Natural Wonders of the World

A Reading A–Z Level V Leveled Book
Word Count: 1,818

Connections

Writing

Write a letter to the author of this book that describes the natural wonder from the book that you would most like to visit, and why.

Science

Research a natural wonder not discussed in the book. Write a report that describes it and then compares it to a natural wonder from the book.

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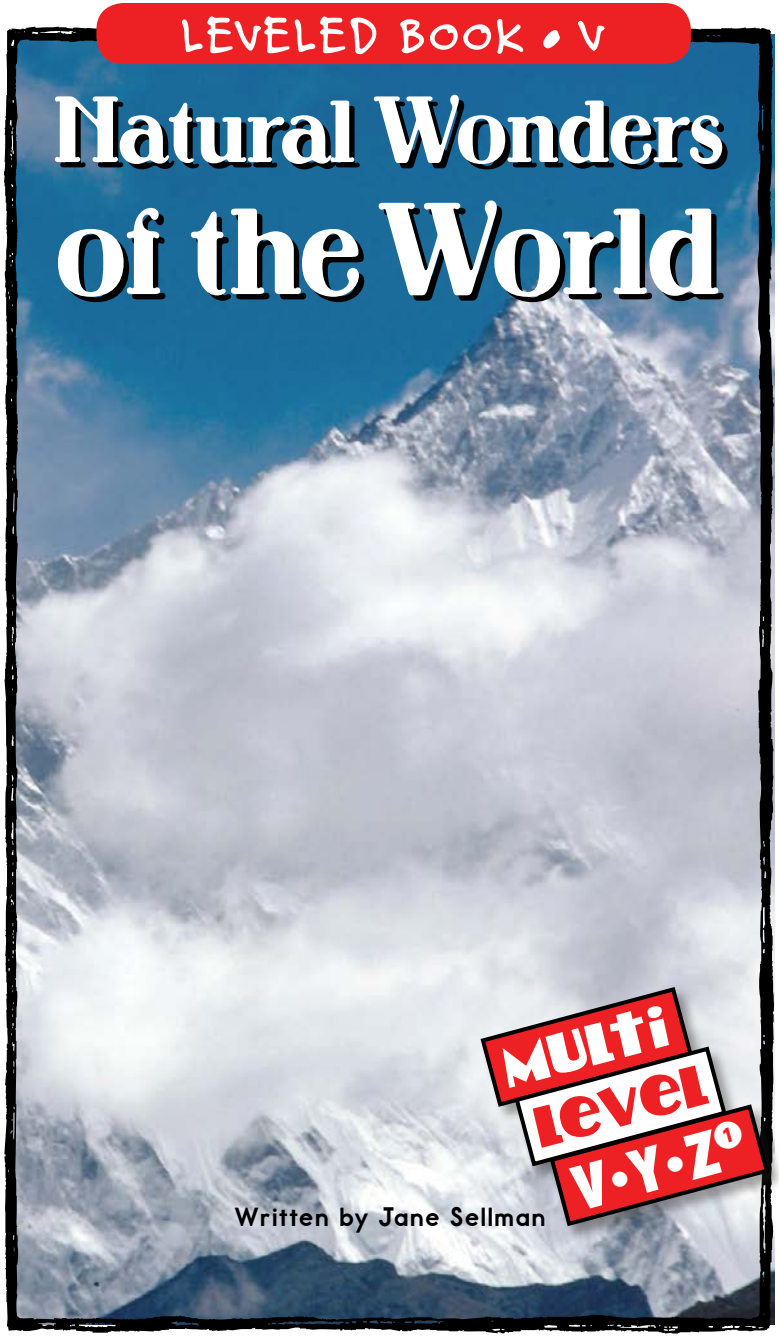

