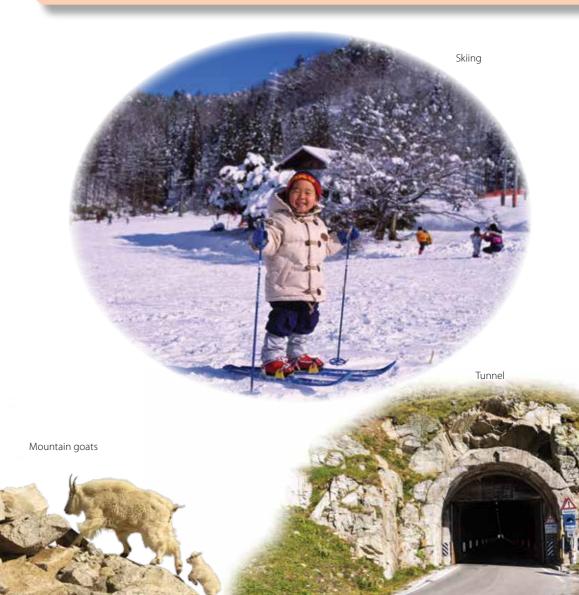


# World Mountains

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# World Mountains

Reader



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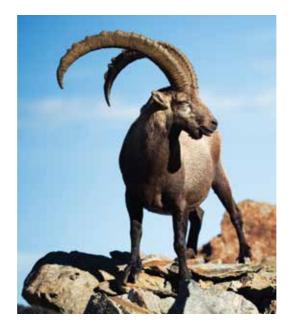
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# **World Mountains**

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## World Mountains Reader

Core Knowledge Sequence History and Geography 4

# Chapter 1 Introducing Mountains

## O beautiful for spacious skies,

For amber waves of grain,

For purple mountain majesties

Above the fruited plain!

—"America the Beautiful" Katharine Lee Bates, 1893

## **The Big Question**

How are mountains formed?

Denali is a mountain in the U.S. state of Alaska. It is the highest mountain in North America.

# **The Importance of Mountains**

People have long admired the beauty of mountains. Some people long ago even worshipped them. They placed offerings on mountain slopes in the hope of good crops, good weather, or good luck.

Mountains play a part in many religions. Moses, for example, received the Ten Commandments on the top of a mountain. The ancient Greeks believed that their gods lived in the mountains.

Mountains are important in many ways. They affect Earth's weather and climate. They provide a home for many animals. They contain valuable **minerals**.

Mountains have historically made trade and travel difficult. They have also acted as

# Vocabulary

**mineral,** n. a naturally occurring substance found in Earth's crust

### **barrier,** n. something that blocks movement

weathering, n. the breaking up of Earth's materials into smaller pieces

**barriers** to keep out or slow down invading armies. More recently, mountains have attracted tourists, skiers, hikers, and climbers.



- For a landform to be called a mountain, it must rise at least one thousand feet (three hundred meters) above its surrounding area.
- Some mountains, such as the Himalayas, are still growing. Others, such as the Appalachians, are being worn down by weathering, erosion, and mining.

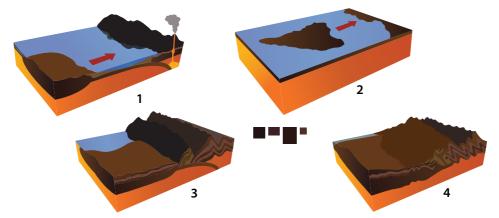
## **How Are Mountains Made?**

Mountains are formed in several different ways. To understand how mountains are formed, you need to remember that the Earth has a crusty shell made up of gigantic **plates.** These plates can shift, crack, and wrinkle.

# Vocabulary

**plate,** n. a large section of Earth's crust that is able to move

Folded mountains are created when Earth's crust shifts. As it shifts, one piece of rock folds on top of another. The Himalayas (/him\*uh\*lae\*uhz/) in Asia are folded mountains. Some of the Appalachian (/ap\*uh\*lae\*chun/) Mountains in the eastern United States are folded mountains, too.

