



Grade Level: Elementary School

Subject Correlation: Social Studies

Objectives: Students will be able to:

1. Understand why humans are dependent on natural resources and the problems associated with their use.
2. Demonstrate how humans affect their environment.
3. Describe the different components and natural resources that go into making their favorite foods.
4. Compare and contrast the resources going into different foods and analyze which foods are more sustainable, or environmentally friendly.

Length: 45-60 minutes

Teacher Preparation: Bring to class pictures of animals, oceans, and farmlands to visually demonstrate where food comes from. The Exercise will also require three different sized Footprint cutouts for each group. (See [Picture File](#) for photos.)

Outline (with times)

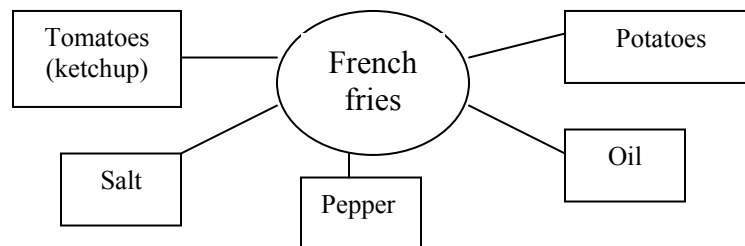
15 minutes

Introduction: The Food Web – in this exercise, students will explore the many ingredients that go into their favorite foods – likely more than they realize!

Talk about the students' favorite foods. Make a list of these foods on a chart.

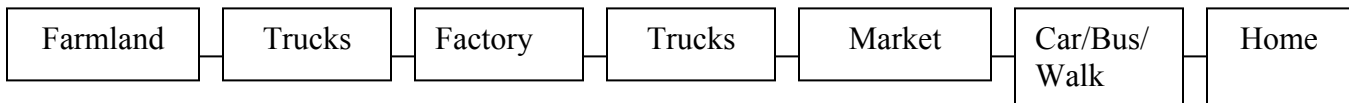
As a class, brainstorm all the components going into one food.

FIGURE A: Resources



Discuss where these foods come from (have pictures available from the [Picture File](#) to show the class) and what is required to produce them (i.e.: productive farm land, farmers, fertilizer, farm machines, trucks, gasoline, market area, restaurant, frozen food section of supermarket...). Younger students do not have to create an exhaustive list, so long as they understand that more resources go into a meal than they may realize.

FIGURE B: Supply Chain



15 minutes

Divide the class into 2 or 3 groups. Assign each group two or three foods with which to do this exercise on their own (including diagrams like A and B above). Try to make sure each group of students has a food that requires many resources and one that requires few.

For example:

orange/orange juice/ orange candy
milk/cheese/ packaged snacks
water/fresh squeezed juice/ soda
(Use foods served in the school cafeteria.)

10 minutes

Tape the students' work on a wall for all to see. To piece everything together, have three different sized Footprint cutouts for each group (see footprints at the end of the lesson plan). Tell them that the big Footprint will cover items that make the largest impact on the Earth and the smallest Footprint will cover items that make the smallest impact on the Earth. Have the students match the correct Footprints to the foods.



5 minutes

In closing, ask the students how they think they can make their Footprint smaller with what they do and eat. Students could suggest eating a few meals a week that cause less waste and use less energy to produce.

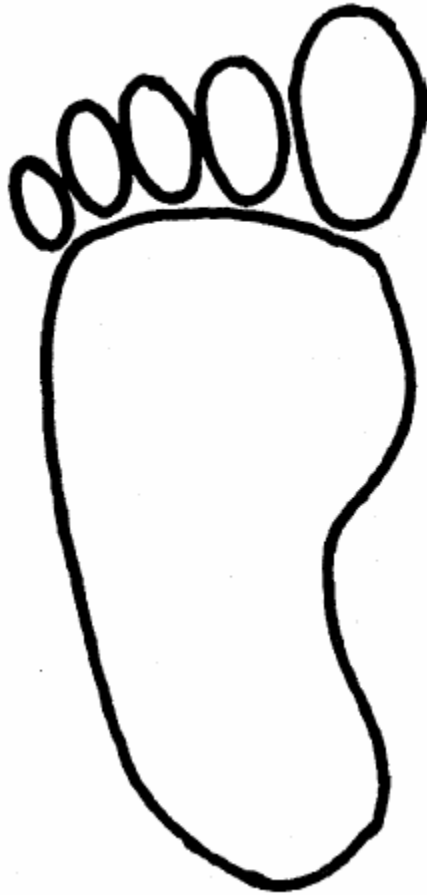
Art Project:

-Have the students look in their lunches to see if they have anything that may negatively affect the environment. Make a class collage out of the clean wrappers in their lunches and ask the students if they think the collage could be even smaller the next day.

-Students may prepare two collages from lunch wrappers: one including harmless, biodegradable materials and the other demonstrating harmful non-biodegradable materials. Each collage will demonstrate the appropriate waste from the student's lunch. Display the two collages in a place easily visible to the rest of the school. As a class or individually, students can write an explanation of why using the biodegradable materials is better for the environment.

