



HOW CLIMATE CHANGE IMPACTS THE NATURAL WORLD

Explore how climate change is impacting weather and the environment.

Grade Level: 6-12 | Duration: 1-2 class periods

Students Will Be Able To:

- Describe the effects of climate change on the environment
- Illustrate changes in plant growing seasons due to climate change
- Research and articulate how climate change impacts animal migration patterns

Materials Needed:

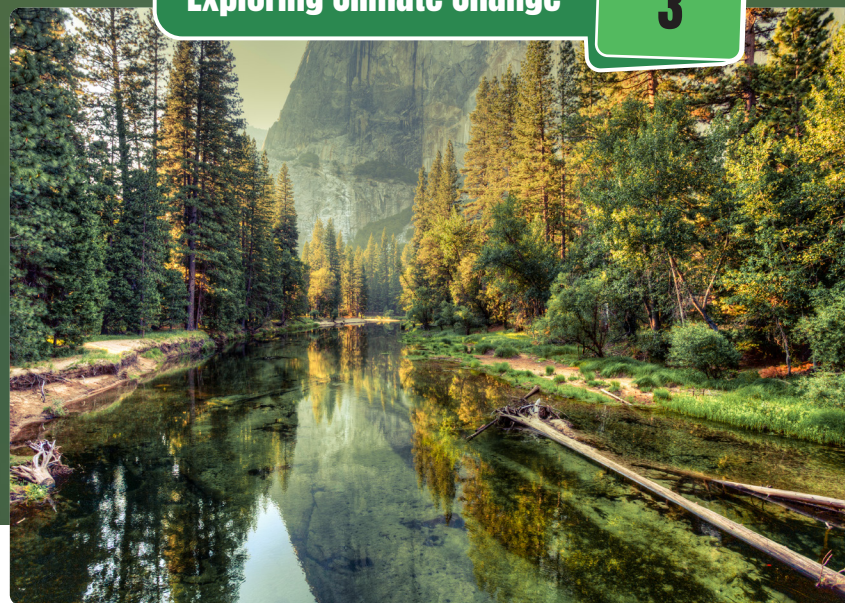
- Paper
- Pencils or pens
- Poster/bulletin board paper
- Markers
- Discussion cards
- Climate Change Awareness Campaign worksheet

In the Teachers Guide

- Climate Change and Extreme Weather
- Rising Sea Levels and Melting Ice
- Phenology and Climate Change
- Animal Migration and Climate Change

Exploring Climate Change

LESSON
3



RESOURCES

Articles

- [Researchers Can Now Explain How Climate Change Is Affecting Your Weather](#)
- [Climate Change Indicators: Weather and Climate](#)
- [Climate Change: Global Sea Level](#)
- [Seasonality and Climate Change: A Review of Observed Evidence in the United States](#)
- [The Early Blooms of Spring: How Climate Change Impacts Growing Seasons and You](#)
- [Find a Budburst Species](#)
- [Phenology Visualization Tool](#)

Videos

- [What Is Phenology?](#)
- [How Is Climate Change Fueling More Intense Storms?](#)

HOW CLIMATE CHANGE IMPACTS THE NATURAL WORLD

Explore how climate change is impacting weather and the environment.

1 ENGAGE:

1. Introduce the topic of the effect of climate change on weather and the environment by discussing subjects like flooding, seasonal patterns, and species migration.
2. Watch the video "How Is Climate Change Fueling More Intense Storms?" and read "Researchers Can Now Explain How Climate Change Is Affecting Your Weather."
3. Ask students essential questions:
Can you provide some examples of how climate change impacts weather?
Have you personally experienced an extreme weather event?
What recent weather events have been impacted by climate change?

2 EXPLORE:

1. Have students skim the report "Seasonality and Climate Change: A Review of Observed Evidence in the United States." It's a large report, but students should be able to easily find and review the main areas.
2. Hand out the Climate Change Awareness Campaign worksheet. Share as a group.

3 EXPLAIN:

1. Review climate change indicators.
2. Discuss how climate change influences these indicators.
3. Talk to students about why it's important to predict future weather patterns and examine potential environmental impacts.



Use the discussion cards to further conversations.

4 ELABORATE:

1. Talk about how to bring awareness to the correlation between climate change and extreme weather.
2. Hand out the worksheet Climate Change Awareness Campaign. Students can work in pairs or in small groups to create messaging on a topic of their choice.
3. Have students create posters based on their messaging and then take turns sharing their posters with the class. If possible, build on these messages in future lessons and projects.



Use the Climate Change Awareness Campaign worksheet to guide message creation.

5 EVALUATE:

1. Have students individually or in groups research a plant species (e.g., Find a Budburst Species) or animal species in North America to explore how that plant or animal could be impacted by climate change over time.
2. Think about recent weather events that affected your community. Can you identify any that you believe are linked to climate change? Explain your reasoning.
3. Have students share their findings and thoughts in a class discussion.

CLOSURE OR EXIT TICKET:

Reflect on this lesson about how climate change impacts the natural world. Think about these questions:

1. What are some different ways weather can have an impact on the environment?
2. Think about recent weather events. Can you name any that you believe are linked to climate change? Explain your reasoning.

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Discussion Cards: Use these questions to prompt discussions and encourage students to think critically about climate change and its implications.



How does climate change influence extreme weather events?



What are some potential impacts of extreme weather events on the environment?



What elements convey a strong message when creating an educational poster?



Why is melting land ice more significant for sea level rise compared to melting sea ice?



What are the consequences of rising sea levels?



How does climate change affect the timing and duration of seasonal events?



Why is phenology important for understanding the effects of climate change?



How might climate change influence the migration of animals?

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Discussion Cards: Use these questions to prompt discussions and encourage students to think critically about climate change and its implications.



Can you identify any animal species that are currently experiencing shifts in their habitat ranges due to climate change?



What are the advantages and disadvantages associated with animal migration in response to climate change?



How might human activities contribute to climate change?



What can we do to help stop climate change?



How can communities prepare for and adapt to the impacts of climate change?



How can individuals reduce their carbon footprint?



Are there any technologies or innovations that could help slow the effects of climate change?



What are some potential economic impacts of climate change?

CLIMATE CHANGE AWARENESS CAMPAIGN WORKSHEET

Objective: Raise awareness about the connection between climate change and extreme weather.

Directions: Fill out the sections on the right to help gather information and ideas for your poster.

Name: _____

Date: _____

Created in partnership with scientists and educators.
Teachers may make copies of this for school and classroom use.

1. Understanding Climate Change

What is climate change?
Write a brief definition of climate change.

2. Extreme Weather Events

List three types of extreme weather events impacted by climate change:

1. _____
2. _____
3. _____

4. Visual and Message Planning

Think of a catchy headline or message for your poster:

Draw a rough sketch or describe the visual elements you want to include:

3. Research and Facts

Choose one extreme weather event from your list and research its connection to climate change. Write down three key takeaways.

Extreme Weather Event:

1. _____
2. _____
3. _____

5. Call to Action

What can people do to help mitigate the effects of climate change? List two actions:

1. _____

2. _____
