

Use the textbook pg. 270

### p270 Earth's Changing Continents

#### What You Will Learn

• Earth's continents have moved around Earth's surface throughout Earth's history and have only recently arrived at their current locations.

• Rocks and fossils provide evidence of continental drift. They also provide evidence of the changes in life and climate that have occurred during Earth's history.

#### Why It Matters

Understanding the history of climate change and life on Earth will help you better understand today's Earth.

#### Vocabulary

• plate tectonics = The theory that explains how Earth's tectonic plates move and change the shape of continents.

• continental drift = the term that is used to describe how continents have moved around Earth's surface throughout Earth's history.

#### Key Concept Movements of Earth's tectonic plates

have affected climate, geographic connections, and the distribution of organisms.

>The surface of Earth on which we live is constantly moving. Sometimes, we feel this movement as earthquakes. But did you know that Earth's surface has changed so much during Earth's long history that the continents have changed location?

#### Plate Tectonics

The thin, cool "skin" of Earth is called the lithosphere. This layer is broken into several smaller blocks called tectonic plates. These plates rest on a thick layer of solid rock called the mantle. Earth's mantle is solid, but it moves very slowly. As the mantle moves, it scrapes on the bottom of the cold tectonic plates lying on top of it. As a result, the tectonic plates move. Earth's surface currently has about 12 large plates and many small ones. Some of the large plates are labeled in Figure 1. Most plates move as fast as your fingernails grow-between 2 cm and 5 cm per year. Over geologic time scales, this movement can cause large cumulative effects--plate movements may total thousands of miles. The theory that explains how Earth's tectonic plates move and change shape is called plate tectonics.