

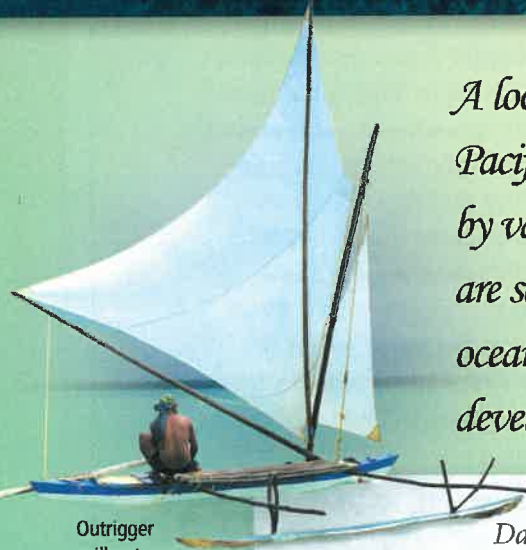
The Pacific Islands

A look at a map will tell you that the Pacific Islands region is characterized by vast expanses of water. The islands are scattered over thousands of miles of ocean, allowing different cultures to develop in isolation from each other.

A Huli man of Papua New Guinea applies face paint.



Outrigger sailboat, Cook Islands



Daba Namona! (“Good morning,” in Motu.) My name is Jean Vanessa.

I live in Vabukori, a village in Port Moresby, the capital of Papua New Guinea. I live with my mother, grandmother, four younger brothers, and my younger sister. My mother is a journalist, and my grandmother bakes bread for the family in a drum oven. Sometimes we sell the bread. My grandfather, whom I loved very much, passed away last year. He was Motu, but my grandmother’s language is Susu.

Our house is big, built on stilts, and painted blue. It is a few yards away from the village square where we have meetings and church gatherings and play sports. Our house has one big bedroom. My mum, my sister, my three little brothers, and I sleep in this room. The others sleep in the main living room area.

For breakfast we usually have tea and bread with fillings such as Vegemite,[®] jam, or peanut butter, and sometimes spaghetti or baked beans. Cereal is expensive, so it’s a real treat. On weekends, we often have fried flour (pancakes) for breakfast. After breakfast, I take a bus to school. All my classes are taught in English.

I really like Christmas and New Year’s. In Vabukori, we celebrate with much feasting and singing. The villagers are divided into two groups. On Christmas Day one group cooks for the other one. The other group sings songs about Bible stories from dawn to dusk. On New Year’s Day the groups exchange roles.



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Section
1

Natural Environments

HOLT
Geography's Impact

Watch the video to understand the impact of nonnative wildlife.

READ TO DISCOVER

1. What are the main physical features of the Pacific Islands, and what physical processes affect them?
2. How is the Pacific Islands region divided into subregions?
3. What climates, biomes, and resources does the region have?

Reading Strategy

READING ORGANIZER Before you read this section, make a table—labeled The Pacific Islands—with three columns. Label one column An Ocean Realm, the second column Three Island Groups, and the third column Climates, Biomes, and Resources. As you read this section, write information you find about the Pacific Islands in the appropriate column. Include key terms and their definitions.

IDENTIFY

Intertropical Convergence Zone (ITCZ)

