

LESSON PLAN: Carbon Footprints Grades 6+/Science & Social Studies

Everyone leaves a carbon footprint – the amount of carbon dioxide (CO₂) released into the atmosphere as the result of burning fossil fuels. Some footprints, however, are bigger than others.

Objective

This activity will allow students to understand their own carbon footprint, and how their actions and decisions in everyday life affect the health of the planet. It will also help them see how the collective actions of many people can make a huge impact to slow global warming.

Materials

- Internet access
- Calculator
- Paper and pen

Activity

Introduce the idea of carbon footprint and what activities result in carbon emissions. Then discuss how carbon dioxide in the atmosphere leads to global warming and the many effects of this warming trend. Key terms include **global warming, carbon emissions, fossil fuels, carbon footprint, and ocean acidification.**

Next, show students how the amount of CO₂ in the atmosphere has changed over time (<https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>) and what they notice. Discuss and list the many things that humans do that put CO₂ into the atmosphere, and how each of these activities leads to global warming, ocean acidification, and extinction.

Have students calculate their own carbon footprint. There are many online resources that can help students research this, including NASA's Climate Kids website (<https://climatekids.nasa.gov/>), and other carbon footprint calculators.

Reflection Questions and Activities

- Compare carbon footprints among students.
- Are students surprised by their own carbon footprint?
- What can students do at home or community to reduce their carbon footprint?
- Will making changes be easy or difficult?
- Calculate the carbon emission reduction if everyone in the class took one step to reduce their carbon footprint. What would the savings be if each student could also convince three other families to do the same thing? How about if 1,000 families in the community took steps to lower emissions?