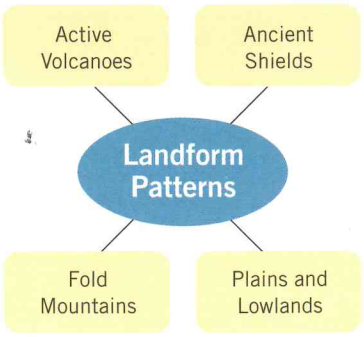
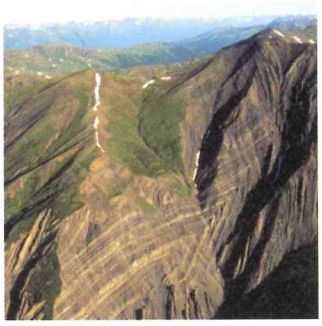
Understanding Landform Patterns

Geographers are interested in patterns on the earth. They use the arrangement of cities, landforms, or river systems to help them identify unique regions. A few pages back, you learned that most active volcanoes are located at plate boundaries, especially around the Pacific Ring of Fire. In this section, you will focus on more landform patterns found on many of the continents. These include shield regions of ancient rocks, plains, and lowlands, and fold mountain chains. You will also learn that both rock age and rock type have been important in creating different landform patterns. Most of the examples in this section will highlight major North American landform regions.




An active volcano.


An ancient shield region.


Fold mountains.


Plains and lowlands.

Shields, Plains, and Lowlands

During the earth's 4.6-billion-year history, land masses have been built up and then worn away many times. Scottish geologist James Hutton first advanced this idea in 1785, but most scholars rejected it. At the time, scientists thought the earth was only 6000 years old, but this was too little time for so much change to have happened. German geographer Alfred Wegener was another landform pioneer. In 1912, he proposed that all of the continents were once joined together in one huge land mass named Pangaea. His theory was also criticized, but is now considered a key to understanding landform patterns. The modern theory of **plate tectonics** is built upon Wegener's pioneering work.

During READING

Checkpoint

Why would the author want us to know about shields, plains, and lowlands? Write this question in your organizer. Add the answer after reading the whole section.

WORDS MATTER

plate tectonics the theory that all the continents were once joined together and are gradually drifting apart