



STUDY GUIDE

Chapter 32, Section 1

For use with textbook pages 793–798.

The Land

Terms to Know

artesian well A well from which pressurized water flows to the surface (page 794)

coral The limestone skeletons of tiny sea animals (page 795)

atoll A ring-shaped island formed by the buildup of coral reefs on the rim of a submerged volcano (page 796)

lagoon A shallow pool of clear water (page 796)

krill A shrimp-like animal eaten by whales (page 798)

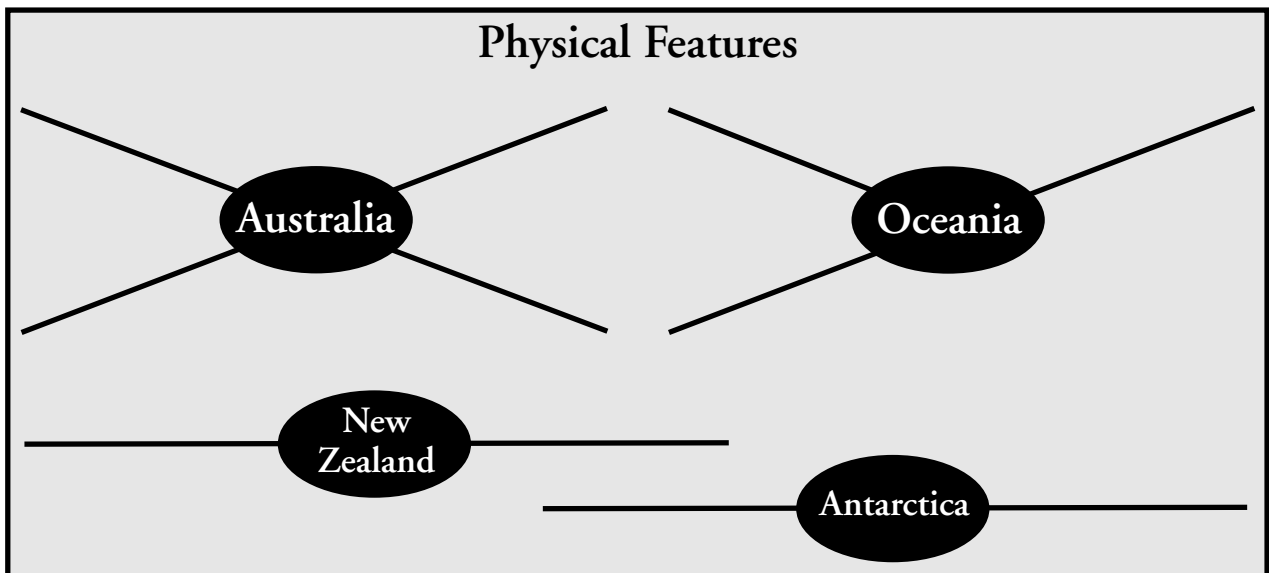
DRAWING FROM EXPERIENCE

What is the “land down under?” Where is the “outback”? What continent is covered with an ice cap? Where is the world’s largest coral reef? These places are all part of a huge area in the South Pacific.

This section focuses on the unique physical geography of Australia, Oceania, and Antarctica.

ORGANIZING YOUR THOUGHTS

Use the webs below to help you take notes as you read the summaries that follow. Think about the physical features of Australia, Oceania, Antarctica, and New Zealand.



(continued)

**STUDY GUIDE****Chapter 32, Section 1****READ TO LEARN** **Introduction** (page 793)

Australia, Oceania, and Antarctica form the South Pacific region. The varied physical geography of this region includes coastal lowlands, mountains, plateaus, islands, and a massive ice cap.

1. What landforms are found in the South Pacific region?

 **Australia: A Continent and a Country** (page 793)

Australia is unique because it is a continent and a country. It is in the Southern Hemisphere, and it has several landforms:

- A. The Great Dividing Range** stretches along Australia's eastern coast from Cape York Peninsula to the island of Tasmania. Most of Australia's rivers begin in these mountains.
- B. The Western Plateau** covers almost two-thirds of Australia. It is located in central and western Australia. Few people live in this "outback" area. Three deserts—the Great Sandy, Great Victoria, and Gibson Desert—cover much of the plateau. South of the Great Victoria Desert lies the Nullarbor Plain. This plain is dry and treeless.
- C. The Central Lowlands** lie between the Great Dividing Range and the Western Plateau. This area of grassland and desert stretches across the middle of Australia. Most rivers and lakes in the lowlands are dry much of the year. In the southeast the Murray River and the Darling River supply water for farming. A large amount of pressurized water called the Great Artesian Basin lies underneath the lowlands. The water gushes out of **artesian wells**, or wells from which pressurized water flows to the surface.
- D. The Great Barrier Reef** lies along Australia's northeastern coast. It is the world's largest coral reef. **Coral** is the limestone skeletons of tiny sea animals. The Great Barrier Reef is a string of more than 2,500 small reefs that stretches for 1,250 miles. It is home to many colorful tropical fish and other sea animals.