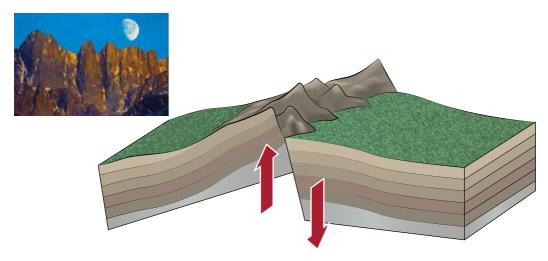


The Indo-Australian Plate moved slowly northward, carrying India with it.





Folded mountains are created when one piece of rock folds over another. Both the Himalayas (left) and the Appalachians (right) are folded mountains.



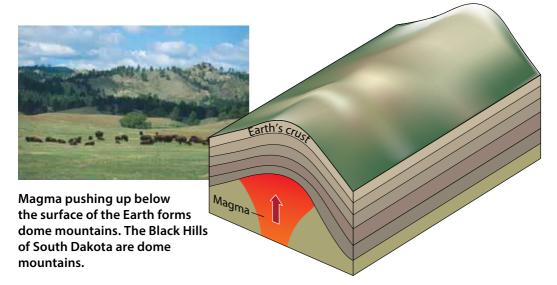
Fault block mountains are created when pieces of rock are driven up. The Sierra Nevadas are fault block mountains.

*Fault block mountains* are also created by shifting plates. In this case, pieces of rock are broken off and driven upward by the force of the shifting plates. The Sierra Nevadas of western North America are fault block mountains.

Dome mountains are created when melted rock called **magma** pushes up below the surface of the Earth. As the magma moves up, it makes bumps on Earth's surface.

Vocabulary

magma, n. melted rock from inside Earth's crust



These bumps often look more like hills than mountains. The Black Hills of South Dakota are dome mountains.

Volcanic mountains form when a volcano erupts and breaks a hole in Earth's crust. Lava and ash flow down the sides of the volcano and harden into a mountain. Many islands, such as the Hawaiian Islands,



are actually the tops of volcanic mountains. Japan's highest mountain, Mount Fuji, is a volcano. It last erupted in 1707.



Japan's Mount Fuji is a volcano.



Mountains sometimes form when a volcano erupts. The Hawaiian Islands are the tops of volcanic mountains.

The highest mountain in Africa, Mount Kilimanjaro (/kil\*uh\*man\*jar\*oe/), is an **extinct** (/ek\*stinkt/) volcano.

Vocabulary extinct, adj. having died out completely

Volcanic mountains can be produced by

a few days of huge eruptions. However, most mountains take thousands, or even millions, of years to form. They form so slowly that, in real life, you can't see them changing.

Some of Earth's mountains, such as the Appalachians, were formed more than two hundred million years ago. Others, such as the Rocky Mountains in western North America, were formed only about a million years ago. You can often tell whether



Mount Everest is the highest mountain in the world.

mountains are young mountains or old mountains by their shape. Young mountains are usually steep, have a high **elevation**, and are often sharp or pointy. Old mountains have been worn down by many years of **erosion** (/er\*oe\*zhun/).

Look at the picture of Mount Everest. You'll notice that there is snow on top of the mountain. Most tall mountains are covered with snow all year long. (That is because the farther above sea level you go, the colder it gets.) We use the term *sea level* to explain land elevation in relation to the surface level of the world's oceans. You may

## Vocabulary

elevation, n. the distance above sea level of a spot on Earth's surface

erosion, n. the carrying away of soil and rock by water, ice, or wind

equator, n. the imaginary east/west line on a globe or map that is an equal distance from the North and South Poles; 0° latitude

