

Carbon In My Life Teacher Guide

Background

In Carbon In My Life, students begin to identify all of the items and tasks in their day that can contribute to carbon emissions. Students survey their surroundings and develop an action plan for reducing carbon in their lives.

Objectives

- Students will identify and analyze the energy use of commonplace items.
- Students will be able to explain that CO₂ emissions occur throughout a product's life cycle.

Time

- Two to three class periods

Materials

- *Carbon In My Life Informational Text*
- *Aluminum Can Life Cycle Comparison* worksheet
- *Carbon In My Life Survey*
- *Carbon In My Life Study Items* organizer
- *Carbon In My Life Item Analysis Organizer*
- *Carbon In My Life Questionnaire*
- *Carbon In My Life Action Planner*

Preparation

- Make copies of the worksheets for students.

Procedure

1. Present an overview of the activity and project expectations. Break into groups of three or four students.
2. Have students actively read the *Carbon in My Life Informational Text*. Select the best strategy for your students:
 - Read individually
 - Read aloud
 - Jigsaw read (teacher may work with emerging readers or pair students together)
3. Check for understanding of the informational text and explain that carbon contributors can include products, food items, behaviors, water and energy uses, transportation needs, or anything that can be associated with the need to use some form of energy.
4. Explain to students that the energy we use each day results directly in an increase in carbon in the atmosphere. Electric power is produced using fossil fuels, and we operate motor vehicles or heat our homes and water with fossil fuels, and create products with fossil fuels.
5. Review the *Aluminum Can Life Cycle Comparison* worksheet.
6. Have teams complete the *Carbon In My Life Survey*.
7. Brainstorm additional items on the *Carbon In My Life Study Items* organizer.
8. All teams will select an item from each category (food, energy, water, etc.) to study and use the *Carbon In My Life Item Analysis Organizer* and *Carbon In My Life Questionnaire* to identify Action Plan items.
9. Teams will select one item for each team member and develop an action plan for lowering their carbon footprint using the steps on the *Carbon In My Life Action Planner*.
10. If time allows, select one of the recommended extensions (on the next page) to reinforce the lesson and to give students opportunities to expand on their Action Plans.



Extensions

- Use this activity at your home to study items and to initiate action plans to reduce energy use and CO₂ impacts. Document your project from beginning to end and prepare a presentation to the class, to the community, or to other homeowners.
- Publish your action plan in a local newspaper article, an Internet article, or contact local radio or television media to conduct an interview.
- Develop a service-learning project that helps senior citizens or low-income citizens find ways to save money by using energy saving strategies that you've developed in this activity.
- Work with your local school board or city council to find ways that your strategies can be used at other schools, city parks, city owned businesses, etc.
- Research schools and buildings in other countries to see how needs are met differently and document the differences in energy use and CO₂ impacts.
- Research how schools and buildings in the year 1900 met the same needs you meet today and document the differences in energy use and CO₂ impacts.