DEFINE

atoll

LOCATE

Tahiti

Melanesia

Micronesia

Polynesia

Papua New Guinea

Locate, continued

Solomon Islands

Vanuatu

New Caledonia

Fiji

Kiribati

Northern Mariana Islands

Marshall Islands

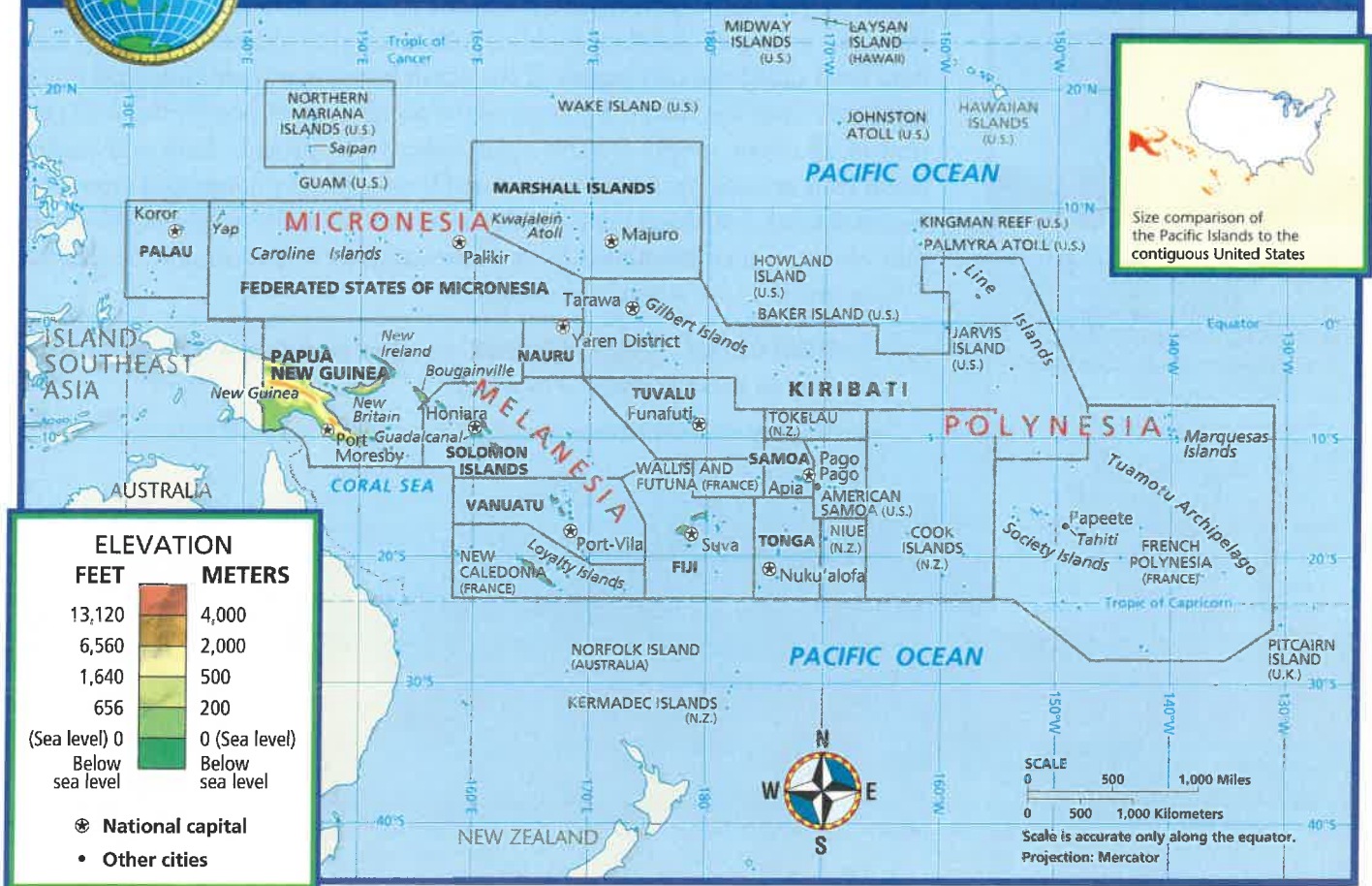
Guam

Marquesas Islands

Samoa

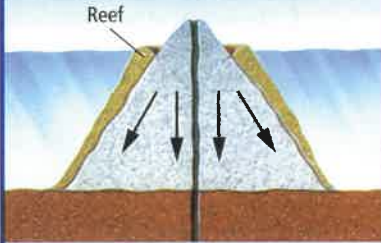


The Pacific Islands: Physical-Political

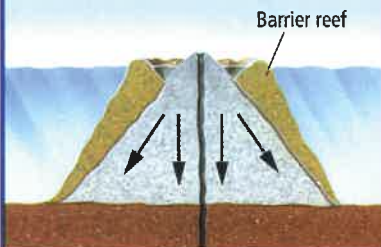


The Formation of an Atoll

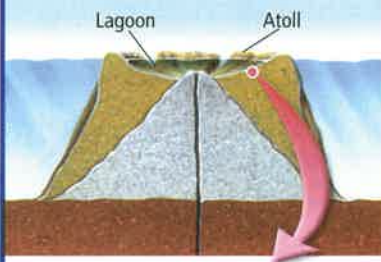
A. A coral reef forms along the edges of a volcanic island.



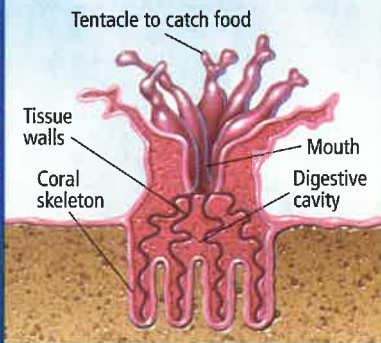
B. As the island sinks into the ocean floor, the coral reef grows upward and forms an offshore barrier reef.



C. When the island is submerged, the reef forms an atoll. A ring of coral islands surrounds a shallow lagoon.



A coral polyp builds a limestone skeleton that bonds it to a reef. The skeletons of many dead coral polyps form a reef. The coral reef pictured shelters a wide variety of marine life and attracts many fish.



An Ocean Realm

The Pacific Ocean is the largest natural feature on Earth. It covers about a third of the world's surface. More than 10,000 islands lie within this region. Yet the total land area of the islands is very small. Most of them are tiny coral islands where no people live.

High and Low Islands Geographers classify the islands of the Pacific as either high islands or low islands. High islands can be further divided into continental and oceanic islands. Both types of high islands tend to be mountainous and rocky, and both may have volcanoes. Continental islands are formed from continental rock and lie on a shallow continental shelf such as that of Australia. New Guinea, the world's second-largest island, is a continental island. Oceanic islands such as Tahiti are simply volcanic mountains that have grown from the ocean floor to its surface.

Low islands form from coral. They are usually small and flat. Low islands also tend to have a characteristic ring shape. A ring-shaped coral island, or a ring of several islands linked by underwater coral reefs, is called an **atoll**. Within this ring lies a body of water called a lagoon. Kwajalein (KWAH-juh-luhn) Atoll in the Marshall Islands is about 80 miles (130 km) long and 20 miles (30 km) wide. However, most atolls are much smaller.



FOCUS ON GEOGRAPHY

Coral Reefs Coral is formed by colonies of tiny marine animals. Millions of these tiny creatures' skeletons build up into reefs on a volcanic base. Coral reefs have been called the rain forests of the ocean because of their biological diversity. Reefs cover less than 0.2 percent of the ocean floor. However, about 25 percent of all ocean species inhabit coral reefs, which provide food and shelter. Coral reefs around the world face natural threats like typhoons and crown-of-thorns starfish, which eat coral. Reefs can recover from these assaults. However, they are now also threatened by human activities. Pollution and destructive fishing practices are among the dangers.

✓ **READING CHECK: Physical Systems** How might the destruction of the world's coral reefs affect the biological diversity of the oceans?

Physical Processes High islands and low islands tend to have very different environments. The high islands' volcanic soils are usually rich. Many high islands support rain forests. Variations in elevation, rainfall, and soil lead to differences in plant life within one island as well as between islands. Low islands, on the other hand, are usually much less fertile. They often have no sources of freshwater.

The Pacific is the site of active tectonic processes. Many islands have active volcanoes, and many more volcanoes lie deep beneath the ocean's surface. Earthquakes are common in some areas. Tsunamis can present a danger as well to coastal areas.

Tectonic processes have also shaped the Pacific Ocean's floor. The Pacific's average depth is 14,000 feet (4,300 m). However, the deepest point, in the Mariana Trench, is more than 36,000 feet (11,000 m) below sea level. Oceanic trenches are the result of subduction. Volcanic ridges, visible on the map as chains of islands, often run parallel to the trenches. The Northern Mariana Islands and Tonga Islands are examples of volcanic island chains alongside deep trenches.

READING CHECK: *Physical Systems* Which type of Pacific island can often support rain forests, and why?

Three Island Groups

Geographers divide the Pacific Islands into three large subregions—Melanesia, Micronesia, and Polynesia. These groupings are based on the cultural variations and spatial arrangement of the islands.

Melanesia lies closest to Australia. It includes the eastern half of New Guinea, which makes up most of Papua (PA-pyoo-h-uh) New Guinea. From there Melanesia stretches east to include the Solomon Islands, Vanuatu (van-wah-TOO), New Caledonia, and Fiji. Most of the Melanesian islands have mountains and volcanoes.

Micronesia lies east of the Philippines, mostly north of the equator. Micronesia includes the Caroline Islands, the Gilbert Islands of Kiribati, the Northern Mariana Islands, and the Marshall Islands. These are a mix of high islands and low islands. The Northern Mariana Islands are a chain of volcanoes. Guam, the largest, is made up of a limestone plateau in the north and volcanic hills in the south. In contrast, the Gilbert Islands are all coral atolls.

Polynesia is the largest of the three subregions. It covers a huge triangle with its corners at Easter Island, the Hawaiian Islands, and New Zealand. See the unit atlas for Easter Island's isolated location about 2,000 miles (3,200 km) west of South America. Polynesia also includes the Cook, Marquesas, Samoa, Society, and Tonga Islands, and the Tuamotu Archipelago.

READING CHECK: *Places and Regions* What are the three subregions of the Pacific Islands?

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KEYWORD: SW3 CH32

FOR: Web sites about the Pacific Islands



The Mariana Trench is the deepest known place on Earth's surface. The trench is more than 1,580 miles (2,550 km) long.