Only 10 percent of Australia's land can be farmed, so farmers must use their land and water resources efficiently. Large deposits of mineral sources make Australia a major mining area. It has one-fourth of the world's bauxite and most of the world's opals.

(continued)



2. What are the main landforms in Australia and where are they located?

 **Oceania: Island Lands** (page 796)

Oceania is made up of thousands of islands. It stretches for millions of square miles of the Pacific Ocean. The total landmass of all the islands, however, is less than that of Alaska. Many of the islands were formed by colliding tectonic plates millions of years ago. The islands are part of the Ring of Fire.

Geographers classify the islands of Oceania into three groups based on location, how the islands formed, and the culture of the people who live there.

- A. Melanesia, or “black islands,” lies north and east of Australia.
- B. Micronesia, or “little islands,” stretches north of Melanesia.
- C. Polynesia, or “many islands,” covers more area than the other two groups. It includes Midway Island and New Zealand.

There are three island types in Oceania.

- A. **High islands** were shaped by volcanoes. Between their mountain ranges are valleys that widen into coastal plains. Bodies of freshwater lie inland. Volcanic soil supports farming. Earthquakes and volcanic eruptions still occur on the high islands.
- B. **Low islands** were also shaped by volcanoes. These are ring-shaped islands known as **atolls**, formed by the buildup of coral reefs on the edge of underwater volcanoes. Atolls surround **lagoons**—shallow pools of clear water. Low islands rise only a few feet above sea level. They have few natural resources and little soil.
- C. **Continental islands** were formed by the rising and folding of ancient rock from the ocean floor. Most of the large islands in Oceania are continental islands. Many have active volcanoes. They have plains, mountains, plateaus, and valleys. They have most of Oceania’s mineral deposits such as oil, gold, nickel, and copper.

3. How were the islands of Oceania formed?

(continued)

**🌐 New Zealand: A Rugged Landscape** (page 797)

Most of New Zealand's landmass is made up of its two largest islands:

- A. North Island** has beaches, ancient forests, and rich soil that supports citrus orchards. It has a wide central plateau with active volcanoes and freshwater lakes. Ranchers graze sheep and dairy cattle on the hills east of the plateau.
- B. South Island** is made up mostly of mountains called the Southern Alps. The island also has lakes and rivers. The lowlands on the eastern coast have fertile soil. The western coast has cliffs with narrow inlets and caves.

About 55 percent of New Zealand's land supports crops and livestock. The country has a large supply of hydroelectric power. Geothermal power is generated by the water heated underground by volcanoes. The waters off New Zealand provide the country with a wide variety of fish.

4. What is the landscape like in New Zealand?

🌐 Antarctica: A White Plateau (page 798)

Antarctica is a continent that lies at the southern tip of the earth. The continent is 98 percent covered by a massive ice cap that holds 70 percent of the world's freshwater. The Transantarctic Mountains divide the continent into east and west. East of the mountains is an ice-covered plateau. To the west, the landmass is mostly below sea level, including underwater volcanic islands.

Antarctica contains many mineral resources. International agreements, however, limit activity on Antarctica to scientific research. In research stations, scientists gather information about such things as weather patterns and environmental changes. Off the coasts, fishing boats catch **krill**, a shrimplike animal eaten by whales.

5. What is the main human activity on Antarctica?



STUDY GUIDE

Chapter 32, Section 2

For use with textbook pages 799–803.

Climate and Vegetation

Terms to Know

wattle A strong, interwoven wooden framework used for building homes (page 801)

doldrums A generally windless area near the Equator (page 802)

typhoon Violent storms with forceful winds and rain (page 802)

manuka A small shrub that grows in New Zealand (page 803)

lichen Tiny, sturdy plant that grows in rocky areas (page 803)