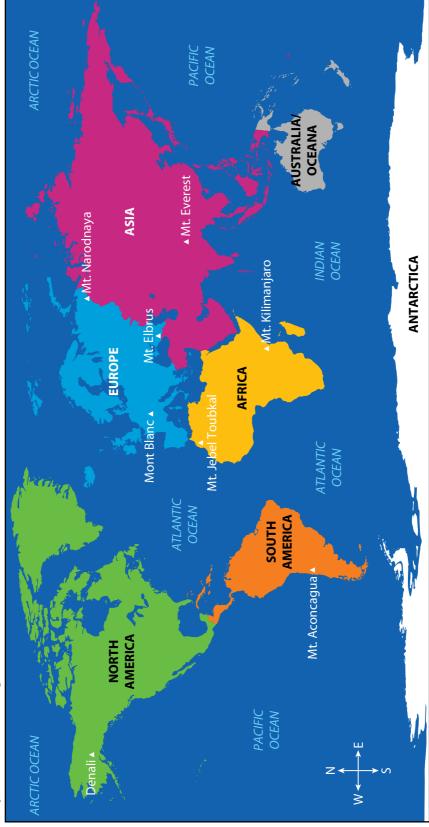
have noticed this if you have ever hiked up a mountain or driven to the top of one.

Mountaintops are usually cold, even when they are located in hot places. Snow covers the top of Mount Kilimanjaro, in the African country of Tanzania (/tan\*zuh\*nee\*uh/), all year long even though it is very close to the **equator**.

# **Major Mountain Ranges and Mountains of the World**

Mountain Name	Major Range or System	Location	Elevation (in feet)	Elevation (in meters)	Highest in (the):
Mt. Everest	Himalayas	Asia (Nepal/ Tibet)	29,028	8,848	World
Mt. Aconcagua	Andes	South America (Argentina)	22,835	6,960	Western Hemisphere
Denali	Alaska	North America (United States)	20,320	6,193	North America
Mt. Kilimanjaro	none	Africa (Tanzania)	19,340	5,895	Africa
Mt. Elbrus	Caucasus	Europe (Russia)	18,481	5,633	Europe
Mont Blanc	Alps	Europe (France/ Italy)	15,771	4,807	Alps
Mt. Jebel Toubkal	Atlas	Africa (Morocco)	13,671	4,167	North Africa
Mt. Narodnaya	Urals	Eurasia (Russia/ Kazakhstan)	6,214	1,894	Russian Urals

The chart on this page lists some of the most important mountain ranges and tallest mountains in the world. See if you can locate all of these mountains on the map on the next page.



Major Mountain Ranges and Mountains of the World

# Chapter 2 Mountain Animals

An old tall tale says that mountain animals, such as goats, are born with the legs on one side of their bodies longer than the ones on the other side. The idea is that this

## **The Big Question**

How do animals survive in the mountains?

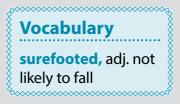
would make it easier for them to walk along steep mountain slopes.

## **Getting Around**

If you think about it, though, there would be one big drawback to such an arrangement. The animal could only move in one direction! If it turned around so that its short legs were on the downhill side, it would tip over and tumble down the mountain!

Animals such as mountain goats and sheep have bodies that make it easier for them to get around. For example, their hooves have sharp edges that help them grip the steep mountainside. Mountain goats are probably the most **surefooted** of the mountain animals. Goats

sometimes walk out onto a narrow ledge. When the ledge ends, the goats rise up on their back legs, turn around, and walk back.



Mountain goats have little trouble moving around some of the world's highest places.

## **Cool Facts About Mountain Animals**

- The Rocky Mountains in western North America are home to 67 different species of mammals, including wolverines, and 270 different species of birds, including the three-toed woodpecker.
- The Himalayas are home to 300 different identified species of mammals, including the red panda; 977 identified species of birds, including the Himalayan Griffon Vulture; 105 identified species of amphibians; and 269 identified species of fish.
- Between 2009 and 2014, scientists discovered more than two hundred new species of plants and animals living in the eastern Himalayas. One new discovery is of a blue "walking" snakehead fish. These fish can breathe air and can survive on land for short periods of time.

