Day 5 – Lesson Review

- Complete **Reading Check #3 on page 17**: How do natural disasters impact the land?
- Complete **Lesson 2 Check #4–6**:
  - **#4:** Identify one natural hazard and explain its effect on the land.
  - **#5:** Describe how weather or climate affects how you live.
  - **#6:** Explain how climate impacts living things.
- Review vocabulary from the week.
- Students may use **pages 11–16** to help find their answers.

Writing Reminder: Students should answer in complete sentences and use capitalization, correct spacing, and punctuation.

3. Reading Check **Main Idea** How do natural disasters impact the land?

Lesson 2 Check

INTERACTIVITY

Check your understanding of the key ideas of this lesson.

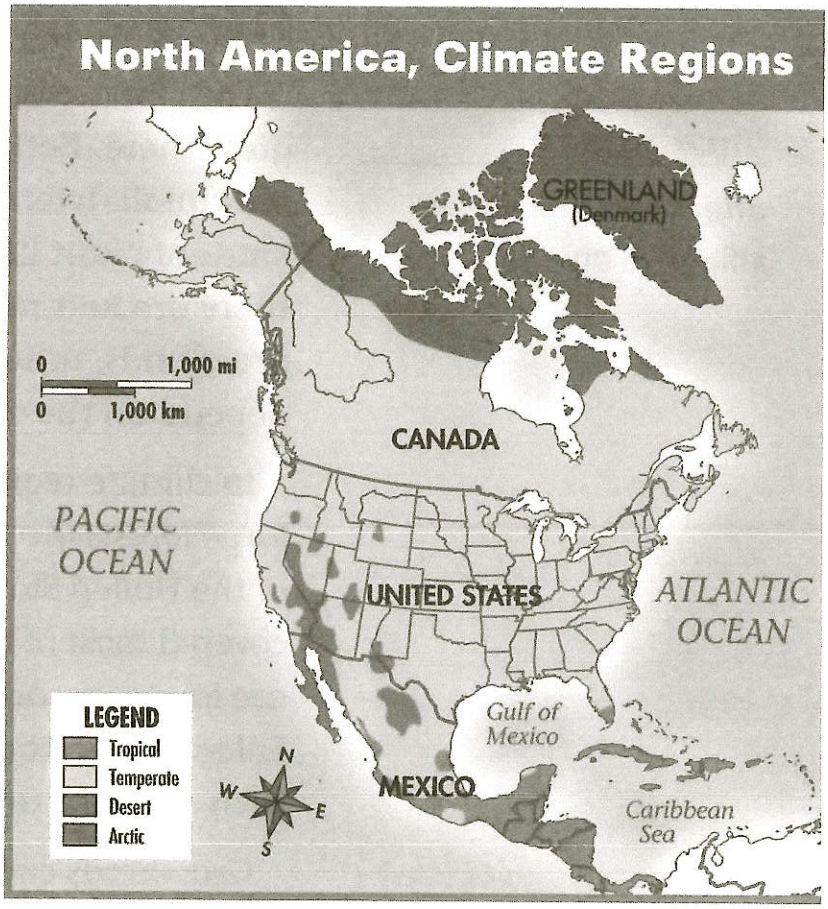
4. Cause and Effect **Identify** one natural hazard. **Explain** its effect on the land.

5. **Describe** how the weather or climate affects how you live.

6. **Understand the** Quest Connections **Explain** how climate impacts living things.

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Weather relates to the daily conditions outside such as hot or rainy. **Climate** is the weather a place has over a long period. A region's climate consists of temperature (how hot or cold it is), precipitation (the amount of rain or snow that falls), and wind.



Climate Regions

A region's climate depends on its location on Earth. Places located close to the equator get more direct sunlight. Places far from the equator get less direct sunlight.

Bodies of water shape the climate of places near them and affect the amount of rain that falls. They also change the temperature since they warm and cool more slowly than land. Winds that blow from the water cool the land in summer. Winds that blow from the water warm the land in winter. The **elevation**, or the height of land above sea level, affects climate, too. High places and mountains are cool most of the year.

The map shows North America's climate regions. Arctic climates are mostly cold. Tropical climates are mostly wet and hot. Temperate climates are not as cold as arctic climates or as hot as tropical climates. Most of the United States is in a temperate climate region. However, parts of the West have dry desert climates where there is little rainfall. Temperatures may be hot during the day and cold at night.