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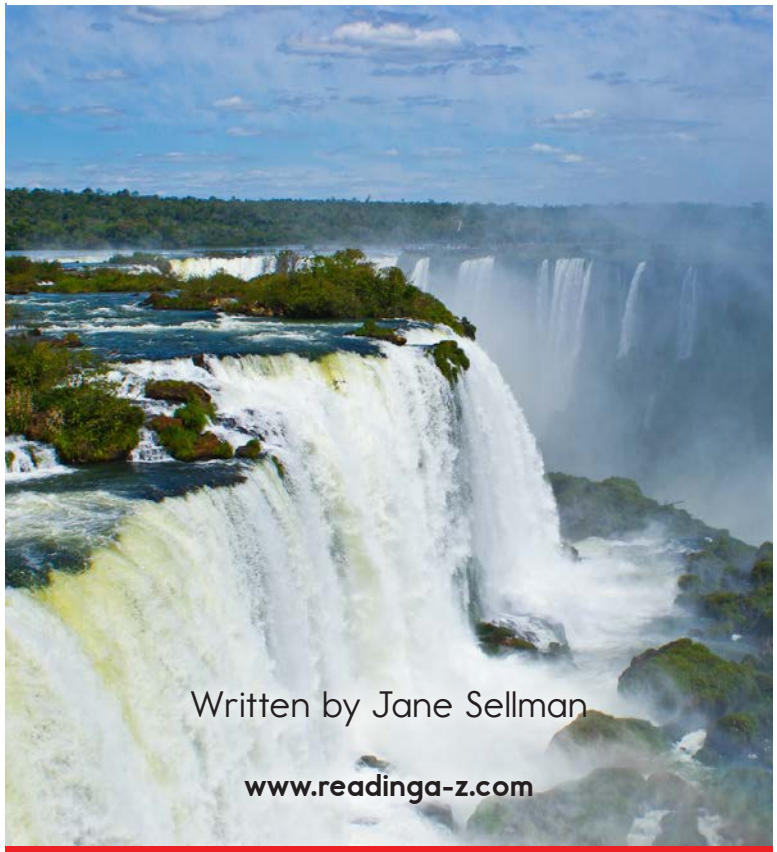

Written by Jane Sellman

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Focus Question

What are some characteristics of famous natural wonders?

Words to Know

breeding
cinder cones
downstream
erosion
fissure
geologists
landforms
mountaineers
plateau
plunge pool
polyps
Sherpa
species
terrain
water vapor

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Correlation

LEVEL V	
Fountas & Pinnell	R
Reading Recovery	40
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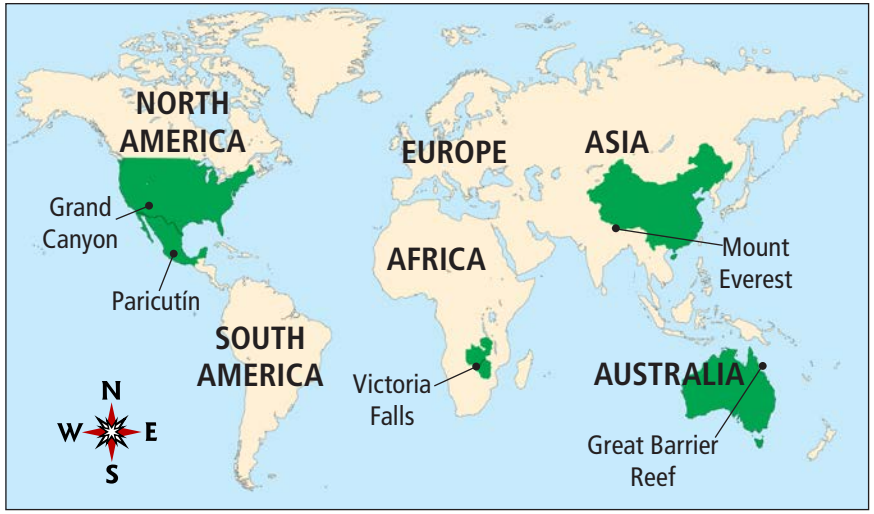


Table of Contents

Arizona's Barringer Meteorite Crater shows how space rocks colliding with Earth create amazing landforms.