# **Surviving the Cold**

Mountains can get very cold, especially in winter. Mountain animals need a way to **survive** the cold weather. Animals can deal with that problem in four ways:

deal alive alive deal **hibernate,** v. to go into a sleeplike state during winter and live off body fat

Vocabulary

survive, v. to stay

(Dent)
and the second
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11 - 11-1

- 1. They can move down the
  - mountain to where it is warmer and there is more shelter.
- 2. They can grow heavy coats to keep them warm.
- 3. They can find shelter underground or under the snow.



4. They can hibernate.

Most large mountain animals spend the winter lower down the mountain. In the Rockies, elk and bighorn sheep move farther

down. There, they find shelter from the cold and wind among trees and bushes.

Mountain goats, on the other hand, stay high up. They have two layers of fur to keep them warm. One is a soft, woolly undercoat. The other layer is a longer, shaggy outer



This photo of a yellow-bellied marmot was taken in San Juan National Forest in Colorado. Marmots survive the winter by hibernating.

coat. In the spring and summer, they shed large parts of these coverings. They end up looking rather untidy.

The meadow vole also stays high up in the mountains. A vole is a small animal similar to a mouse. The vole digs tunnels under the snow. It lives underground during the winter. The snow keeps the wind and cold away.

Some animals, such as ground squirrels, survive by hibernating. They spend the summer and fall eating lots of food. The food is stored as fat in their bodies. In the late fall, they go into their holes and sleep. Slowly their bodies cool off until they are the same temperature as the hole, about 45°F (7°C) to 50°F (10°C). Their heartbeats and breathing slow down. Their bodies need less energy and can live off their stored body fat.

# **A Gallery of Animals**

Many different animals live in the mountains. The mountain lion is the largest wild cat in North America. The mountain lion is also known as the puma, panther, cougar, or catamount. Once the mountain lion roamed all over North America. As more and more people moved into the lowlands and built towns and cities, the mountain lion was driven away. Unable to survive in the lowlands, the lions were forced to mostly live in the mountains.



The mountain lion, or puma, is found in certain parts of the Rocky Mountains. This photo was taken in Utah.

Guanacos (/gwah\*nah\*koez/) live in the Andes of South America. Guanacos are related to llamas (/lah\*muz/). Guanacos are very shy. As they graze, one member of the herd stands guard on higher ground. If they are in danger, the guard gives a signal. The herd then runs away.

The ibex has lived in the Alps for a long time. Its image appears in cave drawings made thousands of years ago. Its horns can grow as long as three feet (0.9 meters). Its horns are so long, it can scratch an itch on its rump with the tip of a horn!



The mountain-dwelling ibex sports some of the most magnificent horns of any animal. This photo was taken in the Alps, a mountain range in Europe.

Mountain animals come in many sizes and shapes. The tiny wolf spider lives in the mountains of North America. The much bigger giant panda makes its home in the mountains of China. Many birds, such as eagles and condors, fly through the air above mountains all around the world.

Some mountain animals are probably **myths**. Local people in the Himalayas tell stories of a huge apelike creature called the Yeti (/yet\*ee/). No one has been able to prove that the Yeti is real.

Vocabulary

**myth,** n. an idea or story that many people believe but that is not true



The Yeti is a creature of myth. This is what people say it looks like.

# Chapter 3 Mountains as Barriers

"What spoils my sleep is not the strength of the enemy, but that immense mountain barrier."

## **The Big Question**

How have mountains acted as barriers?

José de San Martín

## San Martín Crosses the Andes

In the early 1800s, colonies in South America began seeking independence from Spain. One of the leaders in the fight for independence was José de San Martín (/hoe\*zae/de/san\*mar\*teen/) of Argentina. After Argentina became independent, he decided to

## Vocabulary

**pass,** n. a place in the mountains that is lower than the surrounding peaks and that people use as a path through the mountains help defeat the Spaniards in Chile and Peru. He had one major problem. San Martín and his army were in Argentina, on the eastern side of the Andes. San Martín had to cross the Andes to get to Chile. San Martín chose to cross the Andes using a **pass** that was nearly fifteen thousand feet (4,572 meters) high.

