

Conservation in the Classroom

Supplemental Material Packet



HOW CLIMATE CHANGE AFFECTS US AND NATURE, AND WHAT WE CAN DO ABOUT IT

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Teacher guide containing optional discussion questions, helpful resources, and quiz key

HOW CLIMATE CHANGE AFFECTS US AND NATURE, AND WHAT WE CAN DO ABOUT IT Student Warm-Up

Get ready to watch the Conservation in the Classroom event by reading and brainstorming about the topic with the questions below.

Read: How the climate crisis could impact our future

By burning fossil fuels and destroying nature, we are emitting greenhouse emissions into the atmosphere which is changing the climate system at unprecedented levels in thousands to millions of years. Current warming of 1.1°C above preindustrial temperatures (about 150 years ago) is causing widespread disruption to our ecosystems and our communities, from rising sea levels, melting icecaps to more severe and frequent extreme weather like heatwaves, droughts, fires, floods, and storms. These extremes have driven mass tree mortalities, loss of coral reefs, and hundreds of local species extinctions. They have also made our cities hotter, destabilized our food supply, and put our health and wellbeing in danger. Depending on our actions, the threats from climate change could be multiple times higher in twenty years than what we experience today.

But there is hope because we can turn this problem around! There are solutions available now that can cut emissions and help us adapt to climate change. In addition to switching to renewable energy, other key solutions include protecting and restoring ecosystems, avoiding food waste, and eating healthy and sustainable foods. We all have a role to play: we know the steps that governments, businesses, and all of us must take to stop climate change below 1.5°C.

(Source: <u>WWF; IPCC</u>)

What is the main idea behind this reading? Summarize in 1-2 sentences:

Think About It:

Name three effects of climate change that impact both humans and wildlife.

1.	
2.	
3.	

Define:

Humans can **mitigate** climate change by reducing our dependence on fossil fuels, protecting forests, and using renewable energy sources. We can **adapt** to climate change by planting resilient crops, building houses that can withstand flooding, and creating early warning systems to notify people of major storms.

Using these examples, do your best to define these vocabulary words.

Mitigation:		
Adaptation: _		

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Student Wrap-Up

Answer the following quiz questions and prompts to show what you've learned after watching the Conservation in the Classroom event.

1) Which of the following are impacts of climate change?

- a. Rising sea levels
- b. More extreme weather events like hurricanes and heat waves
- c. Decreasing biodiversity
- d. All of the above

Decide if each action helps to **mitigate** climate change or helps humans or wildlife **adapt** to climate change. Write M for mitigation and A for adaptation.

2) _____ Turning off lights when you leave a room or switching to energy-efficient bulbs like LEDs

3) _____ Animals that migrate further towards the poles if their habitats become too warm

4) _____ Restoring mangroves and wetlands because they protect coastlines from hurricanes and storms

5) _____ Plants that have evolved to be more tolerant to droughts in areas that are becoming drier

6) _____ Passing laws that limit the amount of greenhouse gases that factories and powerplants can emit

7) We can reduce our carbon footprint by wasting less food. How does food waste contribute to climate change?

8) Name two ways that you can reduce your carbon footprint at school or at home.

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9) Circle True / False. Climate change is a big problem, but everyone can make a difference.

Explain your answer: ______

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Teacher Guide

Use the discussion questions to further enhance student comprehension following the event viewing. For additional information on climate change, please reference the list of articles, videos, and teaching materials in the additional resources section. Also included is the answer key to the student wrap-up quiz on the previous page.

Discussion Questions

- What are some effects of climate change that we can already see in our world?
- Have you heard any references to climate change in the news lately? What have you heard?
- What is the difference between mitigation and adaptation? Which one should we prioritize right now?
- What are some actions that humans can take individually to fight climate change?
- What are some actions that we can take if we work together?

Additional Resources

- Activity (science, grades 3-5): Climate Trackers
- Activity (science, grades 6-12): Climate Change and Biodiversity
- Activity (science grades 5-8): Good Carbon Behavior
- Toolkit: Food Waste Warriors
- Kahoot!: <u>Climate Change course</u>
- Infographic: <u>Climate Risks: 1.5° C vs 2° C Global Warming</u>
- Podcast: Climate Change is Fueling a Season of Extreme Heat, Wildfires, and Floods
- Web page: <u>What's the difference between climate change mitigation and adaptation?</u>
- Web page: What record-high ocean temperatures could mean for marine life and people
- Web page: <u>How the climate crisis could impact our future</u>
- Video: <u>5 ways to show your love for our planet</u>

Student Wrap-Up Answer Key

- 1. D
- 2. Mitigation
- 3. Adaptation
- 4. Adaptation
- 5. Adaptation
- 6. Mitigation

7. Energy is used for the production, processing, and transportation of food so when we waste food, we're also wasting energy. By reducing food waste, we'd also be reducing the greenhouses gases produced by the burning of fossil fuels for energy, as well as those greenhouse gases produced by food in landfills.

- 8. Answers will vary.
- 9. True. Answers will vary.