Introduction

What makes something a natural wonder? A wonder is a natural structure so amazing and beautiful that it makes you ponder how it was formed. Natural wonders are **landforms** that have been created by nature, not by humans. Our planet is home to many natural wonders. In this book, we will learn about five of them:

- A layered canyon carved by a river
- A young volcano that took over a village
- A breathtaking waterfall
- An immense coral reef
- A towering mountain

Grand Canyon

Between five and six million years ago, the Colorado River wound through a large **plateau** (pla-TOE), or an area of raised ground. Over time, the river picked up small pieces of the plateau and carried them as it flowed to the sea. This process is called water **erosion** (e-RO-zhun).

Different kinds of rocks factor into water erosion. Some rocks are soft and break easily, while other rocks are hard and resist breakage. In the Grand Canyon, the Colorado River flowed **downstream**, carrying pieces of the softer rocks and leaving behind the harder rocks. Over millions of years, this process carved deep canyons in the rocks.

The Colorado River slowly carved the rock of the Grand Canyon into the wondrous structure we see today.

The layers of rocks that form the Canyon walls show geologists what happened in the area over a period of two billion years.

These rocks make up the layers in the Canyon walls. The top of the Canyon, where most visitors enjoy their first view, is the youngest layer of the Canyon. The bottom layer, near the river, is the oldest. Scattered rocks located at the bottom of the Canyon date back as long ago as two billion years.

The Grand Canyon is a great place to study rocks and the Earth's history because the rock layers are so easy to see and reach. **Geologists** often visit the site. One of the first geologists to visit was John Newberry, who traveled to the Canyon in 1858. Newberry was the first scientist to record the Canyon's layers, although he wasn't the first to see them.

Rattling Reptiles

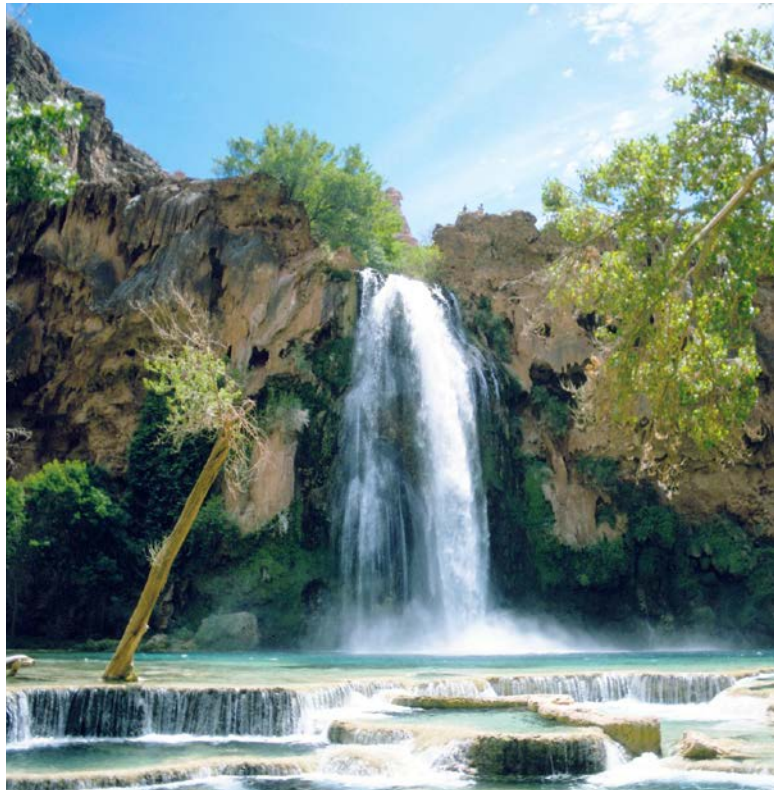
More than 47 different kinds of reptiles live in the Grand Canyon. While most of these reptiles are harmless, visitors should keep an eye out for snakes. Although they rarely bite humans, the Grand Canyon rattlesnake and the diamondback rattlesnake are venomous.

In the winter, rattlesnakes hibernate in dens. Hundreds of rattlesnakes may live in one den. This is one of the only times rattlers live together. In the spring when the weather warms up, the snakes come out of their dens and go their separate ways.

In late summer, females give birth to live babies. The babies only stay in the area where they were born for about seven to ten days. Then they shed their first baby skin, add their first rattle, and move on in search of food.

