



we're walking here nyc

MIDDLE SCHOOL

Step 2: Understanding the Numbers

Personal Carbon Footprint

Personal Carbon Footprint

PURPOSE

After collecting the data in Step One, you can find out how much carbon each type of commute puts into the atmosphere.

PERSONAL CARBON FOOTPRINT

1. Have the class define “Carbon Footprint.” It’s a “measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide.” In other words, your personal carbon footprint is how much pollution you put in the air from your behavior in a day. This can include how much electricity you use, how you travel, what you buy, and how your food is raised and prepared. For the purposes of this lesson, we will concentrate only on daily travel - specifically, the commute to and from school.
2. Take a look at the CO2 handout. You might want to have a few students read a few of the vehicle numbers aloud. Put the set of vehicle icons down on the floor or ground. Ask the students to find the numbers on the worksheet and recreate them by creating human graphs. Each body will represent a pound. Make sure to discuss each mode of transportation (and define SUVs and hybrids).
3. Create bar graphs on the second page of the handout and fill out the question below the graph. Have a class discussion about ways students could improve their commutes.

EXTENSION: YOUR OWN FOOTPRINT

Students can go online to calculate their actual carbon footprint.

- They need to find out how far they live from the school. Go to maps.google.com, “Get Directions.” Home address is “A” (starting point), and school’s address is “B” (destination). Select “By Car” and press “Get Directions.” (You will see the directions come up—don’t worry about these.) Record the number of miles listed.
- Go to www.rollingcarbon.org to find out your actual commute by plugging in the number of miles you found with Google Directions.

PREPARING FOR STEP THREE

This lesson is designed to help inform the Public Service Announcement that your group will be making and submitting to the contest.

- You will want to refer to the handout and this session when you brainstorm for your PSA.

CONTENTS OF THIS KIT

- **The Carbon Footprint of Your Commute Handout:** Each student should get their own copy to record observations.
- **Vehicle Icons for human graphs exercise (print only one copy)**

OTHER MATERIALS

You may need a few other materials, that are not provided in this kit, including:

- Pens or pencils

The Carbon Footprint of Your Commute

Let's say you live 5 miles from your school. That means your total commute is 10 miles per day.

if you...

rode in an SUV, your 10 mile commute would create 16 pounds of carbon dioxide.

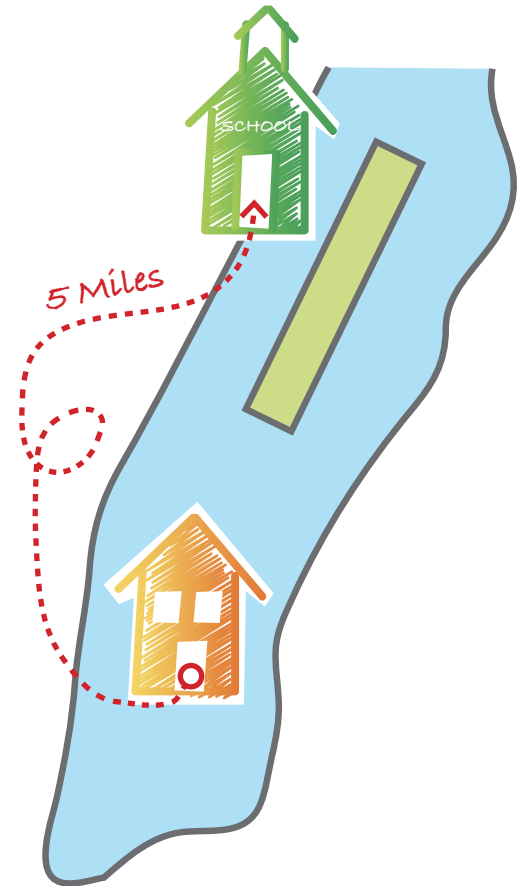
rode in an average car, you would create 12 pounds of carbon dioxide. To offset all that carbon, you'd need to plant 16 trees per year.

rode in a hybrid car, your commute would create 4 pounds of carbon dioxide. To offset all that carbon, you'd need to plant 6 trees per year.

took the bus, you would put 5 pounds of carbon dioxide into the atmosphere.

rode the subway, you would put 2.5 pounds of carbon dioxide into the atmosphere.

walked, biked, or skated, your commute would create no carbon dioxide.



Step 1: Who's Walking Here?

