

## Guide for Reading

Focus on these questions as you read.

- What is continental drift?
- What evidence supports the theory of continental drift?

## ACTIVITY

### DISCOVERING

#### *Putting the Pieces Together*

1. Find one or two friends who also want to do this activity.

2. Obtain one sheet of newspaper per person. (Make sure you use a paper that everyone has finished reading!)

3. Tear a sheet of newspaper into a few large pieces.

4. Trade pieces with a friend.

5. Try to fit the pieces together. How do lines of print help to confirm that you have reassembled the pieces correctly?

■ How does this activity relate to the development of the theory of continental drift?

## 12-1 Earth's Drifting Continents

Imagine that you are browsing in the library looking for something interesting to read. A paper on prehistoric plants and animals catches your eye, and you start to look through it. But partway through, you put the paper down and start to think. The theory presented in the paper does not sound right to you.

This is the theory: A land bridge once stretched across the Atlantic Ocean and connected South America and Africa. Evidence for this land bridge is seen in the **fossils** of plants and animals that could not possibly have crossed an ocean but are found in both South America and Africa. Fossils are the preserved remains or evidence of ancient organisms. You will learn more about them in Chapter 19.

The author of the paper states that the land bridge no longer exists because it sank to the bottom of the ocean. Knowing what you do about isostasy, you realize that continental crust cannot sink into denser oceanic crust. Why, then, are the fossils the same on both sides of the Atlantic Ocean?

Suddenly, you realize that South America and Africa must have been connected at one time—not in the way the author of the paper envisioned. You remember noticing how well the coasts of the two continents fit together and wondering if they had once been a single landmass. At the time, you thought that idea was silly. Now it seems to be an idea worth considering.

You begin to search through the reference materials in the library, looking for evidence that will support or disprove your hypothesis. The more search you do, the more evidence you find in favor of your hypothesis: **The Earth once had a single landmass that broke up into large pieces, which since drifted apart.** You name this giant landmass **Pangaea** (pan-JEE-ah), which means all Earth.

This story is based on real events that happened in the first half of this century to the German geologist Alfred Wegener. Wegener was not the first person to suggest that the continents had once been