In this painting, artist Augusto Ballerini imagines San Martín and his army crossing the Andes.

The Andes are difficult to climb. They are steep and rugged. Even the passes are high. At such elevations, it is cold and windy. The air has less oxygen. People who aren't used to being so high up can become confused and sick. Some even die in the thinner air.

San Martín and his army set out early in 1817. They had five thousand soldiers, 10,600 mules, 1,600 horses, and seven hundred head of cattle. They also had to get all their supplies, including heavy cannons, over the mountains. The soldiers were lucky—most of them survived. The animals were not so lucky. Only 4,300 mules and five hundred horses made it to Chile, and none of the cattle were left. The struggle paid off, though. The Spaniards in Chile were caught by surprise and were quickly defeated. San Martín also won the battle in Peru. By crossing the Andes, San Martín and his soldiers helped Chile and Peru gain independence.

# **Getting Over or Through Mountains**

Mountains cause difficulties for all travelers, not just for armies. Still, people have managed to find ways to cross mountains.



- The Andes are the longest mountain range in the world. They stretch 5,500 miles (about 8,900 km) through seven countries along the west coast of South America.
- José de San Martín crossed the Andes at Los Patos Pass. At fifteen thousand feet (4,572 meters), Los Patos is higher than the tallest mountain in North America's Rockies.



This road uses S-curves to climb the steep mountainside.

Sometimes people build roads that go in S-curves back and forth across the mountainside. That way, cars or trucks don't face such a steep climb all at once. Even so, traveling these mountain roads is tricky.

Sometimes you can't go around or over a mountain. But, you can try going through it. How? By using a **tunnel**. People have dug tunnels for thousands of years. However, new machines were invented in the 1800s,

## Vocabulary

tunnel, n. a passage through or under a natural feature such as a mountain

which allowed people to dig tunnels through mountains. The first mountain tunnel was a railroad tunnel built through the Alps between France and Italy. This tunnel took more than fourteen years to complete. Today a tunnel for cars, buses, and trucks runs beside the railroad tunnel.



This mountain road in Italy uses a tunnel to pass through the mountain.

## **Mountain Passes and Gaps**

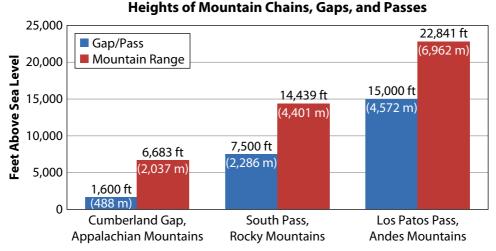
When people need to cross mountains, they look for the lowest places to cross. These are called passes and **gaps**. In the late 1700s, Daniel Boone helped create a

Vocabulary

**gap,** n. a low place in the mountains, often created by a river

road through the Appalachian Mountains of eastern Virginia, using the Cumberland Gap to cross these mountains. Settlers in the United States followed this road to new homes in Kentucky.

Farther north, engineers and laborers used the Mohawk River Gap in a clever way to pass through the Appalachian Mountains. In the early 1800s, engineers and laborers built the Erie Canal across New York. The canal dramatically cut the amount of time needed to travel from east to west across the state.



This graph shows the heights of different mountain chains, gaps, and passes. Notice that South Pass is higher than the tallest mountain in the Appalachians. Even a pass can be pretty high up!

In settling what eventually became the western United States, wagon trains needed to cross the Rockies to reach the Pacific

Coast. They used passes including the South Pass of Wyoming.

# **Mountains and People**

Long ago, people began to settle and create villages. Most people chose to settle in valleys and on plains. But some people chose to settle in the mountains.

Some settled on the mountainsides, others on **plateaus** in the mountains. A plateau is a flat area of high ground. Sometimes plateaus stand on their own. Sometimes they are part of a mountain range.

So, why did people settle in these high places? Maybe they went there to escape enemies. Maybe the beauty of the mountains attracted them.