INTERPRETING THE VISUAL RECORD

The band of clouds in the photo marks the Intertropical Convergence Zone (ITCZ), which moves north or south of the equator throughout the year to the area with the warmest surface temperature. Does this photo show the ITCZ north or south of the equator? Which hemisphere was experiencing summer when this photo was taken? How can you tell?

Climates, Biomes, and Resources

Most of the region's islands lie between the Tropic of Cancer and the Tropic of Capricorn. As you might expect, climates there are generally hot with high rainfall. Only Papua New Guinea, with its mountainous interior, has areas with highland climates. Here mountain peaks have

tundra and alpine grasslands despite their location in low latitudes. Some parts of the region have distinct wet and dry seasons. For example, in the far western Pacific, wet and dry seasons are influenced by monsoons. In Papua New Guinea and some other areas, heavy rainfall supports thick tropical rain forests.

Trade winds play an important role in the climates of the islands. Northeast trade winds flow from the Tropic of Cancer. Southeast trade winds flow from the Tropic of Capricorn. The area where these prevailing winds meet near the equator is called the **Intertropical Convergence Zone (ITCZ)**. This area has generally calm humid air at low elevations. However, the warm, moist air of the ITCZ condenses and cools as it rises, causing heavy rainfall. Typhoons most often occur in the western Pacific, while the southeastern Pacific has very few. These swirling oceanic storms can be very destructive.

Fish and shellfish are important resources for the region. Lobsters, octopuses, sharks, shrimp, and tuna are just a few of the sea creatures people catch. Cultured pearls are harvested from oysters in French Polynesia and the Cook Islands. Other resources are less plentiful. Papua New Guinea and some other islands of Melanesia export timber. Only the large continental high islands have useful metal deposits. Papua New Guinea has major gold and copper deposits. New Caledonia is rich in nickel.

READING CHECK: *Places and Regions* What are the main natural resources of the Pacific?



Review

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Identify

Intertropical Convergence Zone (ITCZ)

Define

atoll

Working with Sketch Maps

On a map of the Pacific Islands region that you draw or that your teacher provides, label Tahiti, Papua New Guinea, Solomon Islands, Vanuatu, New Caledonia, Fiji, Kiribati, Northern Mariana Islands, Marshall Islands, Guam, Marquesas Islands, and the Samoa Islands. Outline Melanesia, Micronesia, and Polynesia. Which of the three subdivisions lie mostly south of the equator? Which lies mostly north of the equator?

Reading for the Main Idea

- Places and Regions** What physical processes have shaped the region's islands? What environmental hazards affect the region?
- Physical Systems** What factors form the basis for dividing the Pacific Islands into three subregions?

Critical Thinking

- Analyzing Information** Why does New Guinea have highland climates? What factors affect the region's climates?
- Drawing Inferences and Conclusions** How do you think the distribution of mineral resources in the region relates to how different islands are formed?

Organizing What You Know

- Create a chart like the one shown below. Use it to make generalizations about the two types of islands found in the region.

	High islands	Low islands
Surface landforms and elevation		
Soil-building process		
Soil fertility		
Vegetation		

Section 2

History and Culture

READ TO DISCOVER

1. What are some important events in the history of the region?
2. What are the traditions and culture of the region like?

Reading Strategy

TAKING NOTES

Taking notes while you read will help you understand and remember the information in this section. Your notes will be useful for reviewing the material. Use the headings in this section to create an outline. As you read about the history and culture of the Pacific Islands, write details you learn beneath each heading. Include key terms and their definitions.

DEFINE

trust territories
pidgin languages
matrilineal

LOCATE

Wake Island
American Samoa

History

Researchers have used archaeology and other evidence to learn that waves of people from Southeast Asia settled the region. Much later, Europeans and others arrived and brought many changes.

Migration Patterns Humans may have lived on New Guinea at least 33,000 years ago. Human migration into the Pacific may have begun even earlier than that. (See Geography for Life: Migration into the Pacific.) Over thousands of years, different peoples spread to different island groups. They sometimes mixed with earlier settlers. Over time, the peoples of Micronesia and Polynesia developed some distinct cultural features and became different in appearance. While the peoples of the two regions are different from each other, they share many cultural features. On the other hand the third region, Melanesia, is more distinct.

Polynesians created these stone figures, the tallest of which stands 37 feet (11 m) high, on Easter Island, or Rapa Nui (RAH-pah noo-ee), as it is also known. After a period of peace and prosperity that lasted from about A.D. 1000 to 1500, rapid population growth and deforestation created an environmental crisis. Hunger and fighting over scarce resources devastated the island's people.





The French—like the British in Australia—used their colony in New Caledonia as a prison. They sent more than 22,000 French prisoners there between 1864 and 1897.

INTERPRETING THE VISUAL RECORD

Captain James Cook, one of Europe's greatest explorers, led three voyages to the Pacific Ocean. William Hodges was the official artist on Cook's second trip. Hodges painted this view of Matavai Bay, in Tahiti, in the 1770s. How might this painting have influenced Europeans' perceptions of the Pacific Islands?

Cultural patterns, languages, and physical traits there all differ from those in Micronesia and Polynesia. Many Melanesians seem to be genetically linked to the Aborigines of Australia. However, peoples and cultures within Melanesia vary a great deal. Movement and mixing of peoples may have gone on for thousands of years. The picture is not complete, and more research may provide new details.

✓ **READING CHECK:** *Human Systems* Where did the first settlers of the Pacific Islands come from?

European Arrival Europeans began to explore the Pacific Islands in the 1500s. Ferdinand Magellan, a Portuguese navigator working for Spain, sailed across the Pacific in 1520–21. Other explorers followed. Spanish, Dutch, English, and French sailors came to explore, trade, spread Christianity, and claim territory. Later, Germany, Japan, and the United States entered the race for colonies in the area. The United States captured Guam and the Philippines from Spain during the Spanish-American War in 1898. By the end of the 1800s, foreign powers controlled nearly the whole region.

At first, colonial control was limited. American and European whale hunters sailed into the Pacific, sometimes setting up small outposts. Before the discovery of petroleum, whale oil was very valuable for lighting and industrial uses. With little or no regulation by the colonial countries, the whalers and traders badly exploited the people of the islands. This disrupted traditional cultures in many areas. Some Pacific islanders were enslaved. Unknowingly, the Europeans also spread deadly diseases, including measles and influenza.

