Physical Geography

TERMS & NAMES
Mount Everest
Mount Fuji
Ring of Fire
typhoon
outback
Great Barrier Reef

MAIN IDEA
The physical features of East Asia, Australia, and the Pacific Islands are the result of different geological processes.

WHY IT MATTERS NOW
Understanding these countries' physical features helps us to understand their political and economic roles in the world.

DATELINE

EXTRA

YOKOHAMA, JAPAN, SEPTEMBER 1, 1923

Today, as thousands of people in Tokyo and in Yokohama were preparing to have lunch, a powerful earthquake struck. Walls bulged and buildings lurched as though made of cardboard.

Hundreds of thousands of houses completely collapsed, trapping unknown numbers of victims. The ground heaved and tossed, and in one area the earth was lifted 24 feet high. The massive uplifting of the ground caused thousands of landslides.

Some of the worst damage was caused by the fires that followed the quake. When the tremors began, people were cooking on stoves. Within minutes, kitchen fires sprang up throughout the cities. Many people who survived the quake died in the fires. As night falls, the entire city of Tokyo is in flames.

Human-Environment Interaction • It will take many people a long time to clean up the wreckage from the earthquake. ▲

The Lands of the Region

Japan is one among many countries in the region of East Asia, Australia, and the Pacific Islands, which you can see on page 460 of the Unit Atlas. East Asia includes China, Japan, North Korea, South Korea, Mongolia, and Taiwan. Australia is an island, a nation, and a continent all its own, with New Zealand as a nearby neighbor. The thousands of Pacific Islands are grouped into three subregions—Melanesia, Micronesia, and Polynesia.

Region • The Himalayas loom in the distance beyond this family. ▲

China

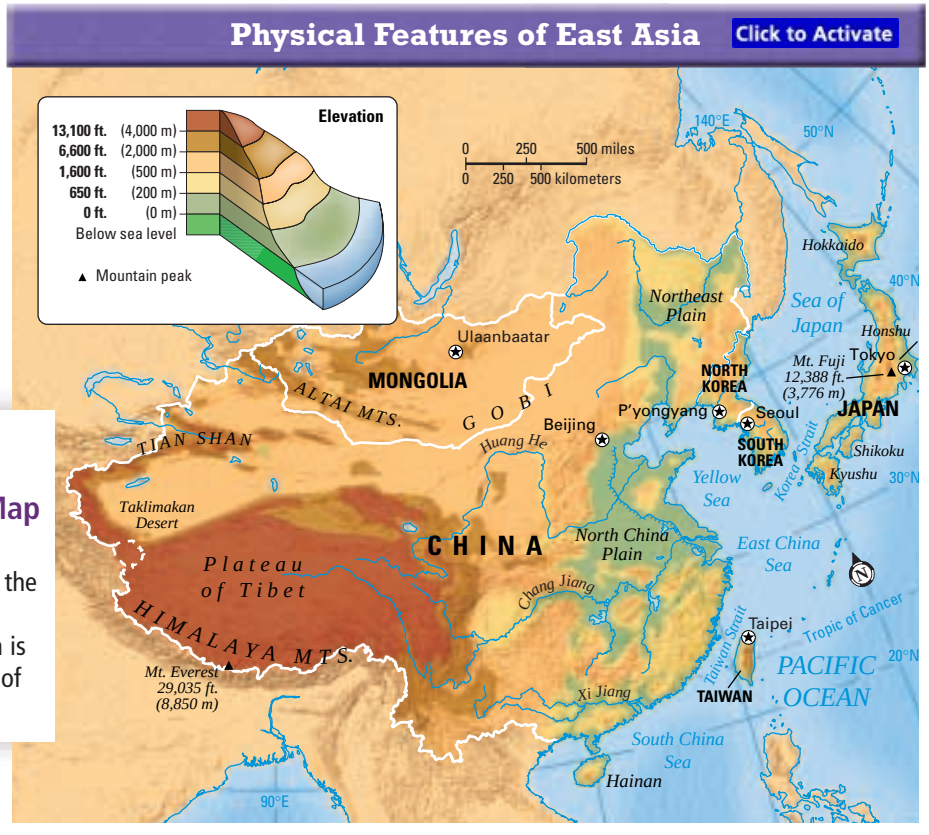
Look at the map below. Notice that the geography within China's boundaries varies greatly. Over much of China's area, mountains rise to great heights. Rivers and plains cover the eastern part of China. To the southwest, the land rises to high plateaus, and to the northwest, it stretches out in long, dry deserts.