Vocabulary wagon train, n. a line of wagons traveling west in the United States in the 1800s

**plateau,** n. a large area of high, flat ground People who live in the mountains often are separated from other people. For example, the Basques (/basks/) settled thousands of years ago in the Pyrenees (/pihr\*uh\*neez/), which are the mountains separating Spain and France. The mountains cut the Basques off from other people. Over time, their language became quite different from Spanish and French.

People living in the Andes Mountains live at very high elevations. So do the people living in the Himalayas. When people from lower elevations travel high up into the mountains, they tire easily. They find themselves short of breath and get headaches. Yet the people who live high up in the mountains don't have these problems. Why? Because they have lived at high elevations for hundreds of years. Their bodies have adapted to their mountain environment.



A Basque shepherd tends to his flock of sheep high in the Pyrenees.

Mountains have had both positive and negative effects on history. Mountains have prevented the spread of new ideas. They have made it difficult for people to communicate with each other. However, mountains have also offered protection and contributed to the creation of unique cultures. Perhaps now when you see mountains off in the distance, or drive over or through them, you will think about how they have helped to shape our world.

# Chapter 4 Making the Most of Mountains

In the 1700s a man named Jonathan Carver explored the Mississippi River. On his travels, Native Americans told Carver about

## **The Big Question**

How do people benefit from mountains?

### Vocabulary

**crystal**, n. a colorless or lightly colored hard mineral Mountains to the west, which were covered with large **crystals**. Carver thought that these crystals were diamonds.

## **Mountains and Moisture**

In fact, the crystals that the Native Americans described to Carver weren't diamonds; they were crystals of snow that melted in the spring and fed the rivers and lakes of western America.

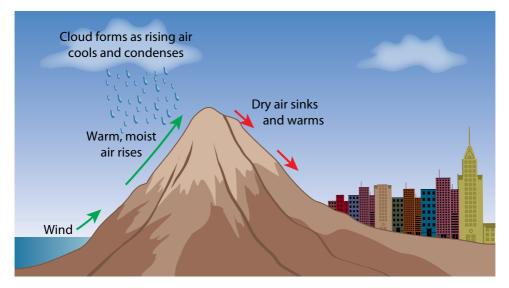
the Shining

Most people would be disappointed if they went looking for diamonds and found water. However, in the dry West, water is very important. The people of Denver, Colorado, know that very well.

Denver lies on the eastern side of the Rockies.

Their city is located at the foot of the eastern side of the Rocky Mountains. Denver receives only about fourteen inches of rain a year. The people of Denver need much more water than that to survive. Luckily, the western side of the Rocky Mountains receives more rain than the eastern side. The solution was to tunnel through the Rockies to get more water.

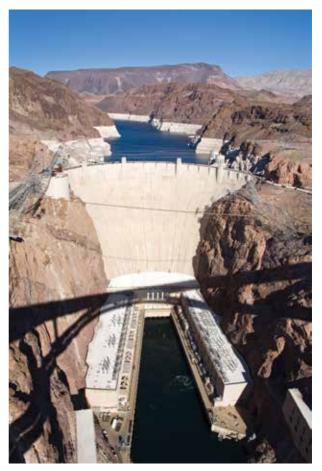
Why is the western side of the Rocky Mountains wetter than the eastern side? Because the winds that blow in from the Pacific Ocean carry a great deal of moisture. When the winds reach the western side of the Rockies, they are forced to rise to cross the mountains. As the air rises, it grows cooler. Cool air can't hold as much moisture as warm air can. Therefore, much of the moisture falls as rain or snow on the western side of the Rockies. By the time the winds get over the mountains, they have lost most of their moisture.



Mountains can block the flow of moisture.

## **Mountains and Power**

Mountain streams are valuable not only as sources of water but also as sources of power. As streams and rivers travel downhill, they sometimes form waterfalls. The currents of the waterfalls can be used to make power. Hundreds of years ago, people used the force of the falling water to turn waterwheels. The waterwheels powered machinery. Some machinery ground grain or wove cloth. Today, water gives power to huge generators that make electricity.