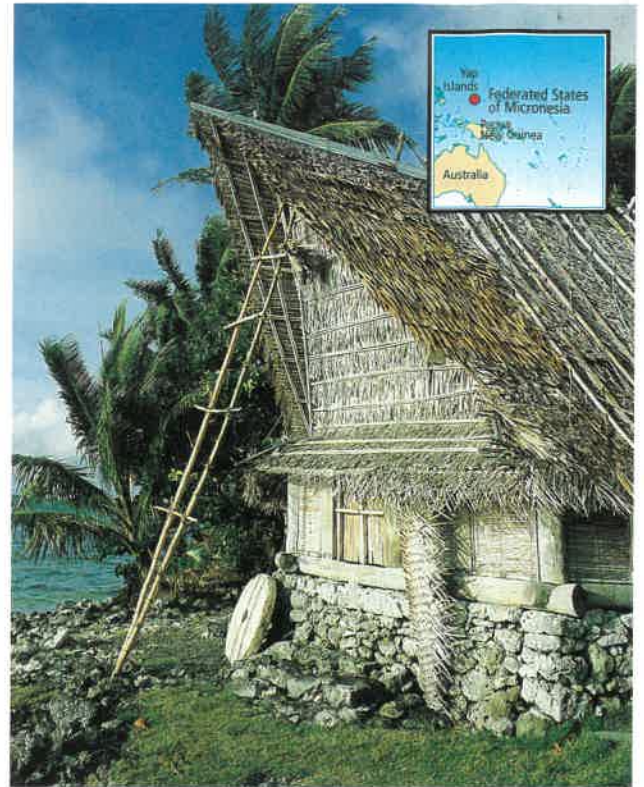
Over time, colonial rule became more organized. Colonial powers set up plantations and military bases. The British brought thousands of workers from India to work on sugar plantations in Fiji. Despite the colonial presence, the Pacific Islands remained uninvolved in global politics until the 1940s. World War II then brought sudden changes to the Pacific region. Many



islands became battlefields between 1941 and 1945. Others were used as bases. Armies, planes, and ships moved through the region. Japan conquered many islands early in the war. Over time, the United States and its allies pushed back the Japanese and defeated them. At the end of the war, the United Nations made some islands **trust territories**. These were areas placed under the control of another country while they prepared for independence.

Independence Since the end of World War II, the islands of the Pacific have moved away from colonialism. Some have become fully independent. A few other islands are still colonies of or are otherwise associated with an outside country. Guam, Wake Island, and American Samoa are U.S. territories. The Northern Mariana Islands form a commonwealth with the United States, similar to Puerto Rico's situation. The Federated States of Micronesia are in free association with the United States. This status allows their citizens to work in this country. In return, the United States can keep military bases on the islands. Australia, Chile, France, New Zealand, and the United Kingdom also have territories in the Pacific.

✓ **READING CHECK:** **Human Systems** Why did Europeans and other outsiders come to the Pacific Islands?



A piece of traditional stone money leans against the wall of this men's meeting house on the island of Yap. Although the U.S. dollar is the common currency in Yap, the stone disks are used for some major transactions, such as land purchases.

Traditions and Culture

Each of the societies of the Pacific developed its own culture. Despite the many variations, it is possible to make some generalizations about cultural features. Groups on the same island or within an island chain often shared cultural characteristics. Some similarities extended through a subregion or even through the entire region.

Today the Pacific Islands are home to a great number of different ethnic groups and languages. How did this happen? Huge stretches of ocean between islands allowed different cultures and languages to develop independently from one another. On New Guinea, thick rain forests and rugged mountains separated different groups of people in a similar way. Today the peoples of Papua New Guinea speak more than 700 different languages. Some of them are spoken by only a few hundred people.

Reflecting the lasting influence of colonialism, English and French are used in government and education in many parts of the region. To communicate within island groups where languages differ, some Pacific peoples have developed simplified languages based on English. These are called **pidgin languages**.

Education Almost all children in Polynesia and Micronesia now receive education through the high school level. Schooling is not yet available to everyone in Melanesia. There are several universities in the Pacific Islands. Most teach mainly in English, but a French-language university has locations in both New Caledonia and Tahiti.

Navigation Skills of the Pacific Islanders

To the untrained eye, the open ocean looks empty and featureless. How would you find your way from one tiny island to another? What if you were in a wooden sailboat without a compass, radio, or other modern instruments?

The sailors of the Pacific Islands used many skills to navigate the ocean. At the start of a trip, they would take their bearings from landmarks on shore to plot their direction. Then they would note the rising points of certain stars and steer by "star paths." Winds and currents were also familiar to the sailors. The flights of birds and the movements of clouds provided clues. The sailors noted the reflections of lagoons on the bottoms of clouds. They could even tell the way waves were deflected off of distant islands. Understanding all these signs helped these sailors reach their destinations, sometimes across thousands of miles of ocean. People of the Pacific Islands still use many of these skills.

Expert navigators of the Pacific Islands teach others how to use a compass based on the locations of certain stars.



Religion Early traditional religions of the Pacific had some similarities. People commonly worshipped several gods and goddesses. Each supernatural being was linked to specific areas of human life or natural phenomena. Carved statues, costumes, masks, and dance were usually part of religious rituals. The spirits of ancestors also were important to some peoples.

Christianity is the main religion in the Pacific Islands today. Roman Catholic and Protestant missionaries spread their faiths through the area during the colonial period. Churches are important to community life in many parts of the region. However, people still practice local religions in parts of Melanesia, including Papua New Guinea.

✓ **READING CHECK:** **Human Systems** How did French, English, and Christianity spread to the Pacific Islands?

Food Before Europeans came, three root crops—sweet potatoes, taro, and yams—were among the key foods in the Pacific Islands. Three tree crops—bananas, breadfruit, and coconut—were also important to the diet. The coconut palm was particularly useful. Pacific Islanders ate the soft flesh of the coconut and drank the milk. They used the shells as containers and got fibers from the coconut's outer husk. The people also made roofs and baskets from coconut palm tree fronds. Rice was the only grain grown in the region. It was grown only in parts of the Mariana Islands.

Around the Pacific, fish are the main source of protein. Before European contact, the domesticated animals of the Pacific Islands were limited to chickens, dogs, and pigs. People on some islands ate fruit bats. Not all these animals were found on all islands. For example, no dogs lived in the Marquesas Islands. Easter Island had only chickens. Many islands had no domesticated animals at all. In general, people served meat—especially pigs—only at special celebrations. In Samoa, for example, an occasion's importance could be measured by the number of pigs served.

Today imported foods such as canned meat, boxed cake mixes, and soft drinks are a growing part of people's diet. The need for money to buy imported goods has pushed many farmers to switch to growing cash crops such as sugarcane for export.

