environmental thought and policy reflects changing societal values and scientific understanding over time.

Essential Questions

1. How have significant climate events influenced the course of US history?
2. What were the social, economic, and political impacts of climate-related events in the past?
3. How have different communities and governments historically responded to climate challenges?
4. What lessons can we learn from history to guide our response to current and future climate issues?

Summative Assessment and/or Summative Criteria

Industrial Revolution Introduction Lesson- Do now's, exit tickets, research of inventions worksheet- 2 days
Industrial Revolution Research Project - 2 days
Greta Thumberg- Research and Discussion– 1 day
Climate Change Advocacy Project- 5 days

Resources

Oncourse classroom

Google docs

Google slides

Primary sources

Secondary sources

Stanford historical charts

Achieve3000

Discovery Ed

Belouga

BrainPop

Unit Plan

Topic/Selection Timeframe	General Objectives	Instructional Activities	Benchmarks/Assessments
Introduction to Climate Change	Identify and analyze key climate events in US history and their effects on society, economy, and politics. Develop critical thinking skills by	Students will engage in a "Four Corners" Climate Change opinion activity. The teachers will read some statements, and students will assess their opinions using "Strongly Agree", "Agree", "Disagree",	Quiz and test assessments Check for understands Worksheets Completion of daily assignments Verbal and Written Responses to Lesson Questioning - quality and quantity of responses

	analyzing primary and secondary sources related to historical climate events. Students will explore the relationship between the Industrial Revolution and environmental changes, focusing on how industrialization contributed to climate change.	and Strongly Disagree to different statements. After, students can play a Climate Change Meet & Greet Activity, where they are assigned different climate profiles and will use a set of climate questions to interview each other. They also will engage in Group discussions, real world research, exit tickets, instructional videos, worksheets, and textbook materials, Achieve3000, Discovery Ed, Belouga	Presentations Interviews Self-Evaluations Peer Evaluations
General Elections	Understand about current climate issues and how they affect current elections on the local, state, and federal level Connect historical climate events to contemporary issues of climate change. Articulate informed opinions on the role of historical knowledge in shaping current climate policies.	Group discussions, real world research, exit tickets, instructional videos, worksheets, researching and formulating opinions, Achieve3000, Discovery Ed, Belouga. Students will be looking at current event issues that are directly affected local, state, and federal elections. They will be watching news clips of candidates speaking about these issues, and formulate their own opinions through the use of research and data.	Quiz and test assessments Check for understands Worksheets Completion of daily assignments Verbal and Written Responses to Lesson Questioning - quality and quantity of responses Presentations Interviews Self-Evaluations Peer Evaluations
Westward Expansion	Students will examine how climate conditions, such as harsh winters and droughts, influenced westward expansion and settlement patterns in the 19th century.	Students will create a timeline of key events during westward expansion, noting how climate challenges affected pioneers and settlers. Group discussions, real world research, exit tickets, instructional videos, worksheets, and textbook materials,	Quiz and test assessments Check for understands Worksheets Completion of daily assignments Verbal and Written Responses to Lesson Questioning - quality and quantity of responses

	Articulate informed opinions on the role of historical knowledge in shaping current climate policies.	Achieve3000, Discovery Ed, Belouga.	Presentations Interviews Self-Evaluations Peer Evaluations
Noteworthy Environmentalists	Identify and analyze climate change activists and how they changed the world. Helping students learn about advocacy and their rights Evaluate historical responses to climate challenges and their long-term consequences.	Students ilAnalyzing quotes from noteworthy environmentalists and their life goals. Analyzing their work in a small and large group setting, Achieve3000, Discovery Ed, Belouga.	Discussion posts Quiz and test assessments Check for understands Worksheets Completion of daily assignments Verbal and Written Responses to Lesson Questioning - quality and quantity of responses Presentations Interviews Self-Evaluations Peer Evaluations
Industrial Revolution	To understand, identify, and analyze what the industrial revolution was and how it has affected the climate almost 200 years later Identify and analyze key climate events in US history and their effects on society, economy, and politics.	Group discussions, real world research, exit tickets, instructional videos, worksheets, and textbook materials, Achieve3000, Discovery Ed, Belouga. Students will be able to engage in a gallery walk activity to analyze the impacts of the industrial revolution with guided questions selected from Stanford's Historical Education group. Sources include pictures, graphs, quotes, artwork, etc. Students will research the environmental impact of industrial	Quiz and test assessments Check for understands Worksheets Completion of daily assignments Verbal and Written Responses to Lesson Questioning - quality and quantity of responses Presentations Interviews Self-Evaluations Peer Evaluations

		activities in major US cities during the 19th and early 20th centuries. They will present their findings in a report that includes both the positive and negative effects of industrialization on the environment.	
Advocacy Project	Identify and formulate opinions based on the year long climate change unit curriculum. Students will be able to advocate for issues they are passionate about. Develop critical thinking skills by analyzing primary and secondary sources related to historical climate events.	Analyzing issues throughout the year, formulating opinions with peers, advocating for something you believe in, videos, worksheets, Achieve3000, Discovery Ed, Belouga. Students will be writing a letter to an elected official advocating for an issue on climate change that they are passionate about.	Quiz and test assessments Check for understands Worksheets Completion of daily assignments Verbal and Written Responses to Lesson Questioning quality and quantity of responses- Writing a letter to an elected official on an issue Presentations Interviews Self-Evaluations Peer Evaluations

Standards

- 6.3.8.EconET.2: Assess the impact of government incentives and disincentives on the economy (e.g., patents, protection of private property, taxes)
- 6.2.8.GeoHE.4.b: Use geographic models to determine the impact of environmental modifications made by earlier civilizations on the current day environmental challenges.
- 6.3.8.CivicsPR.4: Use evidence and quantitative data to propose or defend a public policy related to climate change.