As a rattlesnake grows, it sheds its skin at least once a year, adding a new rattle to its tail with each shed. A mature diamondback may grow to be 2 meters (about 6.5 ft) long and weigh up to 6.8 kilograms (15 lb). Rattlers can live to be 25 years old.

Native Americans lived in and around the Grand Canyon for more than 4,000 years before European explorers arrived. By 1150, most of the original tribes had moved away. Only the Havasupai people remained. Some of them still live and work in the Canyon. Every year, millions of people travel to Grand Canyon National Park to hike, raft, and see this majestic wonder of nature.



Havasu Falls on the Havasupai Reservation is an example of how water continues to carve the western Grand Canyon.

Paricutín

Many of nature's creations are millions of years old. They began forming long before humans lived on Earth. Other creations have formed in modern times. The Paricutín (pah-ree-koo-TEEN) volcano in Mexico is one such formation.

Paricutín began forming in 1943 in a field. A farmer discovered a **fissure** (FISH-ur), or opening in the ground, in his cornfield. The crack was about 1.8 meters (6 ft) long. Soon more fissures appeared. Black smoke came from the holes, and ash piled up on the ground, forming a cone. In about 12 hours, the cone had grown to 10 meters (33 ft) high, and after a day, it had grown to 50 meters (164 ft). The volcano continued to grow, reaching a height of 100 meters (328 ft) in just a week.

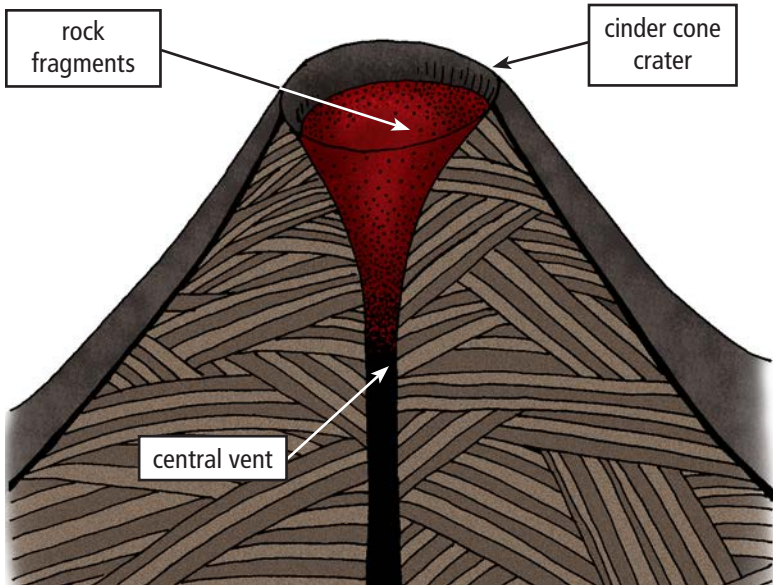
Paricutín volcano erupts in 1943.

A church steeple is all that remains visible after volcanic debris covered the town of Paricutín.

The people of Paricutín hoped that their village would be safe, but after a few months, the cone had grown so large that lava started to reach their town. The villagers had to evacuate, leaving behind their homes and farms. Over a nine-year period, lava and ash eventually covered the entire village of Paricutín and most of the nearby town of San Juan. Eventually, all that was left of Paricutín was the church steeple rising out of the black rock as a reminder of nature's power.

Volcanoes such as Paricutín are called **cinder cones**. They are the simplest type of volcano. Cinder cones are formed when lava, which is under pressure inside the Earth, shoots out from a central vent in the ground. As the lava explodes into the air, it cools and breaks into small pieces that harden and fall as rocks and ash, or cinders, around the central vent to form a cone. Most cinder cones have a bowl-shaped crater at the top.

Because Paricutín volcano is young, scientists have been able to observe its growth since it first appeared. Today, the volcano stands about 424 meters (1,391 ft) tall and covers 26 square kilometers (10 sq mi).