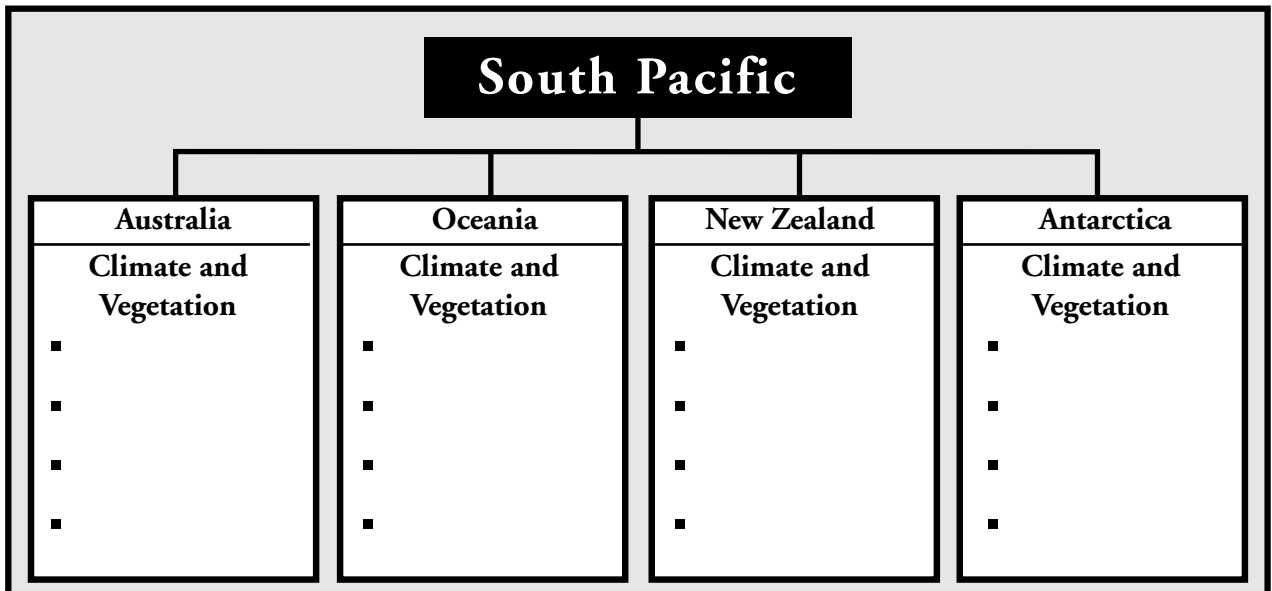
crevasse A deep crack that forms in thick ice or snow (page 803)

DRAWING FROM EXPERIENCE

In the last section, you read about the physical features of Australia, Oceania, and Antarctica. This section focuses on the climate and vegetation of the South Pacific region.

ORGANIZING YOUR THOUGHTS

Use the diagram below to help you take notes as you read the summaries that follow. Think about the kinds of climates and vegetation in Australia, Oceania, New Zealand, and Antarctica.



(continued)



STUDY GUIDE

Chapter 32, Section 2

READ TO LEARN

Introduction (page 799)

Great diversity exists in the climates and vegetation of Australia, Oceania, and Antarctica. Even the ice shelf of Antarctica supports a surprising variety of life.

1. What geographic extremes create the differences in climates and vegetation of Australia, Oceania, and Antarctica?

Australia (page 799)

Since Australia was separated for millions of years from other continents, Australian vegetation is different from anywhere else on earth. These unique plants also vary by climate region within Australia.

- A. A desert climate is found in the Western Plateau. The desert climate has little vegetation.
- B. A steppe climate encircles the desert region of Australia. Yearly rainfall ranges from 10 to 20 inches. The steppe climate supports eucalyptus and acacia trees, small shrubs, and short grasses. Young acacia trees were used by early settlers to make **wattle**. This is a woven wooden framework used for building homes. Some areas support farming.
- C. A humid subtropical climate is found along the northeastern coast.
- D. The southern coasts have a Mediterranean climate, with less rain.
- E. Along the southeastern coast there is a marine west coast climate.

Australia's coastal areas support most of its agriculture.

2. What climates are found in Australia?

Oceania (page 802)

Most of Oceania lies between the Equator and the Tropic of Capricorn, so most islands have a tropical rain forest climate. Oceania has a wet season and a dry season. Low islands get little rainfall. High islands get as much as 150 inches a year. Shrubs and grasses grow on dry, low islands.

(continued)

**STUDY GUIDE****Chapter 32, Section 2**

Coconut palms and other trees grow on islands with more rainfall. A generally windless area called the **doldrums** is found along the Equator. The doldrums sometimes change to violent wind and rain storms called **typhoons**.

3. Why does most of Oceania have a tropical rain forest climate?

 **New Zealand** (page 802)

Most of New Zealand has a marine west coast climate. Ocean winds warm the land in winter and cool it in summer. Geographic differences in the country cause climate variations. North Island's central plateau is warm during summer, but its mountaintops may have snow year-round. Mountaintops with western winds get the most rainfall. The Southern Alps on the South Island have an average annual rainfall of 315 inches. Humidity in inland areas is about 10 percent lower than in coastal areas.

About 90 percent of the country's plants are native only to New Zealand. A shrub called **manuka** grows where prehistoric volcanic eruptions destroyed ancient forests. Other vegetation includes kauri trees, evergreen trees, willows, and poplars imported from Europe.

4. What causes the variations in the climate and vegetation of New Zealand?

 **Antarctica** (page 803)

Antarctica is the earth's highest, driest, windiest, and coldest continent. The Antarctic Plateau is drier and colder than the coastal areas. A small area on the Antarctic Peninsula lies in the tundra climate zone. Vegetation in Antarctica includes some mosses, algae, and **lichens**—tiny sturdy plants.

The heavy weight of Antarctica's ice cap causes it to move toward the coasts. As it moves, the ice breaks up, causing huge cracks called **crevasses**.

5. What kind of climate and vegetation does Antarctica have?