SOC.6.2.8.GeoHE.4.b	Use geographic models to determine the impact of environmental modifications made by earlier civilizations on the current day environmental challenges.
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SOC.6.3.8.EconET.2	Assess the impact of government incentives and disincentives on the economy (e.g., patents, protection of private property, taxes).

Suggested Modifications for Special Education, ELL and Gifted Students

Special Education Students: *

- Collaboration between Content Education and Special Education teachers
- Preferential seating
- Printed and highlighted notes
- Modified test/quizzes/worksheets/written assignments
- Repetition of directions and refocus activities
- Read test/quiz/assessment questions orally if needed
- Allow for more time on assessments and assignments

MLL/ELL Students:

- Collaboration between Content Education and MLL/ELL teachers
- Use of audio tapes when applicable
- Use of translation dictionary when applicable
- Provide for oral performance
- Allow use of computer or other technological device
- Highlight notes
- Use of graphic organizers
- Peer liaison
- Visual aids
- Provide materials in multiple languages or at varying levels of English proficiency.
- Use visuals (e.g., diagrams, pictures) to support understanding.
- Pre-teach key vocabulary and concepts.
- Allow for alternative forms of communication (e.g., drawing, gestures).
- Provide opportunities for peer collaboration and language practice.

Gifted Students:

- Provide more elaborate, complex, and in-depth study of major ideas and themes that integrate knowledge within and across the curriculum
- Provide other outside sources (media, content, community) for further study that are thematic in nature
- Promote self-directed and self-initiated learning
- Allow for the development of productive thinking skills to allow students to generate new knowledge
- Provide opportunities for independent research and exploration.
- Encourage critical thinking and problem-solving skills.
- Allow for student-led projects and presentations.
- Provide opportunities for leadership and mentorship in group activities.

*Consistent with individual plans, when appropriate.

Suggested Technological Innovations/Use

Interactive Maps and GIS Tools (Google Earth)- Shows historical climate data and visualizes changes over time.

Climate Change Models- Introduce simple climate models or predictions to help students understand future impacts and compare them with historical data. Tools like NASA's Climate Time Machine can show how the climate has changed what future changes look like.

C-ROADS-Simulations that model the effects of climate change. Students will be able to compare and contrast past data to today's.

TECH.9.4.8.CI.1	Assess data gathered on varying perspectives on causes of climate change (e.g., cross-cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions (e.g., RI.7.9, 6.SP.B.5, 7.1.NH.IPERS.6, 8.2.8.ETW.4). Gathering and evaluating knowledge and information from a variety of sources, including global perspectives, fosters creativity and innovative thinking.

Cross Curricular/Career Readiness, Life Literacies and Key Skills Practice

TECH.9.4.8.CI.1	Assess data gathered on varying perspectives on causes of climate change (e.g., cross-cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions (e.g., RI.7.9, 6.SP.B.5, 7.1.NH.IPERS.6, 8.2.8.ETW.4).
TECH.9.4.8.CI.3	Examine challenges that may exist in the adoption of new ideas (e.g., 2.1.8.SSH, 6.1.8.CivicsPD.2).
TECH.9.4.8.CI.4	Explore the role of creativity and innovation in career pathways and industries.
TECH.9.4.8.CT.2	Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).
TECH.9.4.8.CT.3	Compare past problem-solving solutions to local, national, or global issues and analyze the factors that led to a positive or negative outcome.
TECH.9.4.8.DC.7	Collaborate within a digital community to create a digital artifact using strategies such as crowdsourcing or digital surveys.
TECH.9.4.8.IML.14	Analyze the role of media in delivering cultural, political, and other societal messages. Digital tools make it possible to analyze and interpret data, including text, images, and sound. These tools allow for broad concepts and data to be more effectively communicated.

UDL Framework

In this climate change unit designed using the UDL framework, students will first encounter clear and attainable outcomes that highlight the significance of understanding climate change's impact on the environment and society. Their diverse needs, backgrounds, strengths, and barriers will be anticipated, ensuring that all students can access and engage with the material. They will experience instructional activities tailored to include various means of representation, expression, and engagement, such as multimedia presentations, interactive simulations, and group discussions.

Students will have multiple ways to demonstrate their understanding through projects, presentations, and written reflections as part of the assessment plan. Lastly, ongoing reflection and adaptation will ensure that instructional strategies remain effective, inclusive, and aligned with students' needs and the overall learning goals.