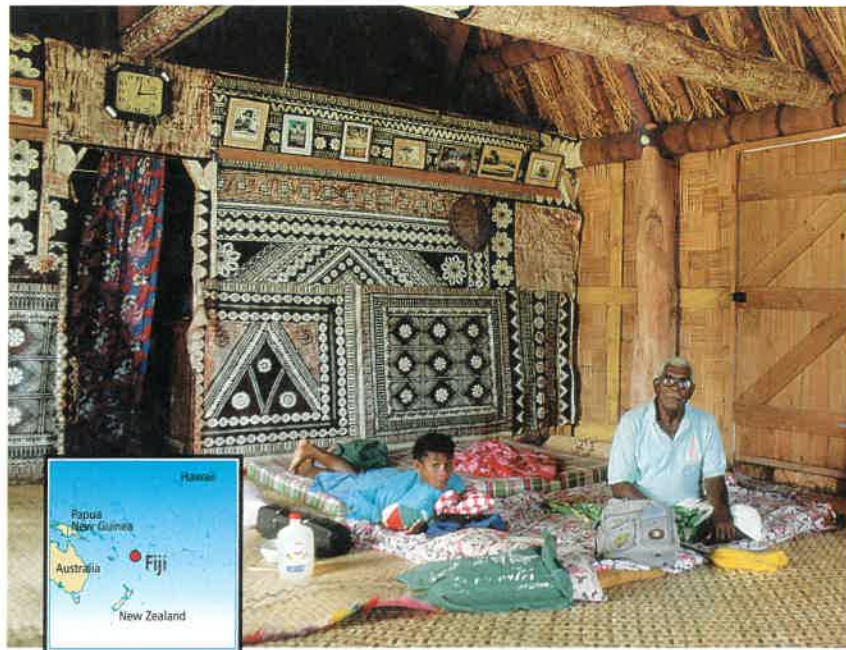
Traditional Societies Historically, people in the region tended to be organized into clans or tribes. They lived in places that ranged from small villages to communities with thousands of people. Patterns of social interactions within these groups had some features in common.

Polynesian groups often had complex rules of behavior and social ranks. On some islands, like Tahiti and Tonga, political status was kept within certain families. Individuals of high rank had great power over the common people. Chiefs distributed land and organized work such as the digging of irrigation systems. Competition for land, resources, and status often led to war.

Elsewhere in the Pacific, people placed less emphasis on inherited rank. People could gain status by giving feasts or presenting valuable gifts. They could also gain status by organizing trade with other groups or other islands. Many Melanesian peoples selected a leader through a kind of competition. A leader won supporters through his abilities or his wealth. Marriage or descent from an important family could also help determine leadership. The amount of power a leader held varied from group to group.

One interesting feature of Micronesia was that local groups were often **matrilineal**. That is, people traced kinship through the mother. When a marriage took place, the husband became part of the wife's clan, rather than the other way around. In some societies, women held high status. For example, Tongan women outranked men in several situations.

Art in the Pacific Islands was often connected to religion. Wood carvings, for example, usually showed gods and ancestors. Today island artists create similar carvings and sell them to tourists.



This Fijian chief's home contains traditional handicrafts. Fiji has a Great Council of Chiefs that elects the country's president.

✓ **READING CHECK:** **Human Systems** How did a Melanesian leader win his position?

Section **2**

Review

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Keyword: SW3 HP32

Define

trust territories, pidgin languages, matrilineal

Working with Sketch Maps

On the map you created in Section 1, label Wake Island and American Samoa. In which of the Pacific Islands' three subregions is American Samoa located?

Reading for the Main Idea

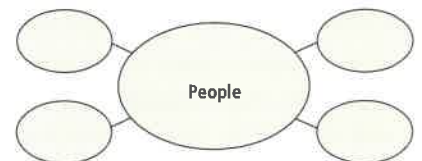
- Environment and Society** What food crops did Pacific Islanders grow before contact with Europeans?
- Human Systems** What six foreign countries have territories in the Pacific?

Critical Thinking

- Analyzing Information** How did physical features affect migration and the distribution of culture groups in the region?
- Analyzing Information** How is the colonial history of the Pacific Islands reflected in the region's culture today? How has importing food changed the region?

Organizing What You Know

- Create word webs like the one shown below to describe the people, languages, religions, educational systems, food, and traditional customs of the region.



Geography for Life

Migration into the Pacific

To learn about the past, geographers study many clues. One great historical mystery is how the remote and numerous Pacific Islands were settled. Geographers have drawn from different areas of study to map the migration and settlement of the Pacific Islands.

One idea developed after a geographer drifted on a raft in the ocean for some time. He proposed that South Americans could have drifted west across the Pacific to reach Polynesia. Evidence from the field of botany may support this theory. Polynesians raise sweet potatoes. However, the plant is native to South America.

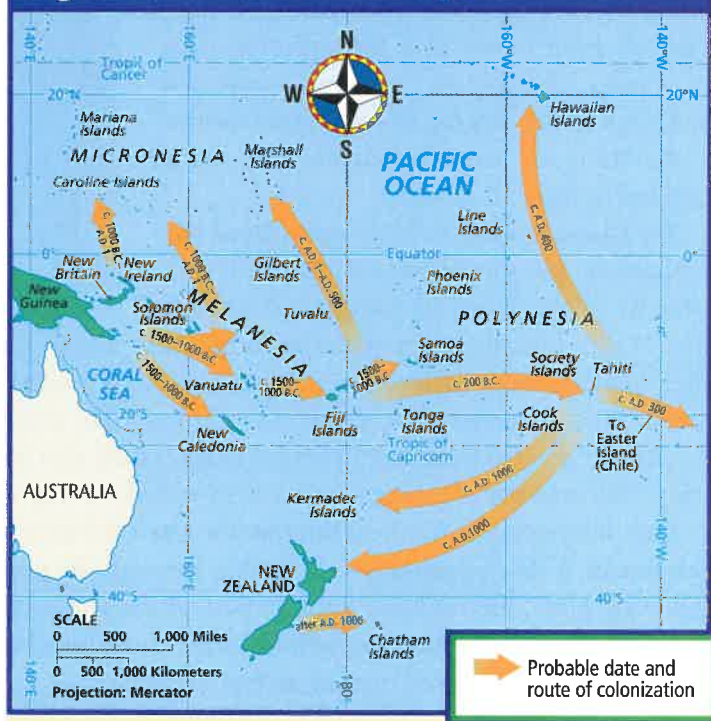
Geographers also study what cultures leave behind. For example, a type of pottery called Lapita ware is found throughout the western Pacific region. Lapita ware is named for a certain site in New Caledonia. These ceramic vessels are of many types and are highly decorated. The people who made this pottery had excellent navigation and canoe-building skills. They were also farmers. Archaeologists have compared samples of pottery from the region's different islands. They concluded that the Lapita culture spread from Fiji to Tonga and Samoa. Fiji and Tonga may have been settled by 1300 B.C.

Physical geography can also offer hints about the islands' settlement. For example, when ocean levels were lower during the ice ages some Pacific Islanders may have traveled across land bridges. At that time, New Guinea and Australia were joined by dry land.

Today most Polynesians believe their people came from places to the west—like Indonesia and the Philippines. The islands of Southeast Asia are large and close together. It is likely that mainland people who needed new fishing areas and land set off for the nearby islands. Overpopulation of their homeland was probably a major factor. After these travelers perfected their navigation skills, their voyages took them farther east. Eventually, they migrated through the Melanesian islands into Polynesia.