China's Mountains Look again at the map. You can see that China's highest mountains are in the west. The Himalayas run along China's southwestern border, dividing China from Nepal. The highest peak in the Himalayas—and in the world—is **Mount Everest,** at 29,035 feet. Notice also the Plateau of Tibet. It spreads across one-fourth of China's land and is the highest plateau on Earth, earning it the nickname "roof of the world."

China's Great Rivers China's three great rivers are the Huang He (hwahng huh), the Chang Jiang (chahng jyahng), and the Xi Jiang (shee jyahng). They all start in the highlands and flow east. The southernmost is the Xi Jiang, as you can see on the map.

BACKGROUND

The Chang Jiang is known in the West as the Yangtze (yang•see).



GEOGRAPHY SKILLBUILDER: Interpreting a Map

1. **Location** • What mountains border the Plateau of Tibet?
2. **Location** • Which is the northernmost of Japan's islands?

North of it, the Chang Jiang winds across China. At over 3,400 miles, this is China's longest river.

Vocabulary

silt: windblown material similar to clay

The northernmost river is the Huang He, or Yellow River. Its name comes from the color of the fine silt that covers the plains along parts of the river. You can see that the Huang He begins in the Plateau of Tibet. On its course east through the North China Plain, it often overflows. Because of the thousands of lives lost in its floods, the Chinese often call the river "China's Sorrow."

China's Deserts Two large deserts span China's northern lands. You can see on the map that the Taklimakan (TAH•kluh•muh•KAHN) covers northwestern China. With an east-west length of about 600 miles, it is one of the world's largest sandy deserts. During the spring, dust storms with the strength of hurricanes occur frequently, lifting the desert's dust as high as 13,000 feet in the air.

East of the Taklimakan, in central northern China, sprawls the Gobi (GOH•bee). In Mongolian, *gobi* means "waterless place." The Gobi's dryness is harsh, and so are its temperatures. In the summer, the Gobi's temperature can rise to 113°F. In the winter, it may get down to -40°F.

Place • Much of the Gobi is made of rock rather than sand. ▲

Japan

Japan is a country of islands that stretch for 1,500 miles across the Pacific Ocean. Look at the map on page 458 to see the four main islands—Hokkaido (hah•KY•doh), Honshu (HAHN•shoo), Shikoku (shee•KAW•koo), and Kyushu (kee•OO•shoo). Honshu is the largest, as well as the home of Japan's capital, Tokyo.

Japan sits atop two tectonic plates that often sink below a third plate. Because of this, Japan is more likely to have volcanic eruptions and earthquakes than are many places on Earth.

Reading Social Studies

A. Drawing Conclusions Why do you think the Japanese built Tokyo where they did?

Mountains and Volcanoes Mountains cover more than 80 percent of Japan's land. Instead of forming ranges, these mountains are blocks separated by lowlands. This formation results from faults, or cracks in the rock, that cause the land either to lift up into a mountain or to drop down into lowlands. The largest stretch of lowlands is the Kanto Plain, where Tokyo lies.

Human-Environment Interaction • More than 100,000 people a year climb Mount Fuji, which is considered sacred in Japan. ▲

Japan's tallest mountain, **Mount Fuji,** is an active volcano. Volcanic eruptions are common in Japan, which is part of the **Ring of Fire**—an area of volcanic activity along the borders of the Pacific Ocean. This is where most of the world's earthquakes and volcanoes occur.

Earthquakes Japan records as many as 1,500 minor earthquakes each year. In 1923, a major earthquake hit Tokyo and its surrounding regions, which you read about on page 469. After 1923, Japan became a world leader in constructing buildings able to withstand the shock of frequent earthquakes.

Climate Japan's climate is largely controlled by monsoons. In the winter, the monsoons bring cold rain and snow to Japan's western coast. In the summer, they bring warm rains to the south and east. During the summer and early fall, storms called typhoons also occur often. A **typhoon** is a hurricane that occurs in the western Pacific.

