

**Lesson at a Glance**

Students will gain greater appreciation of how they can change their habits to reduce their carbon footprint.

**Grade Level**

3-6, aligns closely to 3<sup>rd</sup> and 4<sup>th</sup> Grade Social Studies Core

**Time**

45 minutes

**Core Connections****3<sup>rd</sup> Grade Social Studies**

- 1.3.a *identify ways people use the physical environment*
- 1.3.c *Describe ways to conserve and protect natural resources*
- 1.3.e *Make inferences about the positive and negative impacts of human-caused change to the physical environment*

**4<sup>th</sup> Grade Social Studies**

- 1.3.b *Explain viewpoints regarding environmental issues*

**Materials**

- Pencil
- Alternate Transportation Challenge Worksheet

**Background**

Global warming refers to the increase in the earth's average temperature. Some warming of the earth's temperature is natural; however, certain human activities release greenhouse gasses, such as carbon dioxide, into the atmosphere. The gasses trap the sun's heat like a blanket and increase the earth's temperature. Scientists call this global warming.

One human activity that adds to global warming is driving a car. By burning fuel to make the vehicle move, the car releases carbon dioxide. Burning fossil fuels for heat, hot water, and electricity also contribute to the release of carbon dioxide. In fact, everything we buy and use takes some type of energy to make, transport and to throw out and has an impact on the earth's temperature.

Why should we care? Animals, including people, and plants need certain temperatures and conditions in order to survive. If it becomes too warm or too cold, it becomes more difficult for the plants and animals to survive.

**Activity**

1. Hand out the Alternate Transportation Challenge worksheet.

2. In the first column, ask your students to list all of the places they visit in a week (school, the park, soccer practice, home, the movies, etc.).
3. In the second column ask them write how they get to each of these places (carpool, bus, car, walk, etc.).
4. In the third column have them list ways they could cut down on their driving (carpooling, bus, walking, biking, etc.).
5. Discuss how many places they might have been able to visit without using fossil fuels.
6. Now have the students figure out how many miles they travel each week. Ask them to see if they could figure out a way to get to at least one of their locations without a car and report back to the class how many miles they saved.
7. As a class tally up how many miles and how many pounds of carbon dioxide emissions were saved. (For every mile reduced, one pound of carbon dioxide is prevented from entering the atmosphere.

**Climate Change Connection**

How might changing the way we get from place to place have an impact on climate change?

**Conclusion**

As a group discuss where all of their “needed items” came from. Have the students brainstorm some ways they could reduce their footprint (unplug the television or computer when not in use, grow vegetables, walk to school, turn off the lights, etc.)

## Alternate Transportation Challenge Worksheet

Name \_\_\_\_\_

Places I Visit	How I Get There	How I Could Save Energy