

Clean Air Inquiry

Action Citizen Lesson

Compelling Question: What actions can youth take to protect the environment?

<p>C3 Framework Indicators</p>	<p>MIDDLE SCHOOL</p> <ul style="list-style-type: none"> • D4.6.6-8: Draw on multiple disciplinary lenses to analyze how a specific problem can manifest itself at local, regional, and global levels over time, identifying its characteristics and causes, and the challenges and opportunities faced by those trying to address the problem. • D4.7.6-8: Assess their individual and collective capacities to take action to address local, regional, and global problems, taking into account a range of possible levers of power, strategies, and potential outcomes. <p>HIGH SCHOOL</p> <ul style="list-style-type: none"> • D4.6.9-12: Use disciplinary and interdisciplinary lenses to understand the characteristics and causes of local, regional, and global problems; instances of such problems in multiple contexts; and challenges and opportunities faced by those trying to address these problems overtime and place. • D4.7.9-12: Assess options for individual and collective action to address local, regional, and global problems by engaging in self-reflection, strategy identification, and complex causal reasoning.
<p>Staging the Compelling Question</p>	<p>Students will examine before and after pictures of smog in Los Angeles from 1968 to 2005. As students examine the images, have them write notes to the following sentence stems: I see..., I think..., I wonder..., I predict... Afterwards, have students share their thoughts in a think-pair-share method.</p>

Lesson Overview

<p>This inquiry is designed for one class period and leads students to learn about historical examples of activism against air pollution in the U.S. By examining the compelling question “What actions are citizens taking to ensure their air is clean?” students examine the conditions of air pollution, its effects on society, and actions to promote clean air initiatives in the past. This lesson can be supplementary to a unit on the aftermath of the Industrial Revolution. It also can be used alongside the Clean Air module in the Action Citizen game.</p> <p>The lesson begins with students examining a before and after picture of smog in Los Angeles, California. This will introduce students to imagining how life would be without laws to protect clean air. After, students will learn about the effects of air pollution with human health and climate change. Next, students investigate historical examples of different individuals/groups who took action</p>	<p>to protect clean air and the conditions of the time. The lesson concludes with a class discussion on takeaways and considerations of other types of activism that can be initiated. The formative performance task requires students to create a summative evidence-based list answering the compelling question.</p> <p>An extension activity in this lesson allows students to research the air quality in their community. Student can further research the causes, effects, and activism taken against polluted air in their area. Students can use this information to create an infographic, write a letter to a government official, or interview a local activist to bring further awareness to these issues.</p> <p>Materials needed: Chromebook/iPad, pencil/pen Note: Please click embedded links to access online materials.</p>
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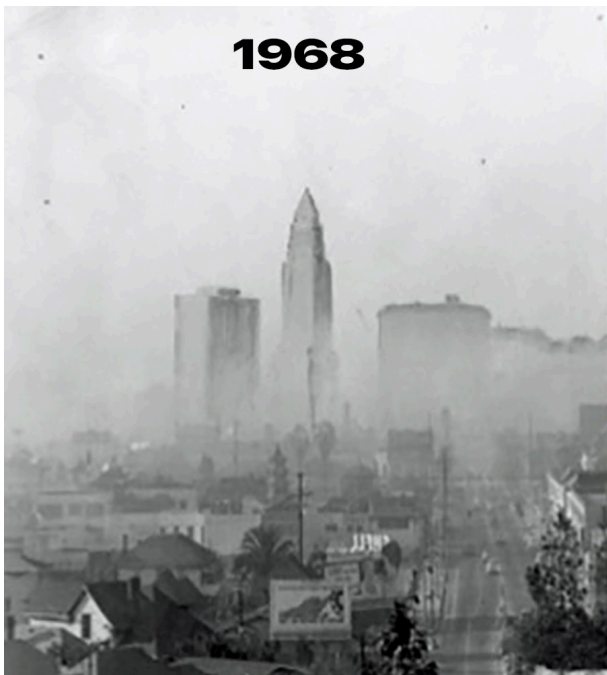
Procedures:

1. As an introduction and hook to today's inquiry, have students examine before and after pictures of smog in Los Angeles, California from 1968 to 2005. As students examine the images, have them write notes to the following sentence stems: I see..., I think..., I wonder..., I predict... Afterwards, have students share their thoughts in a think-pair-share method with one another and the class.
2. Introduce today's compelling question: "What actions are citizens taking to ensure their air is clean?" Inform students that today we will be examining historical examples of ways that citizens have advocated for cleaner air and why it matters.
3. Direct students to the source "The Terrible 10: Air Pollution's Top 10 Health Risks" written by the American Lung Association. As students navigate the fact sheet, have them respond to the following questions:
 - a. What are the ill effects of air pollution?
 - b. How does it impact children?
 - c. What surprised you the most?
4. Show students the video "Air Pollution 101" produced by National Geographic. Afterwards, have them discuss the following questions as a class.
 - a. What contributes to air pollution?
 - b. How does air pollution contribute to climate change?
 - c. What are the effects of climate change?
 - d. What actions are people taking to reduce air pollution?
5. Following the video discussion, have them think-pair-share ways in which they currently are contributing to air pollution in their daily routines.
6. Distribute to students the **Historical Activism for Clean Air Handout**. Inform them that they will be investigating historical examples of actions that citizens took to speak out against air pollution and find solutions. Direct students to click the embedded links in the handout to find information to complete the corresponding rows. Students can work individually, in pairs, or in small groups on the assignment.
7. After students have completed the handout, come back together as a class, and ask them the following questions:
 - a. Which example resonated the most to you and why?
 - b. What are other ways people can bring attention to important issues?
8. As an exit ticket, using information from today's videos and handout, have students list three to five facts to answer the compelling question.
9. Extension idea: Students can research the air quality in their local area using the EPA Mapper by typing in their community's zip code. Encourage students to analyze the causes of air pollution in their area, its effects, and people actions to improve the conditions of their community. Students could create an infographic of their findings, write a letter to a government official, or interview local activists protesting air pollution in their community.



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Picture of air pollution in Los Angeles in 1968, before the Clean Air Act was passed in 1970, and after in 2005.

<https://www.co.mendocino.ca.us/aqmd/district-rules-and-regulations.html>

Primary Source Questions

I see...

I think...

I wonder...

I predict...

Historical Activism for Clean Air Handout

Directions: Please click the link that corresponds to each row. As you read the contents in each link, also examine the photographs and newspaper clippings. Please take notes in the corresponding columns responding to the questions.

	What factors were causing the air pollution?	How was the community suffering?	What individuals or groups of people acted against air pollution?	What actions did they take? What was their impact?
Cincinnati Smoke Ordinance, 1881				
Smog in Early Los Angeles				
Indianapolis Smoke Abatement Association				