People from other parts of the world, such as South America, may have visited the islands. However, the people who actually settled the islands were most likely from Southeast Asia. Geographers think Polynesian migration and settlements east and north eventually formed a huge triangle in the Pacific Ocean. (See the map.) The cultures

Migration and Settlement of the Pacific Islands



INTERPRETING THE MAP Which of the three subdivisions of the Pacific Islands was settled first? How might the winds in this area have affected early migration patterns?

that evolved in central Polynesia had their beginnings in Tonga and Samoa. From there, some people moved eastward to the Marquesas Islands. During the next 200 years, one group went south to Easter Island and another to the Hawaiian Islands. By about A.D. 500, Polynesians had spread throughout the region, with the exception of New Zealand, which they reached in about A.D. 1000.

Applying What You Know

- Summarizing** What are two theories about how the Pacific Islands were settled?
- Evaluating** Based on what you know, what geographic tools would you use to learn about how your state was settled?

Section 3

The Region Today

READ TO DISCOVER

1. What are the economies of the Pacific Islands region like?
2. What are some demographic characteristics of the region?
3. What challenges do the people of the region face?

Reading Strategy

READING ORGANIZER Create a spider map on a sheet of paper. Label the circle the Pacific Islands Today. Create legs for Economy; Population and Migration Today; and Facing Challenges. As you read the section, write main ideas and supporting details beneath each leg. Include key terms and their definitions.

IDENTIFY

Exclusive Economic Zone (EEZ)

DEFINE

copra

phosphates

LOCATE

Yap

Nauru

Port Moresby

Suva

Papeete

Economy

The region's economies have changed as they have become linked with the global economy. However, regional trade networks linked the islands long before European contact. The uneven distribution of resources, even on the larger islands, made trade essential. Trade networks not only stretched throughout island chains but also operated across wide areas of the Pacific. Traders carried goods such as feathers, food, mats, shells, spices, and wood in their canoes. Trading sometimes took on symbolic or political meanings. For example, many people in the Carolines offered yearly gifts to the chiefs of villages on the island of Yap. In exchange, the Yapese chiefs allowed people from the Carolines to continue to use land that the Yapese had claimed.

More recently, development in the region has been slow. Industries here face a number of hurdles. Local markets are small, and raw materials are limited. The need to import raw materials and export finished products adds to the cost of goods made in the region. For these reasons, the Pacific Islands region overall is poor. On many islands, people still rely on fishing and subsistence farming for food. Many of the main crops are those grown long ago. Coconut oil and **copra**—dried coconut meat—have been major exports. Some plantations grow introduced crops like cacao, pineapples, and vanilla.

Each country of the Pacific controls an **Exclusive Economic Zone (EEZ)**. These zones stretch 200 nautical miles (370 km) from each country's shores. The countries can charge fees for economic activities within their EEZs. Fees paid by foreign businesses, particularly big tuna-fishing companies, provide much-needed income.

Mining has become important in Papua New Guinea, New Caledonia, and Nauru. The people of the Pacific may someday profit from the mining of metal deposits from the ocean floor. The technology needed to mine these minerals may not be practical for many years, however.



Workers process pineapple in a Cook Islands factory. Growing pineapples has caused extensive soil erosion on some of these islands.

Some islands have tried to move toward a manufacturing economy. The Northern Mariana Islands, Cook Islands, Fiji, and Tonga export textiles and clothing. Tourism provides more income than manufacturing, however. Clear blue water, white sand, and island culture draw visitors from around the world, particularly Japan and the United States. Tourism is a vital industry for some places, such as Tahiti and Tonga. Other islands have attracted few tourists.

✓ **READING CHECK: Places and Regions** What role might technology play in the development of the region's resources?

Population and Migration Today

Overall, the population of the Pacific Islands is low. Even Papua New Guinea, which is larger than California, has only about 5 million people. However, some of the smaller island countries are very crowded.

There are few big cities in the region. Port Moresby in Papua New Guinea stands out as the largest city. It has a population of about 200,000. Suva, the capital of Fiji, is home to about 170,000 people. Papeete, a city on the island of Tahiti, has a population of about 24,000. It is the capital of French Polynesia and a regional center for tourism, transportation, and trade.

Although the cities of the Pacific are not large, the region saw rapid urban growth in the late 1900s. Population movement from island to island has also increased. People tend to move to cities and the more populated islands. At the same time, there is a great deal of emigration or movement out of the region. Many Pacific Islanders move to Australia, New Zealand, and the United States. The reasons for all three of these patterns are similar. The populations of most islands in the region have very high rates of natural increase. In fact, some of those rates are among the highest in the world. Birthrates in the Pacific have remained high while death rates have fallen. Populations have grown rapidly, straining resources. This is particularly true in the smaller islands. The search for

jobs, education, and a better standard of living pushes people to move to other islands or to other regions.

While emigration may keep a population from growing too quickly, it can also cause problems. Young productive workers are often the ones who move away. As a result, some islands have a shortage of skilled labor.

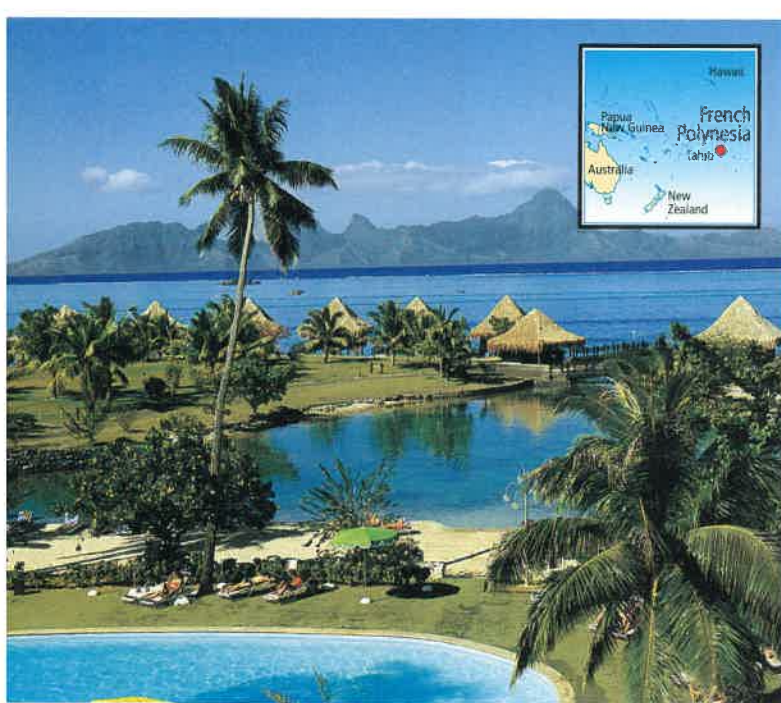
✓ **READING CHECK: Human Systems** What are the causes of migration within and out of the region?

Facing Challenges

In addition to rapid population growth, the region faces other challenges. These include concerns about how economic development will affect the environment. Political problems and issues of nuclear testing and climate also cloud the region's future.