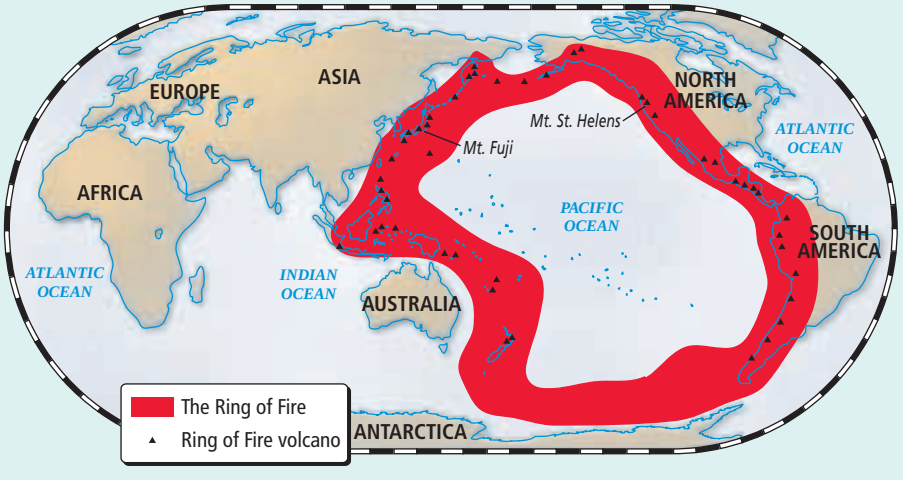
BACKGROUND

Even with their top-notch construction, more than 100,000 buildings were destroyed in 1995 by another major earthquake in Kobe (KOH•BEE).

The Koreas

North and South Korea lie on the mountainous Korean Peninsula, which you can see on the map on page 470. North Korea is a land filled with mountains and valleys. Its major rivers, the Yalu and Tumen, mark the border with China. Its climate is temperate, with cold, dry winters and hot, humid summers.

The Ring of Fire



GEOGRAPHY SKILLBUILDER: Interpreting a Map

1. **Location** • Which continents border the Ring of Fire?
2. **Place** • Is Mount Fuji the only volcano in Japan?

Most of the rain each year falls between June and September, brought on by the monsoons of the Pacific. South Korea is a mix of rugged mountain ranges, coastal plains, and river valleys. Its main rivers are the Han, the Kum, and the Naktong.

Australia

Australia is one of the largest countries on Earth, though it is the smallest continent. Its landscape is unique in that it has not changed dramatically for more than 250 million years. In other continents, such as Europe and North America, major landscape changes have occurred even in just the past 25,000 years.

Flat and Dry Australia Look at the map below. Notice the Great Dividing Range that runs along Australia's eastern coast. This chain is the largest in Australia, but none of these mountains rise higher than 5,000 feet. To their west, vast plains extend across most of Australia. Australians call this huge stretch of interior land the **outback.**

Australia is the flattest continent on Earth, and it is also extremely dry. Deserts cover one-third of the country. The majority of people live along the northern and eastern coasts, where much of Australia's fresh water is found.

Place• Australia is home to many animals that are native only to that continent, such as the kangaroo. ▲