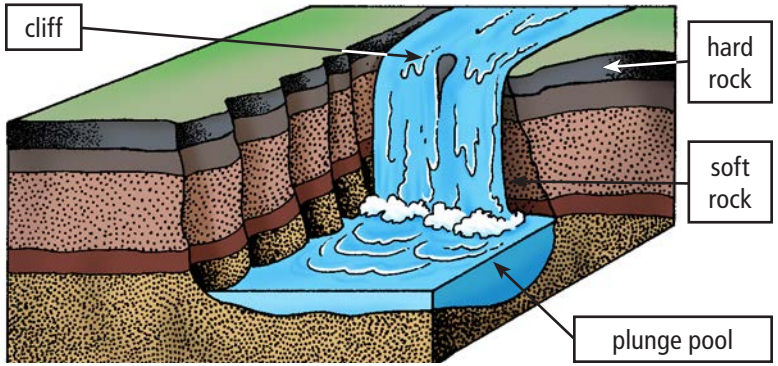
Victoria Falls, like the Grand Canyon, was formed by water.

Victoria Falls

Victoria Falls is the largest mass of falling water on the planet. The water drops 108 meters (354 ft) into a deep pool. The people of Zambia call the falls *Mosi-oa-Tunya* (MOH-see wah TOON-yah) (the smoke that thunders). It's a perfect name. The thunder refers to the booming sound created by the water crashing over the Falls into the pool below. The smoke refers to the **water vapor**, or mist, that comes up from the bottom of the Falls.

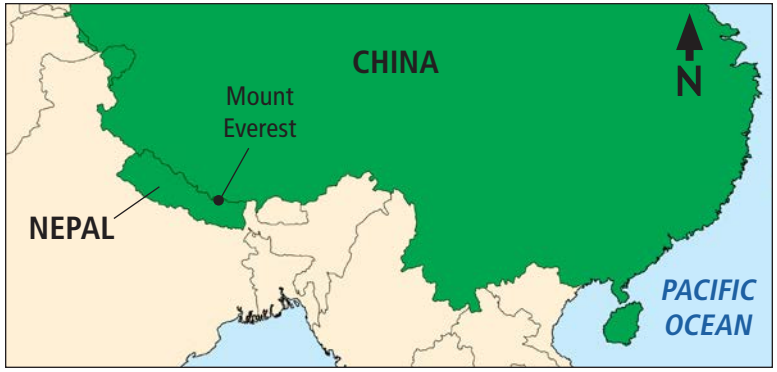
Victoria Falls is located on the border between Zambia and Zimbabwe in Africa. The Falls began forming millions of years ago when a shallow crack in the rock appeared across the path of the Zambezi River. The crack was caused when parts of the earth shifted about 150 million years ago. Over the years, the river flowed over the rock. Eventually, the water wore down the soft rock, forming a cliff over which the river now falls. The pool into which the water falls is called a **plunge pool**.

The Scottish explorer David Livingstone visited the Falls in 1855. He was probably the first person from outside of Africa to see the wondrous formations. He named the Falls after Queen Victoria of England. But many people think that Mosi-oa-Tunya is a more accurate name. The Falls is now part of two national parks, one in Zambia and one in Zimbabwe.



Victoria Falls Fun Facts

- Victoria Falls is actually divided into six waterfalls: Devil's Cataract, Armchair Falls, Horseshoe Falls, Main Falls, Rainbow Falls, and the Eastern Cataract.
- A bridge at the Falls is a popular site for bungee jumping.
- During a full moon, the park stays open late so people can enjoy the rainbow that is made when moonlight shines through the water vapor.
- People go rafting and kayaking on the water below the Falls. They can even surf on the rapids below.

