

Climate Change Mysteries

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1. Question & Research Task

Earth's climate changes. Although there is debate over what causes climate change, scientists agree climate has changed and continues to change over time.

- How do we know that climate change is happening?
- How do we study climate change?
- What evidence supports that human activities affect climate change?
- What can we do to address climate change?



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In this Slam Dunk, you will conduct brief, focused research to respond to the inquiry question:

What evidence can we use to support the claim that human activities are contributing to climate change within the last 100 years?

2. Information Sources

Choose several of the information sources linked below to complete the Student Activity on Slide 3.

- [What is Climate Change?](#) video
- [Climate Change Indicators in the USA](#) text
- [Climate Time Machine](#) interactives
- [Causes of Global Climate Change](#) text
- [Human Activity & Climate Change](#) video
- [Evidence of Global Temperature Change](#)
- [EPA Climate Forcing](#) (look at Figures 1 & 2)
- [Energy Changes Make Things Happen](#)
- [What if there were 1 trillion more trees?](#) TedEd video
- [Underwater Farms vs. Climate Change](#) TedEd Video



3. Student Activity

Create an organizer that describes how human activities are contributing to climate change with in the last 100 years.

Be sure to address the following questions in your organizer:

1. How do we know that climate change is happening?
2. How do we study climate change?
3. What evidence supports that human activities affect climate change?
4. What can we do to address climate change?



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Organizers can be created using charts created on paper or digital tools such as Google Docs/Slides, Jamboard, or another digital tool suggested by your teacher.

4. Assessment Activity

What evidence can we use to support the claim that human activities are contributing to the climate change with in the last 100 years?

Work in a group of 2 or 3 to create an original Paper Slide Video (PSV) that addresses these questions:

1. How do we know that climate change is happening?
2. How do we study climate change?
3. What evidence supports that human activities affect climate change?
4. What can we do to address climate change?

Your teacher will show [this video](#) so you can learn how to create a PSV. Your group may use the [Paper Slide Video Storyboard](#) to plan out your PSV. Use [this rubric](#) to check your work.

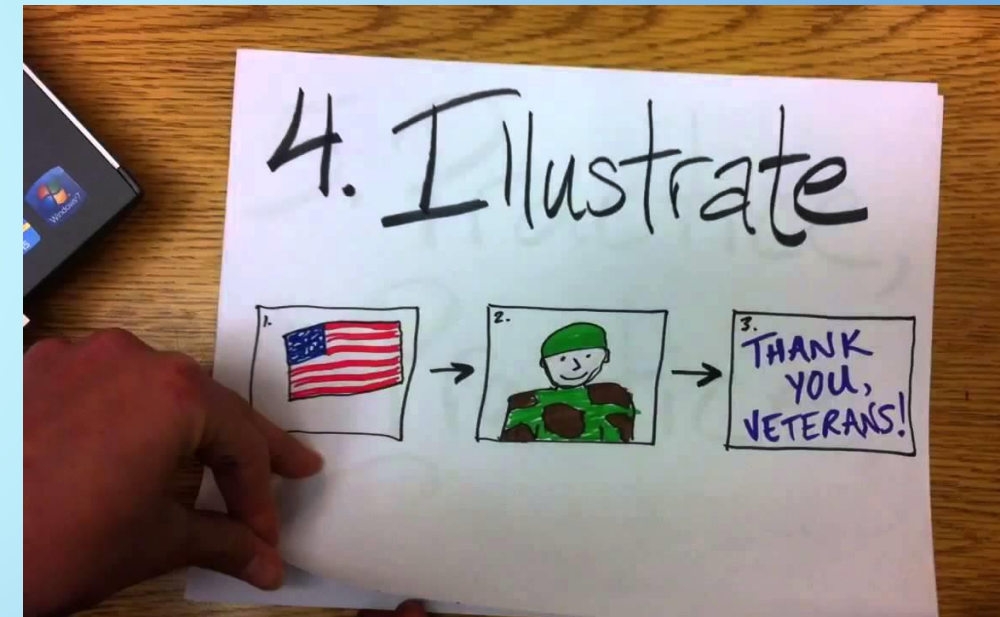


Image Source: YouTube

5. Enrichment Activities

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Extend your learning about climate change and the causes. What can we do to protect our environment?

- [Greenhouse Effect](#) BrainPOP video
- [A Breathing Planet Off Balance](#) infographic
- [Can Animals Adapt to Climate Change?](#) TedEd video
- [How the Yurok People are Combating Climate Change](#) video

6. Teacher Resources

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Learning Standards Alignment

Content Learning Standards Next Generation Science Standards

MS-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

Common Core State Standards for English Language Arts & Literacy

Reading: 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

Writing: 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

AASL Standards Framework for Learners Inquire: Build new knowledge by inquiring, thinking critically, identifying problems, and developing strategies for solving problems.

Think: Learners display curiosity and initiative by:

I.A.2 Recalling prior and background knowledge as context for new meaning.

Create: Learners engage with new knowledge by following a process that includes:

I.B.1 Using evidence to investigate questions. I.B.3 Generating products that illustrate learning.

Share: Learners adapt, communicate, and exchange learning products with others in a cycle that includes:

I.C.1 Interacting with content presented by others.

Grow: Learners participate in an ongoing inquiry-based process by:

I.D.2 Engaging in sustained inquiry.

P21 Framework: 21st Century Student Outcomes

3. Information, Media & Technology Skills: Information Literacy: Access information efficiently and effectively; Use information accurately and creatively for the issue or problem at hand.

ICT Literacy: Use technology as a tool to research, organize, evaluate and communicate information.

Grade 8 Science

Objective: Students will be conduct brief, focused research in order to examine evidence that supports the claim that human activities are contributing to climate change within the last 100 years.

Time Frame: 3-4 hours

Differentiation strategies for this lesson:

- Have students use learning supports provided in BCPS Digital Content found in the [Apps Portal](#). Refer to [Digital Content Snapshot/Support pages](#) as needed.

Notes to the teacher:

- Collaborate with your school library media specialist to plan and implement this lesson.
- Provide students with login information as needed to authenticate BCPS Digital Content. Login information is available on the **BCPS Digital Content** page found via the [Apps Portal](#)

Last updated: July 2022 Use this form to [Report Broken Links](#)

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