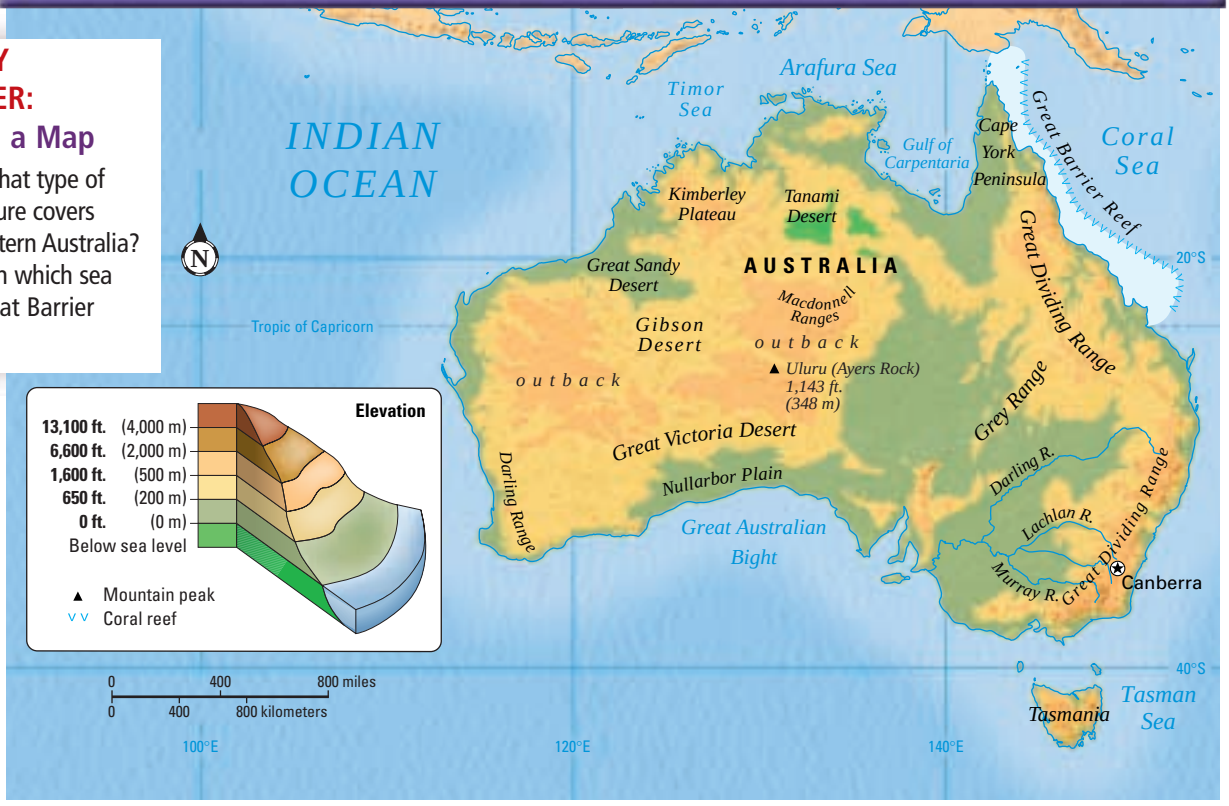
Reading Social Studies

B. Contrasting Contrast the influence of physical features on settlement patterns in Japan and Australia.

GEOGRAPHY SKILLBUILDER: Interpreting a Map

1. **Region •** What type of physical feature covers much of western Australia?
2. **Location •** In which sea does the Great Barrier Reef lie?

Physical Features of Australia



The Great Barrier Reef Off Australia's northeastern coast stretches the world's largest coral reef system, called the **Great Barrier Reef.** Made of more than 2,500 individual reefs and islands, the Great Barrier Reef extends 1,250 miles through the Pacific Ocean. Some of the reefs, called fringing reefs, run along coastlines. Others exist as far as 100 miles from shore. Over 400 species of coral and other ocean life call the reef home.

New Zealand and Other Pacific Islands

Thousands of islands dot the Pacific to the north and east of Australia. On the map on page 458 of the Unit Atlas, you can see that New Zealand's two main islands, which sit about 1,000 miles east of Australia, are among the largest. Most of the others are tiny in comparison.

The roughly 20,000 Pacific Islands are of three types: continental islands, high oceanic islands, and low oceanic islands. Continental islands, such as New Guinea (GIHN•ee) and New Zealand, are parts of Earth's crust that sit above the surface of the water. They often have active volcanoes, even though they were not formed by volcanic activity. High oceanic islands, such as Tahiti (tuh•HEE•tee), are mountainous islands formed by volcanic activity. Most of the Pacific Islands are low oceanic islands, which formed from coral reefs.

SECTION 1 ASSESSMENT

Terms & Names

1. **Identify:** (a) Mount Everest (b) Mount Fuji (c) Ring of Fire (d) typhoon (e) outback (f) Great Barrier Reef

Taking Notes

2. Make a chart like this one to note the physical features in each region. You can list more features than the ones shown here.

Region	Rivers	Deserts
China		
Japan		
The Koreas		
Australia		
The Pacific Islands		

Main Ideas

3. (a) How is Japan affected by the three tectonic plates on which its islands rest?
   (b) Why are some regions of Australia much more suitable for living than others? Which regions are suitable?
   (c) What three types of islands exist in the Pacific?

Critical Thinking

4. **Drawing Conclusions**
   Considering China's geographic features, which areas do you think have large populations? What about small populations?

Think About

- physical features that encourage population settlement
- physical features that would be hard to live in or near

ACTIVITY -OPTION- Make a **diagram** that shows how high oceanic islands and low oceanic islands form.