



Climate Change: Who Creates It? Who Feels It?

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Setting the Stage

Climate change has, in large part, been caused by the most industrialized and wealthy nations emitting carbon dioxide into the atmosphere. However, the greatest impacts are often felt by communities and nations that have done the least to cause the problem and have few resources available to respond.

Lesson Overview

In this lesson, students will play a game to consider the disparity between climate change causes and impacts. The game will be followed by a short presentation by the teacher and a class discussion.

Instructional Overview	
Grade Level	Elementary school
Instructional Time	One class period (50 min.)
Driving Question	Who is responsible for climate change and which groups and communities most feel its effects?
Standards	National Standards for Civics and Government and Common Core ELA standards included, see the "Standards" section at the end of this lesson for details.
Concepts	<ol style="list-style-type: none"> 1. The wealthiest 10% of people on earth create about 50% of global emissions. 2. The people most impacted by climate change are often those who have done the least to cause it.
Outcomes	<ol style="list-style-type: none"> 1. Students can identify which groups are most responsible for greenhouse gas emissions. 2. Students can describe which income levels are most impacted by climate change and why.



Materials and preparation	<ul style="list-style-type: none"> ❑ Create 100 pieces of “emissions” (trash/crumpled pieces of paper). ❑ Find slides here: https://docs.google.com/presentation/d/1TiT4_Kofy01-ciBk07hb8vQtsTkWarj4odXEdEKEWc8/edit?usp=sharing
Vocabulary	<p><u>GDP</u>- Gross Domestic Product- How much money a country makes in a year.</p> <p><u>GDP per capita</u>- How much money each person makes in a country each year.</p> <p><u>Emissions</u>- The release of climate change-causing pollutants into the atmosphere.</p> <p><u>Climate change</u>- (United Nations Definition) - Long-term shifts in temperatures and weather patterns.</p>
DEI/human rights connections	This lesson focuses on equity and climate change by looking at climate impacts and responsibilities.

Activities:

Time	Activity 1: Pollute The Class		
5-10 Minutes	Create 100 pieces of “emissions” (trash/crumpled pieces of paper). Distribute 50 pieces of emission to the “Haves” people and 50 to the “Haves Not” people.		
	Number of Kids In Class	# of “Haves” People	# of “Haves Not” People
	10	1	9
	20	2	18
	30	3	27



	<p>Once “Emissions” have been distributed, allow students 2 minutes to make as big of a mess as they can.</p> <p>Engage- This activity serves to get students interested through a game in which they get to make a mess in the classroom.</p>
10 Minutes	<p style="text-align: center;">Debrief Activity 1</p> <p>Gather the class in a circle. Pass around two questions.</p> <ol style="list-style-type: none"> 1. How did we all contribute to the mess? 2. How do you feel about the mess in the classroom? What were your contributions? <p>Explore- In this debrief, teachers facilitate discussion to allow student exploration of the situation rather than providing answers about the goals of the activity.</p>
2 Minutes	<p style="text-align: center;">Activity 2: Clean the Class</p> <p>Tell the students the goal is to clean up all the pieces of trash in 10 seconds.</p>
10 Minutes	<p style="text-align: center;">Debrief Activity 1</p> <p>Gather the class in a circle. Pass around two questions.</p> <ol style="list-style-type: none"> 1. How did having to clean up the entire mess make you feel? 2. Did we have enough time to clean up the mess? 3. Who should have been responsible for cleaning up the mess? <p>Explore- Similar to the first debrief, teachers facilitate discussion to allow student exploration of the situation rather than providing answers about the goals of the activity.</p>
10 Minutes	<p>Provide students information and discuss the questions in the slides: https://docs.google.com/presentation/d/1TiT4_Kofy01-ciBk07hb8vQtsTkWarj4odXEdEKEWc8/edit?usp=sharing</p> <p>Explain- Use the slides to explain and discuss the connection between the game and to climate change.</p>
10 Minutes	<p style="text-align: center;">Reflection: Metaphor Matching</p> <p>After presenting the information to students, gather in a circle and talk</p>



	<p>about what each part of the lesson represents, ask them to figure out each part of the metaphor.</p> <ul style="list-style-type: none"> • The 2 kids who got 50 pieces of “emissions” were the 10% of the population that creates emissions. • The 18 kids who shared 50 pieces of “emissions” were the 90% of the population • The 2 minutes of mess time represents the years post industrial revolution. • The 10 seconds of clean-up represents how much time humans have started thinking about trying to fix climate change. • Everyone felt the mess = Everyone feels the impacts of climate change. <p>Closing Question</p> <ul style="list-style-type: none"> • What needs to change about the current system to make climate change feel more equitable (fair) for everyone? • Consider bringing in this article regarding rich countries agreeing to pay for “loss and damages” caused by their emissions- https://www.nytimes.com/2022/11/19/climate/un-climate-damage-co-p27.html . Is this the right solution, why or not? <p>Evaluate- Use discussion for informal evaluation</p>
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Standards:

Common Core ELA State Standards:

Speaking and Listening Standards, Grade 5- 4. Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

National Standards for Civics and Government:

NSS-C.5-8.4 Other Nations and World Affairs Questions

- What is the Relationship of the United States to Other Nations and to World Affairs?
- How is the world organized politically?
- How has the United States influenced other nations and how have other nations influenced American politics and society?