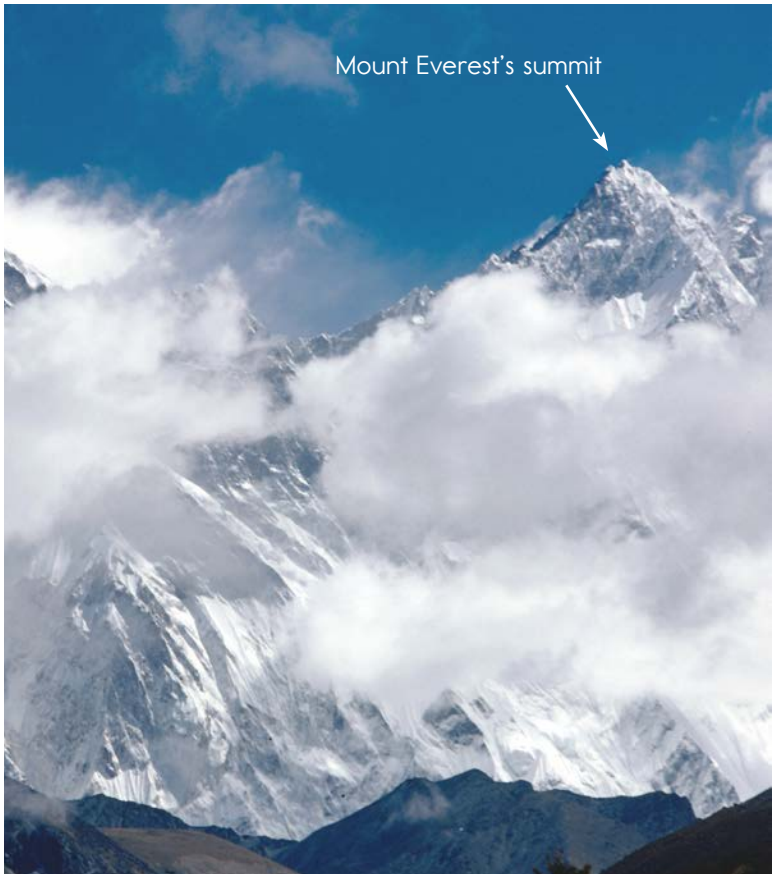


Mount Everest

Mount Everest, the tallest mountain in the world, is one of the most spectacular sites on Earth. Called "Forehead in the Sky" by the Nepali people, this magnificent landform in the Himalayan Mountains reaches a height of 8,850 meters (29,035 ft).

The snowcapped Himalayas might appear old, but they are actually quite young for mountains. The mountains were formed millions of years ago when two parts of Earth's crust collided, or hit each other. Over time, the pressure of the two parts rubbing against each other caused the ground to crumble and rise above the sea. Since Mount Everest is a young mountain, its peaks are still jagged and steep. They haven't yet been eroded and smoothed down by endless years of wind, ice, and snow.

Although Mount Everest is beautiful to look at, the conditions on the mountain are very harsh. The average temperature is about -36°C (-33°F) and can drop to -60°C (-76°F). Even in July, the warmest month, the temperature only reaches -19°C (-2°F). It never gets above freezing, and as a result, the ice and snow at the top of the mountain never melt.

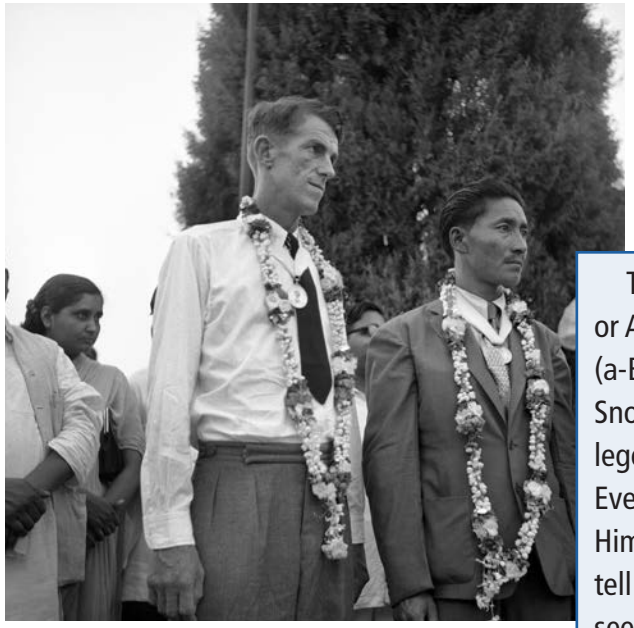


Storms dump more snow on Mount Everest every year.