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Climate and Plants

Academic Vocabulary

affect • *v.*, to have an influence on

The climate of a place **affects** the plants that grow there. Both the temperature and the amount of rainfall determine the types of **vegetation**, or kinds of plant life, that grow. In the United States, there are four main types of vegetation: forests, grasslands, tundra, and deserts. Different animals depend on the vegetation that grows in an area.

In climate regions that have plenty of rainfall, large forests are found. Forests grow in many parts of the United States. In fact, not long ago, forests covered most of North America! Many forests today are found in parts of the West region, near the Great Lakes, and in the eastern United States. Animals such as bears, deer, and raccoons live in forests.

Grasslands cover much of the plains in the United States. Some parts of the Great Plains get enough rain for tall grasses, berry bushes, and even small trees to grow. However, in the western Great Plains, there is less rain. Short grasses are found here. The prairie dogs that live in this region dig underground and eat the grasses.

Caribou in Alaska search for food in the tundra.



Both tundra and desert vegetation are found in places that have dry climates. In Alaska's arctic climate, the land is called tundra. The ground is frozen nearly all year long. It is too cold for trees to grow. However, moss, lichens, and some shrubs grow. Deer called caribou use their hooves to scrape away snow and eat the moss and lichens off the frozen land.

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In desert climates, the only plants that can survive are those that can live with little water. In some deserts, grasses and shrubs are found. In the deserts of the West region, there are large cactuses called saguaros [suh GWAR ohs]. Saguaros grow in Mexico, too. Saguaros have long roots that allow them to get water from a wide area. A saguaro can grow to be 50 feet high. That is nearly as tall as a five-story building!

Animals that live in deserts can survive the hot temperatures during the day. Some animals, such as desert tortoises, keep cool by spending much of their time underground. Other animals only come out at night when it is cooler.

Quest Connection

What kinds of plants and animals live in your national park? What does that tell you about its climate?

INTERACTIVITY

Talk with a partner about the different kinds of plant and animal life throughout the United States.

1. **Reading Check** **Main Idea and Details** **Identify** two details about each type of vegetation, then fill in each box.

Forests	Grasslands
_____	_____
_____	_____
_____	_____
_____	_____

Tundra	Desert
_____	_____
_____	_____
_____	_____
_____	_____

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Plants and Animals Work Together

Forests, deserts, and grasslands each have different ecosystems. In an **ecosystem**, all living things, such as the plants and animals, interact with each other.

In both forest and rain forest ecosystems, birds, squirrels, and other animals depend on trees. Some of the seeds the animals eat drop into the soil and grow into new trees. The vegetation in these ecosystems needs animals to help spread the seeds.



Lesser long-nosed bat

In the desert, cactuses are important to many animals. Bats, such as the lesser long-nosed bats, drink nectar from the cactus flowers. By doing this, the bats spread pollen from cactus to cactus. This helps the cactus fruit grow. Other animals, including jack rabbits, eat parts of the cactus.

Places with similar vegetation can have different ecosystems. The grasslands in the middle of the United States do not have the same ecosystem as the grasslands on the continent of Africa. Some of the grasslands in Africa get more rainfall.

In the lake and swamp ecosystems in the southeastern United States, alligators dig large pond-like holes. Alligators use the holes as a place to rest. The holes also provide shallow water for birds and fish.

2. ☑ Reading Check **Cause and Effect Explain** the effect the animals have on the vegetation in an ecosystem.

