

Lesson Plan

Climate Change: Mitigation

Length

one 45 minute period

Grade Level

High School

Learning Objectives

- Students will be able to categorize the various ways in which human activity causes climate change, and analyze the potential for mitigating those effects.

[How Humans Cause Climate Change](#)



[How to Mitigate Climate Change](#)



[Writing a Letter to a Member of Congress](#)



[Handout](#)



Homework

- Read *How Humans Cause Climate Change*.

Class

1. (5 minutes) Working with the full class, lead students through filling out one sector on the graphic organizer attached above using one of the resources from the *How to Mitigate Climate Change* learning journey.
2. (30 minutes) Have students fill out the remaining sections of the graphic organizer using the rest of the learning journey in a jigsaw:
 - First, divide students into four groups and assign each group one sector on the graphic organizer to fill out.
 - Second, create groups of four students, consisting of one member from each group in the first round. Task them with discussing the questions on the back of the graphic organizer and constructing an argument together.
3. (10 minutes) Reconvene as a whole class and ask each group to briefly share their argument.

Homework

- Ask each student to write a letter to their member of Congress or another government official making the argument they came up with in their group for which sector they think the government should put more focus on mitigating. Refer them to the *Writing a Letter to a Member of Congress* activity linked above for tips. (Or, they can make a different argument if they were persuaded by someone else in class.)

Vocabulary

mitigation

efforts to reduce or prevent emissions of greenhouse gases.

greenhouse gases

gases that absorb heat in the atmosphere and re-emit it back toward earth, causing a warming effect.

emissions

refers to the amount of greenhouse gases an entity, such as a country or company, produces.

Industrial Revolution

a transition, beginning in the eighteenth century, from small-scale, largely agricultural economies to more industry-intensive ones.

fossil fuels

hydrocarbon energy sources such as oil, coal, or natural gas.

greenhouse effect

the natural process that keeps the earth at a life-sustaining temperature.

deforestation

the clearing or thinning of forests by people for materials, land-use, medicinal ingredients, farming, paper production, or other non-forest purposes.

renewable energy

energy derived from sources such as sunlight, wind, and water, which have a steadily replenishing supply.

biofuel

liquid fuel derived from plants. A prominent example is ethanol, a product of sugarcane or corn.

alternative energy

energy sources that are not fossil fuels. Derived from biofuels, solar, wind, geothermal, tidal, or even nuclear power, these sources release few to no greenhouse gas emissions.

European Union

a supranational organization composed of twenty-eight European countries, formally established by the 1992 Maastricht Treaty. The EU's objectives include the economic, political, and security integration of its members, accomplished through such methods as removal of trade barriers; free circulation of EU citizens among certain member countries; and use of a common currency, the euro, by nineteen members.

carbon tax

a policy in which entities such as companies pay the government a fixed fee for each ton of greenhouse gases emitted. The purpose is to encourage firms to pursue technologies and practices that will reduce their emissions.

World Bank

a multilateral financial institution created in 1944 that funds long-term economic development of low- and middle-income countries through loans and grants for policy reforms and for projects in infrastructure,

health, education, governance, and other areas.

nuclear reactor

a container in which a controlled nuclear chain reaction can occur. Nuclear reactors form the core of nuclear power plants but can also be used to make radioactive material for medical use, research, or nuclear weapons.

supply chain

a network—consisting of individual producers, companies, transportation, information, and more—that extracts a raw material, transforms it into a finished product, and delivers it to a consumer.

drone

an unmanned, remotely piloted vehicle generally used for reconnaissance and combat. Also known as unmanned aerial vehicles (UAVs).