#### Day and Night on a Flat Earth

Imagine it is 3,000 years ago. The Native Americans who lived here did not have globes or any reasons to believe that Earth is round. They observed that the Sun rose every day in the east and set in the west.



How do you think the Native Americans explained how the Sun got back to the east in the morning?

# Imagining People on the Other Side of the Earth

- Imagine that you have x-ray vision, and you can look all the way through the Earth as though it were made of glass. Which direction would you look to see people in far-off countries like India and Australia?
  - A. Eastward
  - B. Westward
  - C. Northward
  - D. Southward
  - E. Upward
  - F. Downward



- 2. When you look through the Earth and see people far away, which part of their bodies do you see?
  - A. The tops of their heads.
  - B. Their faces.
  - C. The bottoms of their shoes.
  - D. The backs of their heads.
  - E. Their profiles (side view).

### Is the Earth Round or Flat?

In school we learn that the globe represents the round Earth. But if we look outdoors, the Earth looks flat. Why is that?





- A. They are different Earths. We live on the flat Earth. The round Earth is a planet in the sky.
- B. The Earth as a whole is round. We live on the flat part in the middle.
- C. The Earth is round like an island. That's why it can be flat and round at the same time.
- D. The Earth is round like a ball. It only looks flat because we see just a tiny part of it.

## Which Way Will the Apple Fall?

The picture below shows a drawing of five cooks living in different parts of the world, each dropping an apple. For each apple, draw the path it will follow as it falls. Draw a dot at the end of the line showing where the apple lands.



Explain why the apples will fall this way.

Copyright © 2011 NSTA Press. From *Hard-to-Teach Science Concepts: A Framework to Support Learners, Grades 3–5,* by Susan Koba with Carol T. Mitchell.

#### Exploring a Tunnel Drilled Through the Earth

Below is a diagram, showing an imaginary tunnel drilled all the way through the Earth from pole to pole. If a cook drops an apple into the hole, draw the path of the apple. Make a large dot at the end of the path showing where it lands.



Explain why the apple follows this path.