***Send a notice home to parents explaining what the class is trying to do, and some suggestions on how to reduce garbage in lunches.**

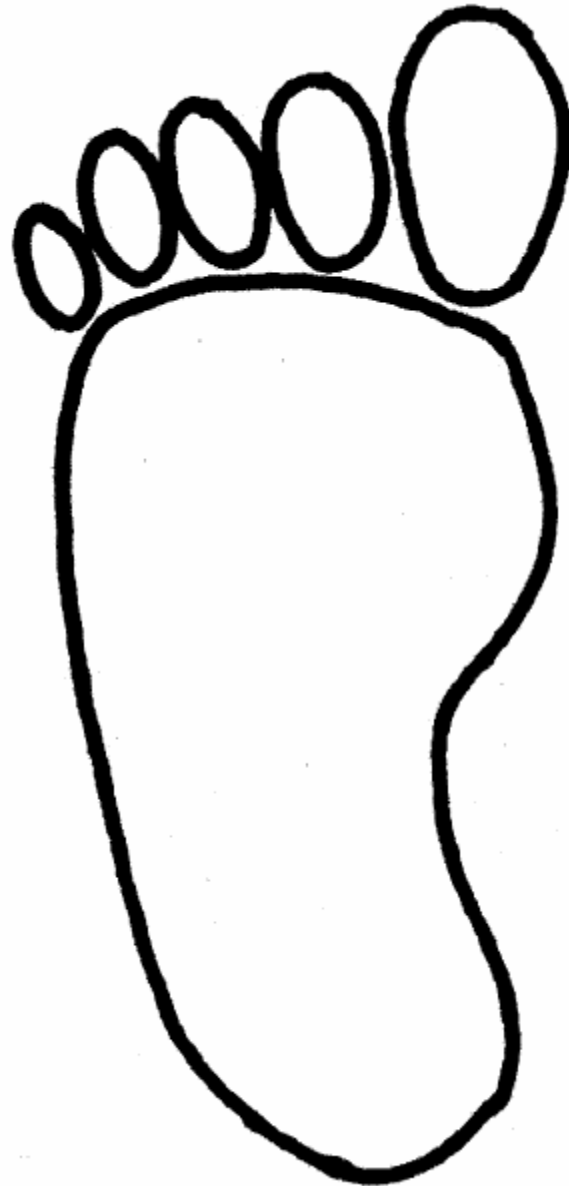




Small Footprint

For items requiring fewer resource, producing less waste, and requiring less production

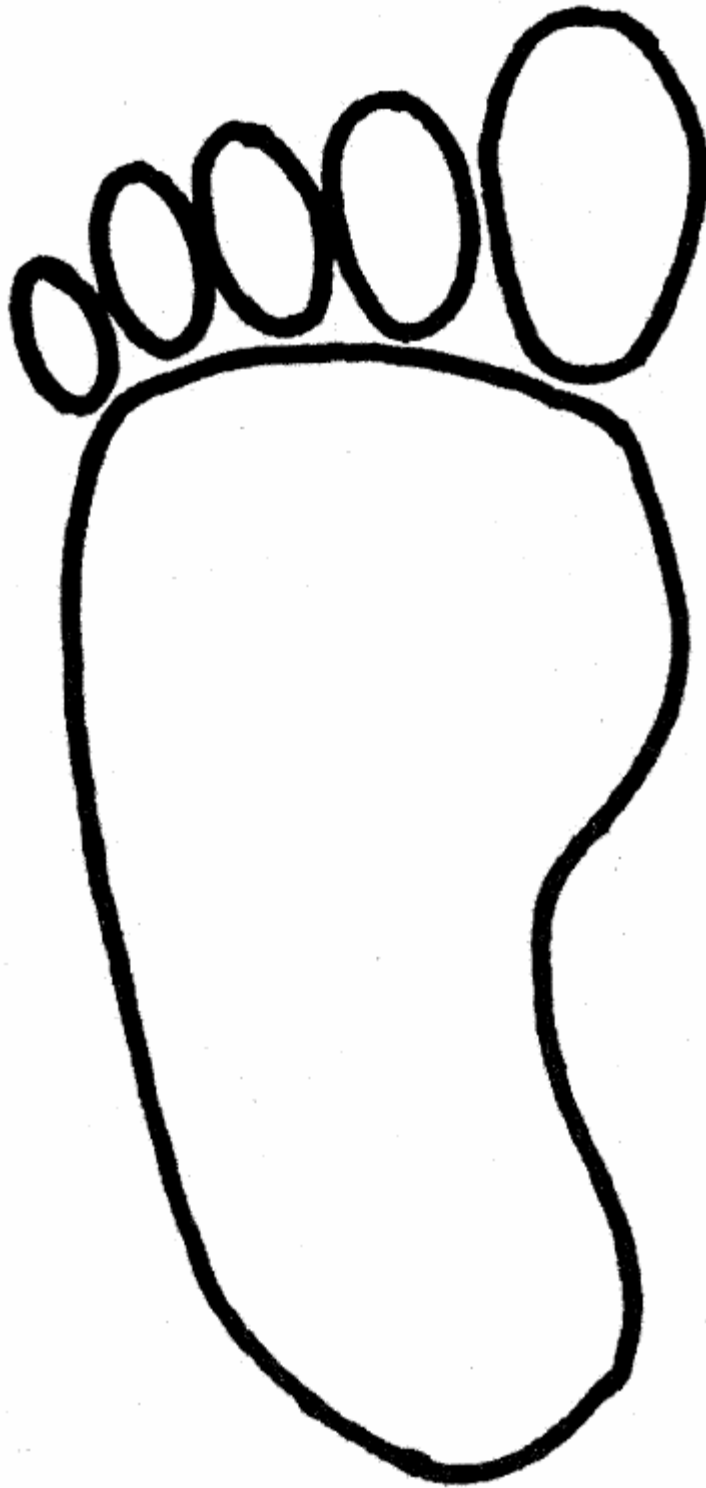




Medium Footprint

For items that require more resource, produce more waste, and require more production





Large Footprint

For items that require the most resource, produce the most waste, and require the most production