With their small land area, many islands are particularly vulnerable to environmental destruction. For

Tourists relax at a hotel on a small island west of Tahiti. Visitors can enjoy a range of activities—from windsurfing to watching a guide feed sharks.



example, cutting forests in Melanesia could lead to rapid soil erosion. Also, mining has polluted some streams in Papua New Guinea. In addition, overfishing may reduce future catches.

The tiny island country of Nauru—less than 8 square miles (21 sq km) in area—displays an extreme case of environmental exploitation. Mining **phosphates**—chemicals used to make fertilizer—brings essential income to Nauru. The government shares some of the profits with Nauru’s people. It has invested the rest of the money. Those investments may provide income after the supply of phosphates runs out. However, strip mining has steadily ruined most of the island’s surface.

Another concern involves past nuclear weapons testing. France, Great Britain, and the United States used their Pacific territories as nuclear testing grounds. They exploded bombs from the 1940s to the 1960s. France continued underground testing until the late 1990s, even though French Polynesians and other countries protested. Some people fear the radiation from the tests may cause health problems in the future.

Finally, the possibility of global warming is a special worry for the people of the Pacific. As you read earlier, many researchers believe worldwide temperatures are rising. As a result, melting polar ice might raise ocean levels. If the ocean rises even slightly, many low-lying islands will be submerged or become more vulnerable to storms.

Some islands have also suffered from political violence in recent years. Beginning in the 1970s, Papua New Guinea’s military fought against a group demanding independence for the island of Bougainville. This fighting continued through the 1990s. Ethnic divisions have led to another conflict in Fiji. Indo-Fijians make up more than half of that country’s population. They are descended from workers the British brought from India. Beginning in the 1970s, some ethnic Fijians became concerned about losing political control to Indo-Fijians. Tensions between the two groups have led to violence.

READING CHECK: *Environment and Society* How have humans modified the environment in parts of the region?



Phosphate mining on Nauru has left about 90 percent of the island a wasteland. In the photo above, ancient coral remains after the phosphate material has been removed.

Section 3

Review

Identify Exclusive Economic Zone (EEZ)

Define copra, phosphates

Working with Sketch Maps On the map you created in Section 2, label Yap, Nauru, Port Moresby, Suva, and Papeete. Which is the region’s largest city?

Reading for the Main Idea

- Human Systems** What two roles did traditional trade networks play in the Pacific?

- Places and Regions** What are five sources of income for the Pacific Islands region?

- Environment and Society** Why is the possibility of global warming particularly worrisome to the peoples of the Pacific?

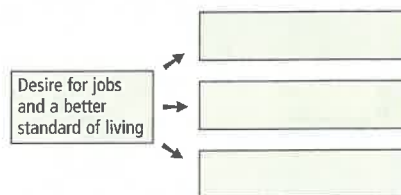
Critical Thinking

- Evaluating** How have policies about resource development affected environments in Melanesia and Nauru? What economic impact have these policies had?

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Organizing What You Know

- Create a cause-effect diagram like the one below. Use it to identify the patterns of human movement in the Pacific Islands today.



CASE STUDY

Exotic Invaders

Environment and Society The Pacific Islands are home to some of the most unusual creatures on Earth. Unfortunately, the introduction of exotic plants and animals threatens or endangers many of these species. When new plants or animals are brought to an island, disaster can result. In the most extreme cases, the original plants or wildlife die off and are replaced by the invaders.

The Brown Tree Snake

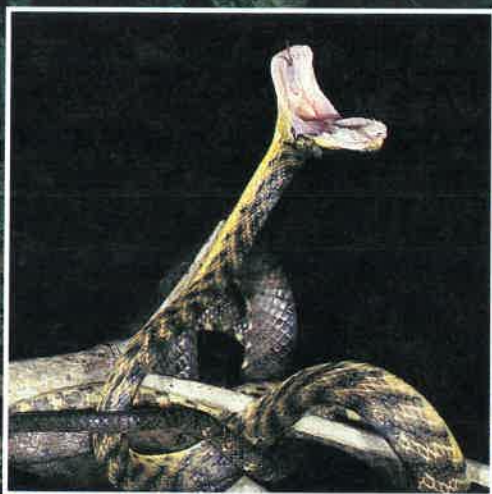
The brown tree snake provides a dramatic example of the effect an exotic invading animal can have on island wildlife. This snake was once found only in Australia, eastern Indonesia, New Guinea, and the Solomon Islands. During the 1940s and 1950s, the snakes probably stowed away in ships' cargoes and came to Guam accidentally. Soon they began to multiply and spread throughout the island. Today, in some of the island's forest areas, as many as 12,000 snakes live within just one square mile. In the 1960s local residents began to notice that there were fewer and fewer birds. Since then, native birds like the Guam flycatcher have practically disappeared from

the island. Today native forest birds can only be found on the island's northernmost tip. Guam could become the first place on Earth to lose all its native birds.

A Detective Story

At first, researchers were not sure why the island's birds were disappearing. Possible reasons for the decline included disease, hunting, loss of habitat, pesticides, and predators. An introduced animal could also be responsible. Brown tree snakes, cats, dogs, and rats were all potential suspects.

Researchers used a geographic approach to solve the puzzle. First, they noticed that the snake was the only suspect not found on three nearby islands. These islands did not experience the same decline in bird populations as Guam. The scientists also noted that birds and bird eggs are important sources of food for the snake. The brown tree snake then became the number one suspect. Next, researchers gathered data about the date, location, and number of bird and snake sightings on Guam. Poultry owners helped by reporting when they first saw the snakes. Government biologists provided information about the number of birds on different parts of the island over previous years. Scientists then plotted this data on a map. They saw that as the snake's range moved north the range of native birds grew smaller and smaller. This evidence proved that the snake was the main culprit in the decline of native birds.



The Rabbits of Laysan

Laysan Island is another example of the disastrous effects introducing exotic animals can have on island habitats. About 1903, workers brought rabbits to this small sandy strip of land north of Hawaii. A year later, the workers left. In 1923, visitors returned and found Laysan Island a barren wasteland with only a few stunted trees. At some time the rabbits had multiplied to more than 5,000 and eaten most of the plants. Several types of native birds had also disappeared. Even the rabbits were dying out. With most of the plants gone, the rabbit population had shrunk to about 200. The remaining rabbits were removed. Within 10 years, plants had taken root again and several kinds of birds had returned to the island. Scientists now consider Laysan a success story.

The small photo opposite shows a brown tree snake. Goats, such as the feral animal in the inset photo below, are an exotic species in Hawaii. They have eaten practically all the native plants in some areas. In the background you can see what part of Kauai's coast looked like before (left) and after (right) the goats stripped the area's vegetation.



Islands of Trouble

Islands' small size and their isolation from other areas of land make them particularly vulnerable to invading species. Unlike plants and animals living on continents, those on islands quickly run out of new places to go when an exotic invader takes over. Islands are like fragile little rafts. They have limited space and a limited food supply. When one creature takes too much space and food, the other creatures often find themselves with nowhere to go.