→ Step 2: Understanding the Numbers

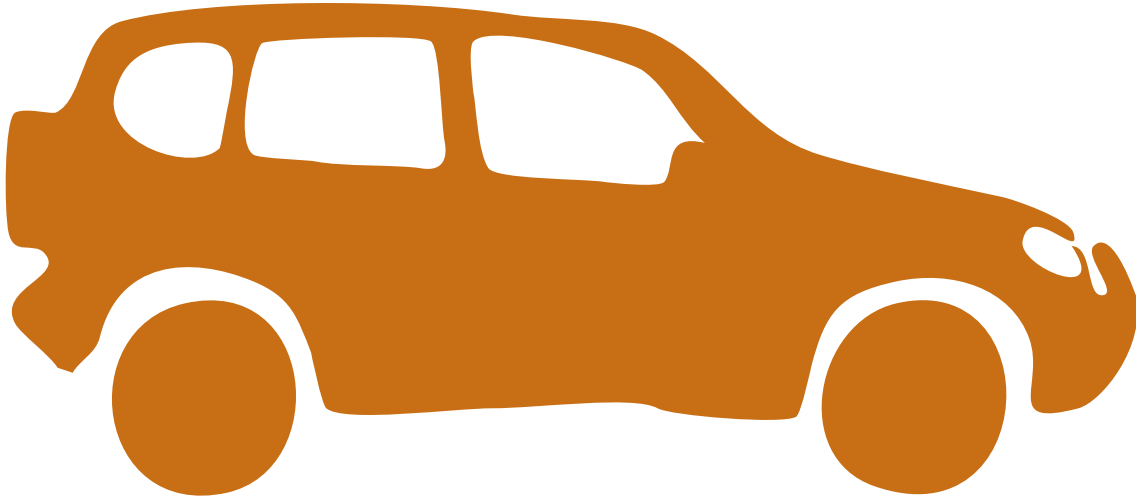
Step 3: Sharing your Message

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GRAPH THE CARBON FOOTPRINT OF A 10 MI COMMUTE



Are there any practical and convenient changes you could make to the way you commute to school to lower your personal carbon footprint? Why or why not?



SUV



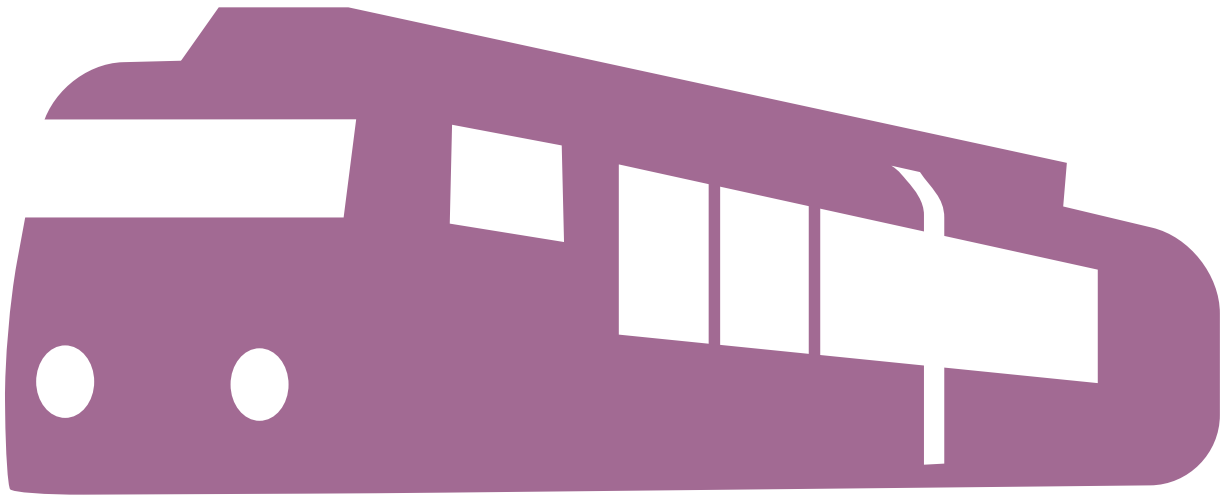
CAR



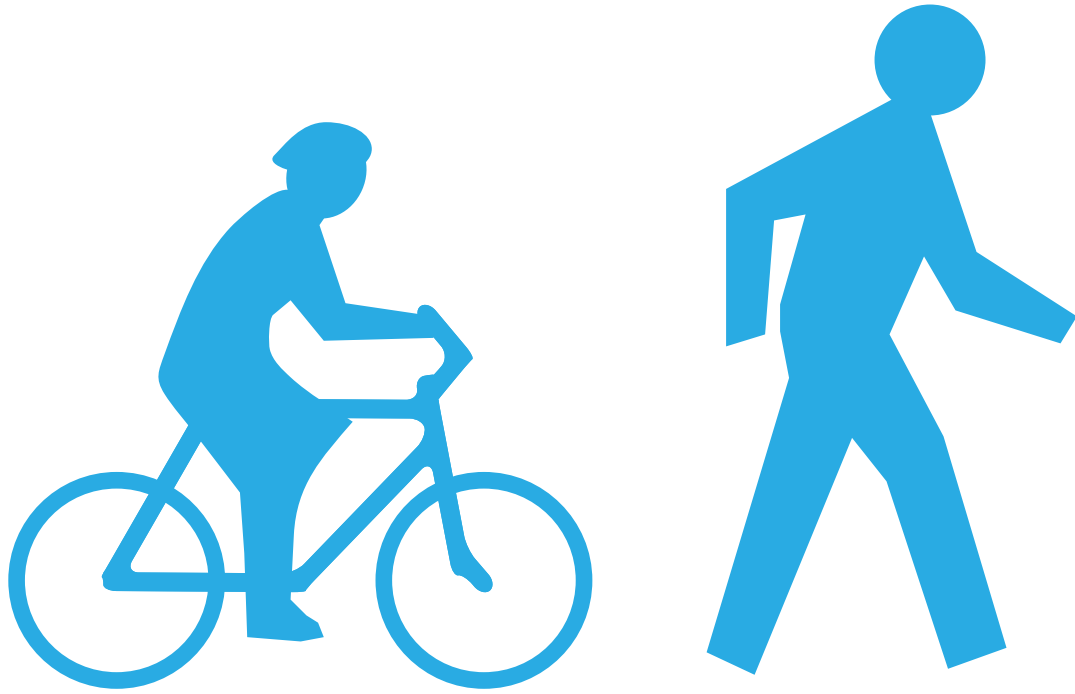
HYBRID CAR



BUS



SUBWAY- TRAIN



WALK-BIKE- SKATE