

EXTERNAL RESOURCES

INTRODUCTION TO CLIMATE CHANGE AND THE GREENHOUSE EFFECT



- **What is climate change?**

This page, a part of NASA’s Climate Kids website, gives an overview of climate change: what it is, the difference between weather and climate, how much the climate is changing, and what causes it.

- **What is the greenhouse effect?**

Another part of NASA’s Climate Kids, this page uses text, diagrams, and video to explain what the greenhouse effect is, how it works, how humans impact the greenhouse effect, and what reduces the greenhouse effect.

- **Meet the Greenhouse Gases!**

Carbon dioxide is the most “famous” greenhouse gas. But there are actually several other gases that contribute to the greenhouse effect. NASA’s Climate Kids gives students the opportunity to “meet” the greenhouse gases by clicking on fact cards that reveal information about each greenhouse gas.

- **How do we know the climate is changing?**

A question that frequently arises when discussing climate change, is “How do we know that it’s happening?” NASA’s Climate Kids explains scientific evidence that shows how we know that the climate is changing. This page includes images, animations, and links to other sources of evidence to help describe this phenomena.

- **Climate Change Basics: A video**

If your preferred medium of introducing new concepts is video, this is the resource for you. In under 3 minutes, this video, which was produced by the U.S. Environmental Protection Agency (EPA), provides an introduction to climate change.

- **The Greenhouse Effect: A video**

This EPA video dives into the concept of the greenhouse effect, explaining how it works using student-friendly narration and graphics.

GENERAL CLIMATE CHANGE EDUCATION RESOURCES



- **Climate Literacy & Education Awareness Network (CLEAN)**

The CLEAN collection includes over 700 resources about climate and energy topics that have been rigorously peer-reviewed by educators and scientists.

- **Alliance for Climate Education**

The Alliance for Climate Education is a nonprofit that educates young people on the science of climate change and empowers them to take action through advocacy training, an expansive youth action network, and education initiatives. One such initiative, which is linked here, is a climate change video series called Our Climate Our Future. These videos cover everything from climate change causes to solutions. Watch the series as one contiguous video or in short 2-6 minute chapters.

- **Climate Generation**

Climate Generation is a nonprofit that offers free climate change curricula for grades 3-12, opportunities to network with other teachers dedicated to teaching climate change, professional development, and avenues for student action around climate issues.

- **EPA**

The EPA has archived a suite of free lesson plans about climate change. These lessons are hands-on, interactive, and have students work with real data from tree rings, ice cores, and more to explore climate change phenomena. From the link provided, you can also access other EPA materials that are designed to teach students about climate change.

- **NASA**

In addition to their Climate Kids website, NASA has other climate change resources for students and educators, which are listed here, alongside other reputable sources of climate change education activities.

- **NOAA**

NOAA has an entire section of its website devoted to teaching climate change. Here you'll find a variety of resources to teach climate literacy, including visuals, experiments, and interactive tools.

- **The Teachers' Guide to Cranky Uncle**

Cranky Uncle is a game that helps cultivate critical thinking skills to identify and fight misinformation about climate change and other topics. The Teachers' Guide to Cranky Uncle explains how teachers can use the Cranky Uncle game with their students. The guide explains five different misinformation tactics, outlines how the game works, and provides activity suggestions for the classroom.