Applying What You Know

- 1. Summarizing** What steps did researchers take to solve the mystery of the disappearing birds?
- 2. Identifying Cause and Effect** What role did people play in bringing the brown tree snake to Guam and rabbits to Laysan? What were the results of each event?



Review the video to answer the closing question:
What are some ways to help prevent or limit the spread of nonnative species?

Building Vocabulary

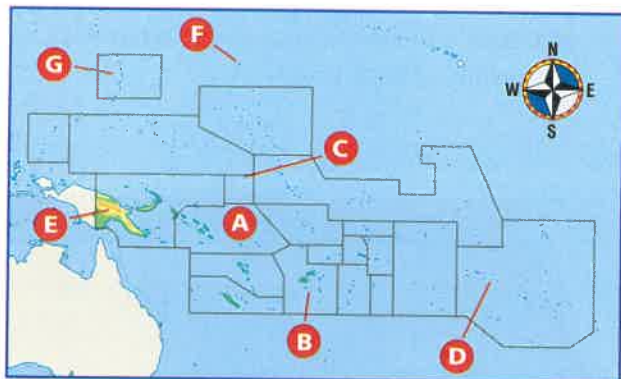
On a separate sheet of paper, explain the following terms by using them correctly in sentences.

atoll	matrilineal
Intertropical Convergence Zone (ITCZ)	copra
trust territories	Exclusive Economic Zone (EEZ)
pidgin languages	phosphates

Locating Key Places

On a separate sheet of paper, match the letters on the map with their correct labels.

Tahiti	Northern Mariana Islands
Papua New Guinea	Wake Island
Solomon Islands	Nauru
Fiji	



Understanding the Main Ideas

Section 1

- Places and Regions** What are the two types of islands in the Pacific? What are their origins?

Section 2

- Human Systems** What geographic factors helped a large number of languages to develop in the region?
- Environment and Society** What food crops have traditionally been important in the region? What uses did Pacific Islanders find for the coconut palm?

Section 3

- Human Systems** Why is manufacturing not a major factor in the region's economy?
- Human Systems** What are the three patterns of human movement in the Pacific Islands today?

Thinking Critically

- Summarizing** What environmental hazards affect the Pacific Islands region? What impact might these hazards have on the land and people living there?
- Comparing** How do fishing, subsistence farming, and plantation agriculture play different roles in the region?
- Analyzing Information** How have migration, war, and trade affected the people and culture of the region?

Using the Geographer's Tools

- Interpreting Charts** Review the unit Fast Facts chart, the unit Comparing Standards of Living chart, and information from this chapter. Then use that information and the World Factbook (go.hrw.com) to rank the countries of this region by level of development. Write a short paragraph explaining why you ranked the countries as you have.
- Evaluating Maps** Look at the map of the ocean floor in Section 1. What does this map tell you about the region's geography? What are some clues that this is a tectonically active region?
- Creating and Interpreting Maps** Construct a map of the Pacific Islands region. Label the subregions of the Pacific Islands. Then use arrows to show the origin and direction of migration of people into the region over time. Label each arrow with the origin of migration. How would you expect these migrations to have influenced the region's cultures?

Writing about Geography

Write a speech from the point of view of a resident of French Polynesia calling for greater political independence from France. Include specific reasons why you feel this way. When you are finished with your speech, proofread it to make sure you have used standard grammar, spelling, sentence structure, and punctuation.



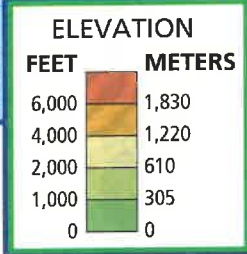
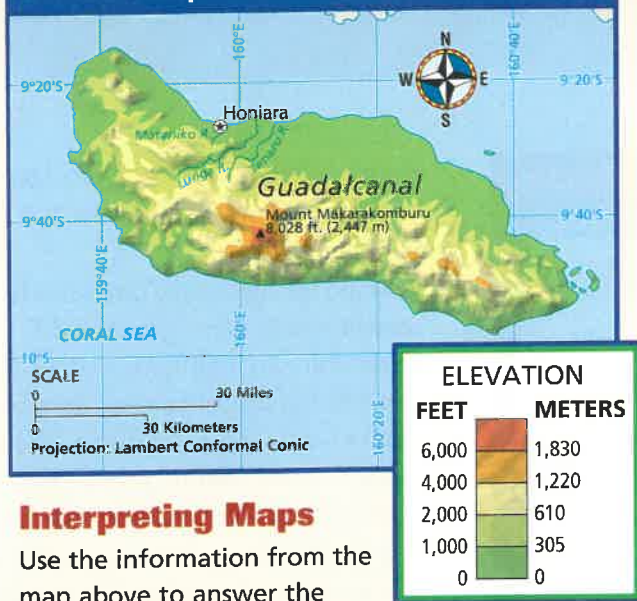
SKILL BUILDING

Geography for Life

Gather and Organize Information from Maps

The World in Spatial Terms Using the physical-political map of the region, pick five Pacific islands. For each island, measure its approximate distance from Honolulu, Hawaii; Port Moresby, Papua New Guinea; Sydney, Australia; Suva, Fiji; and Papeete, Tahiti. Finally, create a chart to organize this information.

Elevation Map: Guadalcanal



Interpreting Maps

Use the information from the map above to answer the questions that follow.

- What is the elevation of Guadalcanal's highest area?
 - less than 1,000 feet (305 m)
 - between 1,000 and 2,000 feet (305 m and 610 m)
 - above 9,000 feet (2,740 m)
 - above 6,000 feet (1,830 m)
- How does the elevation of the island change from north to south?

Analyzing Secondary Sources

Read the following passage and answer the questions.

"Today the Pacific Islands are home to a great number of different ethnic groups and languages. How did this happen? Huge stretches of ocean between islands allowed different cultures and languages to develop independently from one another. On New Guinea, thick rain forests and rugged mountains separated different groups of people in a similar way. Today the peoples of Papua New Guinea speak more than 700 different languages. Some of them are spoken by only a few hundred people."

- Which feature was *not* a major factor in the development of the region's diverse cultural geography?
 - ice cap
 - rain forest
 - mountain range
 - ocean
- What do the region's oceans, forests, and mountains have in common?

Alternative Assessment

PORTFOLIO ACTIVITY

Learning about Your Local Geography

Individual Project: Navigating with Landmarks

Just as Pacific Islanders navigated across vast ocean distances, you navigate from place to place every day. Like those sailors, you probably do not use a map or compass to find your way. Write detailed descriptions of some of your daily journeys, such as from home to school or from school to a job. Include how you get from place to place and what landmarks you use to find your destination.

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Choose a topic about the Pacific Islands to:

- tour the South Pacific.
- learn the traditions of the Pacific Islands.
- explore the diversity of the region.

