

# Summary: Land and Climate

## Land and Water of the West

The West is divided into the Southwest, Mountain, and Pacific States. Most western states are east of the Pacific Ocean between Mexico and Canada. Alaska and Hawaii are separated from the other states by land and water. The West has many different landforms and climate regions. There are mountain ranges and valleys, deserts and rain forests, glaciers and volcanoes.

The Rocky Mountains formed as tectonic plates pushed against each other. This caused the earth's crust to fold. The Cascade Mountains formed when melted lava from a volcano bubbled up through openings in the earth's crust. This released geothermal energy. Between the mountain ranges there are valleys, basins, and flat, raised areas called plateaus. Glaciers carved valleys such as Yosemite Valley. Rivers wore away the rock and made deep canyons, like the Grand Canyon.

## Water, Climate, and Wildlife

Many rivers flow west from the Rockies. The water is used for irrigation. Most people live on the coast because the land is so dry. Dams are used to produce hydroelectric power.

Temperatures in the West are affected by the Pacific Ocean, elevation, and latitude. Cool, moist air flows east from the Pacific Ocean. This gives the northern coast mild temperatures and more rain than the south. As moist air goes over the mountains, it drops rain and snow on the western side. This air is dry as it goes down the eastern side. This makes the climate arid. Places at high elevations are colder. Alaska is in the northern latitudes, so it has short summers and long winters.

Plants and animals depend on climate. Tropical plants grow in Hawaii. Cactuses grow in arid areas. Sequoias and redwoods grow in wet coastal areas. Bristlecone pines live in the mountains. Elk, bighorn sheep, and cougars live there too. Lizards, scorpions, and snakes live in the hot dry Southwest. In Alaska there are moose, bears, and condors.



### Before You Read

Find and underline each vocabulary word.

**geothermal** *adjective*, heat from beneath the Earth's crust

**irrigation** *noun*, a way of supplying land with water

**hydroelectric power** *noun*, electricity produced from flowing water

**arid** *adjective*, very dry



### After You Read

**REVIEW** What are three major landforms found in the West? Circle words that name landforms. Draw a box around the names of specific landforms.

**REVIEW** What factors influence temperature in the West? Underline the sentence that tells you the answer.