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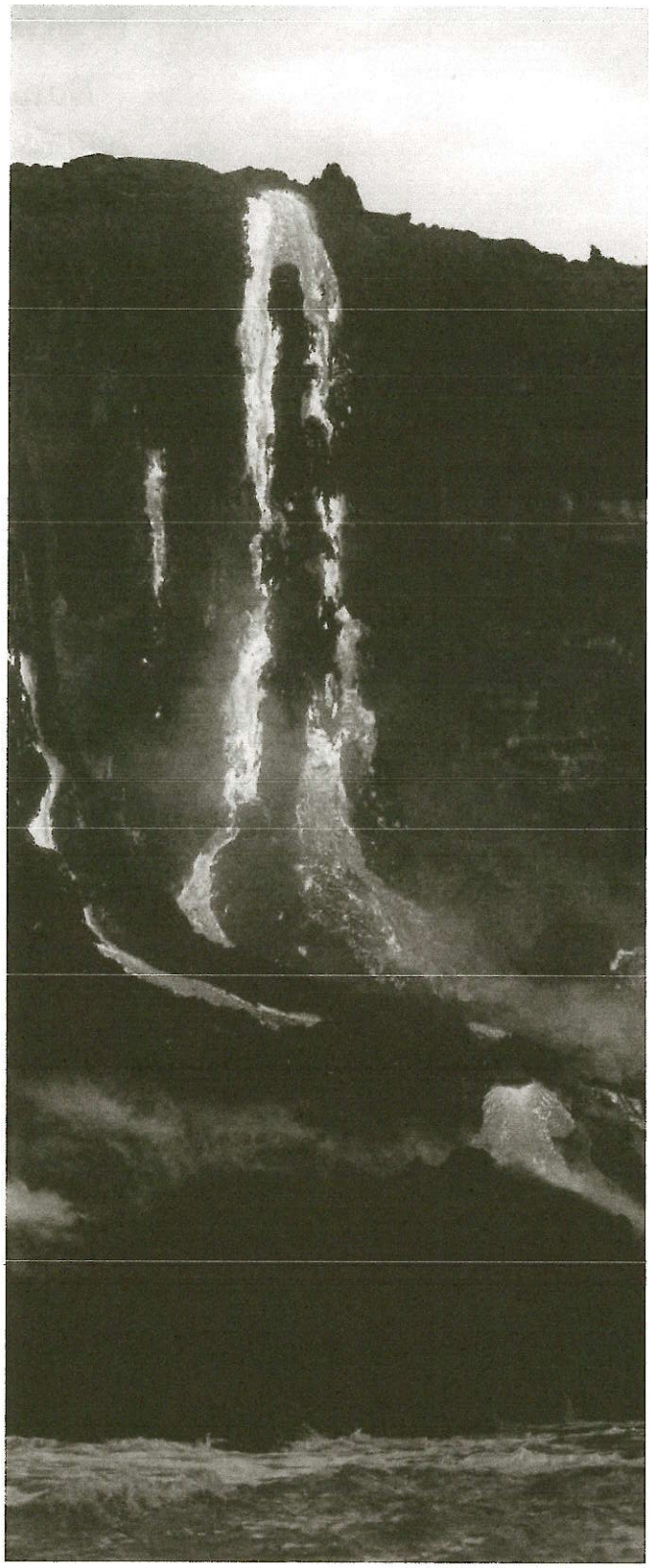
Natural Hazards

Have you ever watched a weather forecast? Perhaps you have heard about events in nature, called natural hazards. Some examples of natural hazards are volcanoes, hurricanes, and earthquakes. These physical processes can cause changes to the land. Some physical processes such as these are dramatic and happen quickly. Other physical processes, like erosion, happen slowly.

A volcano is a mountain that erupts in an explosion of molten rock (lava), gases, and ash. The lava, gases, and ash are forced out of the volcano. Hot lava flows down the side of the volcano. When it cools, it changes the land. The ash that falls down can make the soil rich, which helps plants grow. Volcanic eruptions have helped form some of the greatest mountain chains around the world.

A hurricane is a big storm with strong winds and a lot of rainfall. Heavy rains and wind from hurricanes can cause flooding. These factors shape and change the land.

An earthquake is a violent shaking of the earth. Many earthquakes strike along faults, or cracks in Earth's crust. The crust is the outer layer of Earth. Earthquakes can cause landslides and mudslides, which can change the landscape.



Hot lava flows from Kilauea Volcano in Hawaii.

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Natural Disasters

Natural hazards can change the land in the environment. When they cause damage, they are natural disasters. A disaster is something that can cause damage to human-made structures such as buildings and bridges. It can wipe out land or form new land.

Academic Vocabulary

structure • *n.*, something that is constructed

In 2005, the most destructive hurricane to hit the United States moved ashore along the Gulf Coast. In New Orleans after the **structures** built to prevent flooding failed, about 80 percent of the city was underwater. Millions of people became homeless, and it has taken years to recover from the disaster.

Earthquakes have caused major damage around the world. More earthquakes strike California than any other state in our country.

New Orleans faces extreme flooding during Hurricane Katrina in 2005.



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