

What's Up with Climate Change? Learning Lab Teachers Guide (grades 4-5)

Prepare Before Your Upcoming Field Trip

Thank you for joining us for the “What’s Up with Climate Change?” field trip! Below are some supplemental activities to continue the classroom conversation around the climate. These activities outlined below will help students develop a well-rounded understanding of our climate as well as current challenges and modern solutions.

Optional Classroom Discussion Prompts

- What is ‘climate’ and why is it important?
- What is the difference between climate and weather?
- How does climate change affect the environment, including people and animals?
- What are some ways we as individuals can help combat climate change?
- Can you think of any changes you’ve noticed in the weather where you live? How might these changes be related to climate change?
- Why is it important for everyone to work together to address climate change?
- How do you feel when you think about climate change? Does it inspire you to take any sort of action? How can we manage our emotional response to climate change?
 - [Climate Mental Health Resources for Teachers](#)

Useful Videos Exploring Climate and Climate Change

- [Weather vs Climate](#) [4 min] (*Crash Course Kids*)
- [Climate Change - The Environment for Kids](#) [5 min] (*Smile and Learn*)
- [Causes and Effects of Climate Change | National Geographic](#) [3 min] (*National Geographic*)
- [Earth Science Basics: Sea Level Rise - NASA](#) [3 min] (*NASA*)

Optional Online Resources to Introduce Climate Prior to Program

- [Understanding the Greenhouse Effect, Jar Activity, and Printables](#) (*KidMinds.com*)
- [Fundamental Concepts of Climate](#) (*Climate Literacy and Energy Awareness Network*)



Supplemental Activities & Resources

Dig Deeper and Keep Exploring After Your Field Trip!

Post Program Activities

1. Connecting with Special Places in Nature

[Connecting with Special Places in Nature Activity Guide](#)

Learning Objectives:

- Students will be able to appreciate the parts of nature that are special and important to them.
- Students will be able to develop tools to process the anxiety, fear, and grief that come with learning about climate change.
- Students will be able to check in with their own mental health following difficult conversations regarding climate and climate change.

Educational Standards:

- [5-LS2.A](#): Ecosystems: Interacts, Energy, Dynamics. Interdependent relationships in ecosystems
- [5-ESS1](#): Earth exists in a unique and delicate universal position and the support of life on Earth is dependent on this position

2. Sea Level Rise

[Information about Sea Level Rise](#)

[Animated Video about Sea Level Rise](#)

[Glaciers Then and Now Activity](#)

Learning Objectives:

- Students will be able to understand and discuss the basic causes and effects of sea level rise.
- Students will be able to discuss the threats of sea level rise to coastal populations.
- Students will be able to identify that most of the freshwater on Earth is stored in ice.

Educational Standards:

- [5-LS2.A](#): Ecosystems: Interacts, Energy, Dynamics. Interdependent relationships in ecosystems
- [5-ESS1](#): Earth exists in a unique and delicate universal position and the support of life on Earth is dependent on this position
- [5-ESS2.C](#): Nearly all of Earth's freshwater is in glaciers or underground

3. What Makes Cities So Hot?

[Urban Heat Island Video](#)

[What Makes Cities So Hot Activity](#)

Learning Objectives:

- Students can understand the basic concepts that cause urban areas to trap heat.
- Students can brainstorm ideas to mitigate the effects of the urban heat island phenomenon utilizing their new knowledge and creativity.

Educational Standards:

- [5-ESS3.C](#): Human activities in agriculture, industry, and everyday life have had major effects on land, vegetation, streams, etc. But individuals and communities are doing things to help protect Earth's resources and natural environments.
-

TEACHING ABOUT CLIMATE - RESOURCES

Online Resources

- [Weather vs Climate](#) [4 min] (*CrashCourse*)
- [Climate Change - The Environment for Kids](#) [5 min] (*Smile and Learn English*)
- [NOAA Climate Change Preliminary Reading Resources](#) (NOAA)
- [Climate Teaching Strategies](#) (*Climate Literacy and Energy Awareness Network*)
- [Guidance in Climate Literacy](#) (*Climate Literacy and Energy Awareness Network*)
- [Fundamental Concepts: Connecting Elementary Science Topics to Climate](#) (*Climate Literacy and Energy Awareness Network*)
- [The Essential Principles of Climate Literacy](#) (NOAA)