

## LEARNING ACTIVITY:

# How Much Soil Is There?

Grade Level: K-5



Source: Adapted with permission by the Soil Science Society of America from Oklahoma Ag in the Classroom.

All living things depend on soil to live. What are some of our important natural resources? Your answers might include materials such as oil, water, coal, trees, animals, and gold. All of those are important natural resources, but we often forget to mention one of our most important natural resources: soil.

### Materials

- Apple(s)
- One sharp knife (for teacher demonstration) or plastic knives (for student participation)
- Cutting board
- Paper towels
- A computer with Internet access

### Procedure

1. Print copies of pie chart graphs from <http://www.soils.org/lessons> and share among students. Cut the unpeeled apple as the teacher explains the fractions shown.
2. Pretend that this apple is planet Earth. Notice how its skin hugs and protects the surface. Cut the apple in quarters. Three of the four quarters represent how much of the earth is covered with water — oceans, lakes, rivers, and streams. Set three of four quarters aside. Discuss: Do you know what percentage that is?
3. Left is just one quarter (25 percent), representing the portion of our earth that is dry land. Take this quarter and cut it in half. One of these halves represents land that is desert, swamps, polar,
4. The other half (one-eighth or 12.5 percent of the apple) represents where humans can live and grow crops. Slice this section lengthwise into four equal parts. Now you have four 1/32nds (3 percent each) of an apple.
5. The first of these represents land too wet for food production. It isn't swamp land, but it may flood during the growing season. The second section represents land that is too rocky and poor to grow food. A third 1/32nd represents areas that are too hot. Set these three sections aside.
6. The last section (1/32nd or 3 percent of the apple) represents the area of the world developed



## Soils at the Smithsonian!

A unique exhibit on soils will launch soon at the Smithsonian Institution's National Museum of Natural History. Now confirmed to open in July 2008, the exhibit will run for 1.5 years at the world's most-visited natural history museum with more than six million visitors a year.

The exhibit will include a display of state soil monoliths and an educational, interactive section to help the museum's visitors understand how soil is intricately linked to the health of humanity, the environment, and the planet. Related publications and web activities will reach millions of additional people, and a traveling exhibit will go to dozens of other museums to reach additional communities.

Visit [www.soils.org/smithsonian](http://www.soils.org/smithsonian) for up-to-the minute information.

by humans. Now, carefully peel the last 1/32nd section. This small bit of peel represents the portion of our planet that is soil on which humans depend for food production and similar uses. So, like water and air, soil is a very important and limited natural resource.

### Follow-up activities

Have older students rank resources in order of importance. Are some resources equally important for life? Are others important because we rely on them in our modern world? Have students (or show younger students) areas on a map or globe where crops cannot grow.