The extreme conditions on Mount Everest make it hard for animals and plants to survive. One of the only animals that can live on the mountain is the wild yak. This large animal can weigh more than 454 kilograms (1,000 lb) and grow up to 1.8 meters (6 ft) tall. One of the reasons the yak is able to survive is because its blood can take in more oxygen than the blood of other animals. This adaptation is a lifesaver on Mount Everest, where the air contains little oxygen.

Wild yak grazing

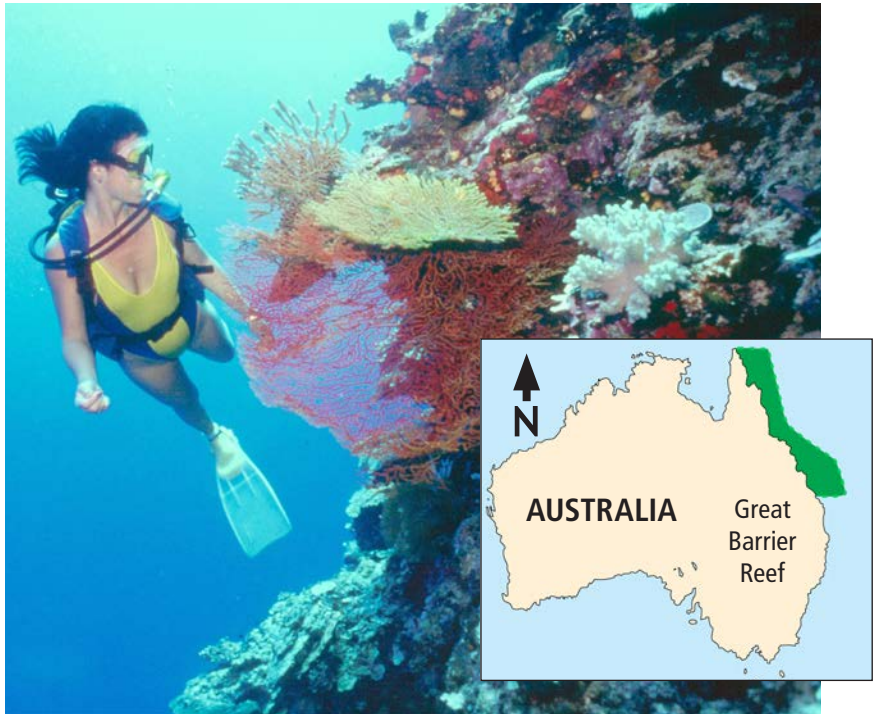
The people who originally settled in the Himalayan Mountains believed that the gods made their homes in the peaks. As a result, no one tried to climb Mount Everest until explorers arrived in the early 1900s. The earliest climbers quickly learned about the harsh conditions on the mountain—freezing temperatures, powerful winds, changing weather, and rough **terrain**.



Mountaineers Hillary and Norgay accept awards recognizing their achievement.

Despite all the obstacles, **mountaineers** continued to come to Mount Everest, hoping to be the first to make it to the top. No one was successful until 1953, when Sir Edmund Hillary (from New Zealand) and Tenzing Norgay (a **Sherpa** from Nepal) became the first men to successfully climb the mountain. Since then, many climbers from all over the world have risked their lives to get to the top of the "Forehead in the Sky."

The yeti (YEH-tee), or Abominable (a-BOM-in-a-bal) Snowman, is a legend of Mount Everest and the Himalayas. Sherpas tell stories about seeing large footprints and gnawed yak bones in the mountains. Hillary's team took what was said to be a yeti scalp and skins to Europe and the United States, where scientists agreed that the scalp was from a goat and the skins were from a bear. To this day, no one has been able to prove the existence of the yeti.



A diver explores coral formations on the Great Barrier Reef.

Great Barrier Reef

The Great Barrier Reef—really a collection of many reefs—is more than 2,300 kilometers (1,429 mi) long. It is located off the northeast coast of Australia and is full of enchanting sea creatures, from sea slugs and urchins to dolphins, whales, and sharks.

