Climate Change - The Thingamabob Game: A simulation on capitalism vs. the climate

Content Area: **Social Studies**
Course(s):
Time Period: **January**
Length: **2 days**
Status: **Published**

Unit Overview

The premise of this activity is that an economic system driven by the profit motive inevitably collides with the health of the planet in general, and with climate stability in particular. The Thingamabob Game helps students grasp the essential relationship between climate and capitalism. How we think about solving the climate crisis depends, in large part, on what we think is causing it. In the Thingamabob Game, small groups of students represent competing manufacturers of "thingamabobs"—goods that, as in the real world, require natural resources to produce and whose production creates greenhouse gases, especially carbon dioxide. In the game, as in the real world, the more we consume and produce, the more carbon dioxide is released into the atmosphere, and the more we put at risk life on Earth.

Enduring Understandings

- Climate is regulated by complex interactions among components of the Earth system.
- Human activities are impacting the climate system.
- Humans have the power to change the environment more than any other living thing.
- Our decisions and actions matter; they have social, environmental, economic, and political consequences.
- The capitalist market has no built-in alarm system to protect the Earth.
- A profit-oriented economic system is incompatible with climate stability and environmental responsibility.

Essential Questions

- What is capitalism?
- How has capitalism affected climate change?
- What actions can we take now to reduce the risk posed by changing climate conditions and sea level rise?
- How does consumer ideology in a capitalist society result in the overproduction and overconsumption of goods?
- How do capitalist modes of production contribute to climate change?

Instructional Strategies & Learning Activities

See lesson plan attached

https://www.zinnedproject.org/wp-content/uploads/2019/03/APCE_thingamabob-game-simulation-on-capitalism-climate-activity.pdf

Integration of Career Readiness, Life Literacies and Key Skills

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.CT.1	Evaluate diverse solutions proposed by a variety of individuals, organizations, and/or agencies to a local or global problem, such as climate change, and use critical thinking skills to predict which one(s) are likely to be effective (e.g., MS-ETS1-2).
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.IML.14	Analyze the role of media in delivering cultural, political, and other societal messages.
	Gathering and evaluating knowledge and information from a variety of sources, including global perspectives, fosters creativity and innovative thinking.
	Some digital tools are appropriate for gathering, organizing, analyzing, and presenting information, while other types of digital tools are appropriate for creating text, visualizations, models, and communicating with others.

Technology Integration

CS.6-8.8.2.8.EC.1	Explain ethical issues that may arise from the use of new technologies.
CS.6-8.8.2.8.EC.2	Examine the effects of ethical and unethical practices in product design and development.
CS.6-8.8.2.8.ETW.4	Compare the environmental effects of two alternative technologies devised to address climate change issues and use data to justify which choice is best.
CS.6-8.8.2.8.ITH.2	Compare how technologies have influenced society over time.
CS.6-8.8.2.8.ITH.3	Evaluate the impact of sustainability on the development of a designed product or system.
	Resources need to be utilized wisely to have positive effects on the environment and society. Some technological decisions involve trade-offs between environmental and

	economic needs, while others have positive effects for both the economy and environment. Technology interacts with society, sometimes bringing about changes in a society's economy, politics, and culture, and often leading to the creation of new needs and wants. New needs and wants may create strains on local economies and workforces. Improvements in technology are intended to make the completion of tasks easier, safer, and/or more efficient.

Interdisciplinary Connections

LA.W.8.1	Write arguments to support claims with clear reasons and relevant evidence.
LA.W.8.1.B	Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
LA.W.8.2.D	Use precise language and domain-specific vocabulary to inform about or explain the topic.
LA.SL.8.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.
LA.SL.8.1.D	Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

- **Definitions of Differentiation Components**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

Differentiation occurring in this unit:

Modifications & Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

Modifications and Accommodations used in this unit:

Benchmark Assessments

Benchmark Assessments are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

Schoolwide Benchmark assessments:

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

Additional Benchmarks used in this unit:

Formative Assessments

- ssessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

  Formative Assessments used in this unit:

- completed role play sheet
- small group discussion questions:

1. Describe what went on in your group. What pressures did you feel?
2. What prevented you from being more ecologically oriented?
3. How does the game resemble real life? What was unrealistic about the game?
4. Is the game "rigged"? Could the rules be changed in ways that would not lead to climate ruin?
5. Invent a new set of rules for the "game" that would not lead to environmental destruction. What different behaviors could be rewarded?
6. What, if anything, they could have done that would have led to a more positive outcome?

Summative Assessments

Summative assessments evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

Summative assessments for this unit:

Reflection journal prompts- students will react to the following take-aways:

- Human beings are inherently greedy and competitive. People will never be able to cooperate to solve the climate crisis. It's human nature.
- What's missing from this game is a government. To keep corporations' greed in check, we need a strong government that enacts and enforces regulations on carbon dioxide emissions.
- The cause of the climate crisis is the capitalist system itself. So long as we have an economic system driven by profit, corporations will be rewarded for endangering the planet. If we want to deal with the roots of the climate crisis we need to create an economic system that does not reward greed.

Instructional Materials

1. Copies of the Thingamabob Game Role Sheet; one for each student.

2. Five Thingamabob Production Round slips per group.

3. Several candy bars or other desirable food products. (See the Thingamabob Game Role Sheet for the exact number you could end up needing.)

Standards

SOC.6.3.8.CivicsPR.4	Use evidence and quantitative data to propose or defend a public policy related to climate change.