

Lesson Plan

# Who Releases the Most Greenhouse Gases

## Length

one 45-minute period

## Grade Level

High School

## Learning Objectives

- Students will be able to compare and contrast different ways of measuring greenhouse gas emissions
- Students will be able to construct an argument about responsibility for climate change grounded in data about emissions

### [Who Releases the Most Greenhouse Gases?](#)



### [Who Is Responsible for Climate Change?](#)



### [Handout](#)



## Homework

- Read CFR Education | “Who Releases the Most Greenhouse Gases”
- Complete part 1 of the handout (attached)

## Class

- **(10 minutes)** Divide the class into small groups. Ask students in each group to work together to fill out the table in part 2 of the handout.
- **(5 minutes)** Have groups share out their responses and work together to fill out a version of the table on the board.
- **(5 minutes)** Watch the video “Who Is Responsible for Climate Change” (3 minutes). Ask students to briefly summarize Modi’s argument.
- **(20 minutes)** Write-pair-share: ask students to write a short paragraph answering the prompt “how should world leaders decide how much each country should cut its emissions? Why that method?” Then, ask them to share with a neighbor, and ask their neighbor one question about the neighbor’s argument. Finally ask a few students to share their argument with the class.
  - If students need additional guidance, offer the following framing questions:
    - What is the fairest approach?
    - What is the most feasible approach? (i.e. what is the approach everyone will be most likely to agree to?)
    - Who can most afford to cut emissions?
    - Who is incurring the most costs from climate change?
- **(5 minutes)** Spend a few minutes to reflect as a group on the following questions:
  - Why is this question so difficult?

- Why is this question so important?

## Homework (optional)

- Ask students to revise their argument and submit it as a short writing assignment.

## Vocabulary

### greenhouse gas

any gas that absorbs heat in the atmosphere and re-emits 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.

### fossil fuels

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

### Intergovernmental Panel on Climate Change (IPCC)

a group formed in 1988 by the United Nations Environment Program and the World Meteorological Organization to evaluate the scientific literature on climate change and provide reports to international policymakers.

### industrialization

the process by which the balance of production shifts from agriculture toward manufacturing and industry.

### Paris Agreement

a nearly universal international agreement reached in 2015 that requires signatories to offer concrete emissions reductions pledges, establishes rules to monitor their performance against those pledges, and sets up a process to review and increase the ambition of the pledges over time. The Paris Agreement's goal is to limit global warming by 2 degrees Celsius (about 3.6 degrees Fahrenheit) above pre-industrial temperatures.

### greenhouse gases

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

### Industrial Revolution

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