A reef is a chain, or range, of rocks that lies at or near the surface of the water. The Great Barrier Reef is a coral reef.

Coral reefs are found in all tropical oceans of the world, but none is as large as the Great Barrier Reef. Most established coral reefs are between 5,000 and 10,000 years old.

At first glance, the Great Barrier Reef might look like a rock, but it's not. It's made from the skeletons of millions of animals called **polyps** (POL-ips). As the polyps die, new ones grow on top of the old skeletons. The many layers of skeletons form the limestone base of a coral reef. Other kinds of plants and animals also help make up the reef, such as algae, sponges, and shellfish. But the tiny polyp is responsible for most of this natural wonder's structure.

The life and death of coral polyps are responsible for the formation of coral reefs such as the Great Barrier Reef.

Reefs are made from animals, and they supply food and shelter for other animals. Thousands of **species** live on the Reef, including 1,625 kinds of fish, more than 30 kinds of marine mammals, 500 kinds of seaweed, and 6 kinds of marine turtles. The Reef is also an important **breeding** area for animals, including birds, sea turtles, and the endangered humpback whale.

As one of the most interesting and beautiful places on Earth, the Reef is a popular destination for groups of scientists, scuba divers, and tourists. Today, environmentalists are working with these groups to protect the Reef so future generations can learn from it and enjoy its beauty.

Look, But Don't Touch!

Reefs are alive and full of delicate creatures. Responsible snorkelers and scuba divers should always follow these important rules:

- When snorkeling, float over the reef. Never stand on it.
- Take pictures, not coral souvenirs.
- Stock saltwater aquariums with fish that are raised in captivity, not those taken from a coral reef.
- Always pack out your plastics and other trash.
- Learn more about coral reefs and how you can help protect them.

Wonders Everywhere

From Arizona to the coast of Australia, natural wonders are everywhere. Whether they were formed millions of years ago or within the span of a lifetime, they are all unique. These amazing landforms are some of the largest, highest, and most breathtaking places on Earth. Travelers, scientists, and adventure seekers will continue to visit these special places for generations to come.

The Grand Canyon, Paricutín, Mount Everest, Victoria Falls, and Great Barrier Reef are only five of the many wonders that surround us. Other well-known natural wonders include:

- The Northern Lights, a light show that brightens up the skies in the Northern Hemisphere
- The Barringer Meteorite Crater, a massive hole in the Arizona desert that is almost a mile wide and 174 meters (570 ft) deep
- Ayers Rock, the world's largest solid rock, rising 862.5 meters (2,830 ft) above sea level in Uluru, Australia

Do you live near an amazing and beautiful natural wonder—an incredible mountain, a majestic river, a mysterious cave? These are all examples of wondrous sites you can visit, learn from, and enjoy every day.

Glossary

breeding *(adj.)* of or relating to the production of offspring (p. 21)

cinder cones *(n.)* cone-shaped hills formed by the airborne eruption of lava and ash that settles around volcanic vents (p. 11)

downstream *(adv.)* moving in the same direction as the flow of water in a river or stream (p. 5)

erosion *(n.)* the natural removal of rock or soil by water, wind, or ice (p. 5)

fissure *(n.)* a long, narrow opening or crack (p. 9)

geologists *(n.)* people who study the origin, physical nature, structure, and history of Earth (p. 6)

landforms *(n.)* natural formations on Earth's surface, such as valleys, plateaus, mountains, plains, or hills (p. 4)

mountaineers *(n.)* people who climb mountains (p. 18)

plateau *(n.)* a large raised area of flat land (p. 5)

plunge pool *(n.)* a deep pool at the base of a waterfall (p. 13)

polyps *(n.)* small sea invertebrates, such as coral, that have tube-like bodies and tentacled mouths (p. 20)

Sherpa *(n.)* a member of a cultural group of people living in the Himalayas who often work as mountain climbers' guides (p. 18)

species *(n.)* a group of living things that are physically similar and can reproduce (p. 21)

terrain *(n.)* the natural features of a piece of land; ground (p. 17)

water vapor *(n.)* the gaseous state of water (p. 12)

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