



HERE'S A LESSON WORTH TEACHING

Lesson # 1 If the Earth was an Apple

Appropriate for All Ages

SUPPLIES NEEDED

Apple
Cutting board
Knife
Globe or Map of the World

OVERVIEW

The apple is used to model the Earth. Students learn that just $1/32$ of the earth surface is devoted to farmland. They discuss what sacrifices may be needed to feed a larger population. The activity demonstrates how we as a society use land. The amount of land on Earth stays the same, so as the world's population gets larger, it becomes even more important that we make wise decisions about how it is used.



PROCEDURE

	<p>Step 1: Explain that the apple represents Earth. Cut the apple into four equal parts. Explain three of the parts represent Earth's 70 percent water (or approximately 3/4). Set the three parts aside. The last 1/4 piece represents Earth's land.</p>
	<p>Step 2: Remind students that this relatively small amount of land must be put to many different uses. Not all the land can be used for farming. Ask students for examples that cannot be farmed. Examples: desert, arctic, swamps, mountains, urban areas.</p>
	<p>STEP 3: Use the knife to cut the 1/4 piece of apple in half. Now you have two 1/8 pieces. One 1/8 piece represents the land that is mountains, Arctic, Antarctic and desert.</p>
	<p>STEP 4: With the remaining piece cut it in half two more times. Set one 1/32 piece aside. The other 2 pieces represent cities, land that is too wet, land that is too dry and land that is too rocky.</p>
	<p>STEP 5: The last 1/32 piece (or 2%) represents the land that is suitable to produce the world's food. Point out that the skin on this small piece of apple represents the tiny layer of topsoil that we depend on to grow food.</p>

To help you visualize the presentation visit the following link:

<https://vimeo.com/128288736>

Learn more about population growth from our Partners at [Journey 2050](#)

MAJOR CONCEPTS

- Only a small portion of Earth's surface is used to grow food
- The world population is growing at a steady rate
- Unless food productivity increases, more land will have to be farmed
- Fertilizers help increase food productivity



OUR MISSION

Educating Canadians about the sustainable use of nutrients to increase the health and quality of our soil, improve production of nutritious food, and preserve green spaces.

Nutrients for Life Foundation Canada is a non-profit organization that provides information and resources to educators and individuals like you, to help inform the public

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compiled is science-based and user-friendly. It has been successfully implemented by educators across the country. Through a grassroots effort, we can spread the word about soil health to students of all ages and to adult organizations that are always looking for programs. Our story is not only important, but it is interesting and serves a vital role in educating consumers and decision-makers in the future.

This lesson is found in NFL's resource, *Nourishing the Planet in the 21st Century*.

All of our [resources](#) are free to teachers across Canada.

