



# Comparing Apples and... Earth?

Explore how much of the Earth's surface is needed for growing food for a world of people.

## Activity

1. Hold up an apple to the class and tell the students that it represents Earth.
2. Slice the apple into fourths. Set aside three of the fourths, as they represent water on the Earth's surface.
3. Cut the remaining slice in half. Set aside one of the halves as uninhabited deserts, swamps and Arctic areas.
4. Divide the remaining piece into fourths. Set aside three of the pieces for land that is too rocky, wet, hot, or poor for crop production.
5. The remaining piece is  $\frac{1}{32}$  of the original apple. Carefully, peel this section. Hold up the peel and explain that it represents the thin layer of soil that is available for producing all of the world's food crops.

## Classroom Discussion

- What is the key message underlying the activity?
- What actions can students take to care for their patch of this precious Earth—as individuals, as a class and school, with their families, in their community?
  - How are farmers stewards of the land?
  - What is sustainability? Introduce the concepts without using the word itself, which can be difficult to define. Produce concept maps based on discussion.
  - How do natural resource management, farming techniques, feeding the world, land care, and environmental management play a role in food production in California or your specific region?



## Materials

Enough for each student:

- Apple (or a paper cutout of an apple)
- Knife
- Chopping board or plates
- Paper towels or wet wipes

## Tip

A demonstrator could cut one apple and students eat an approximate amount.

## Watch Online!

See a video of this Ag-Bite at [LearnAboutAg.org/agbites](http://LearnAboutAg.org/agbites)

## California Standards:

### Grade 3

Math CC: 3.NF.1  
NGSS: 3-LS4-4

### Grade 4

Math CC: 4.NF.3a, 3b  
NGSS: 4-ESS3-1

### Grade 5

Math CC: 5.NF.2  
NGSS: 5-ESS3-1

## Classroom Activities

### English Language Arts/History

- Have students journal about this activity, what they learned from the demonstration, and different ways they can take care of the Earth.
- Research different farming practices used in the past and create a chart with the pros and cons of each one. Report your findings to the class.

### Visual and Performing Arts

- Create art stamps using different tools (paperclip, toothpick, popsicle stick) to make designs in the apple pieces. Mix paints to produce different colors and dip the stamps in paint to create art.
- Use the activity as a prompt or an example for students to produce a game, puzzle, poster or other means of delivering a similar message.

*Adapted from materials by the Natural Resources Conservation Service*