A large hydroelectric plant at the base of Hoover Dam on the Nevada/Arizona border.

Today, when there is no waterfall, people sometimes build a **dam** to hold back the water in a river. When the water behind the dam is released, it flows downstream rapidly. It has as much or more force than water going over a waterfall. This

# Vocabulary

**generator,** n. a machine that makes electricity

**dam,** n. a wall used to stop the flow of water running water turns huge generators in hydroelectric plants that make electricity. Mountains make this possible.

## **Minerals**

It's easy to make fun of Jonathan Carver for

Vocabulary hydroelectric plant, n. a place that uses the force of moving water to power generators that make electricity

thinking that the crystals on the slopes of the Rocky Mountains were diamonds. But in a sense he wasn't as far off as you might think. No one has ever found diamonds in the Rocky Mountains, but the Rockies are bursting with other valuable minerals.

Gold was discovered in the Rockies near Pikes Peak in 1858. People rushed to the area to get their share of the riches. Mining camps and towns sprang up overnight. Very few people became rich from the gold. Very little gold is left today, at least near the surface. But people discovered other minerals during the gold rush—silver, lead, copper, zinc, and more.

Other mountain ranges around the world also contain minerals. The Ural Mountains in Russia are rich in zinc, silver, platinum, and



- Ten percent of the world's population lives in mountains.
- Coal is still an important resource. Today, approximately forty percent of the world's electricity is generated by coal.
- The U.S. state of California depends on the snowpack on the Sierra Nevada mountains for water. Since 2001, the mountains have received less-than-normal amounts of snow. This has created an extreme drought in the state.

nickel. Miners dig these minerals out of the mountains and send them to nearby factories. Pennsylvania's Allegheny Mountains are full of coal, as are the Appalachian Mountains in Pennsylvania, Ohio, West Virginia, Kentucky, and Tennessee. Coal from the Allegheny and Appalachian mountains helped American **industry** to grow in the late 1800s and early 1900s.

# Farming

Some people make a living farming in the mountains. Often, they raise animals. People in the Andes raise llamas and alpacas (/al\*pak\*uz/), and people in the Himalayas raise **yaks**. Some farmers in the Alps herd goats on the high pastures during the summer. As you have discovered, these animals are all surefooted. They are used to traveling up and down hillsides in search of plants to eat.

Farming is somewhat easier on the flat top of a plateau, but it is

hard to grow crops on steep mountainsides. For hundreds of years, the people of the Andes and the Himalayas have used **terracing** to create fields. In southeastern Asia, terracing is used on a large scale to grow rice. Terracing turns mountain slopes into giant staircases, with lots of flat surfaces for growing crops. Farmers build stone walls on the mountainsides. They then fill the area behind the walls with dirt. This creates a series of steplike flat fields.

## Vocabulary

industry, n. a business that manufactures a product or provides a service

**yak,** n. an animal similar to an ox that lives in Asia

**terrace,** v. to build level surfaces on a mountainside



Steplike terraces make it easier to farm on a mountainside. These terraces were built on a mountain in India.

## Recreation

Today mountains also attract lots of tourists. These tourists come to enjoy mountain sports like sledding, snowboarding, and skiing.

Skiing developed long ago in the mountains of Europe and Asia. People used skiing to travel when snow covered the ground. Archaeologists have found skis that they believe were made almost nine thousand years ago! These ancient skis were carved out of bones or wood.

No one knows when skis were first used in warfare. We know that in 1200, Norwegian soldiers traveled on skis to spy on their Swedish enemies.



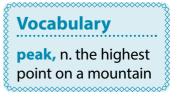
Downhill skiing is a favorite mountain sport in many parts of the world.

Over the years skiing became a popular sport. Skiing competitions began in the 1800s. It was introduced as an Olympic sport in 1924. Skiing is still a popular mountain sport today.

## **Mountain Climbing**

People who are looking for other challenging pastimes can try mountain climbing. Some people enjoy hiking in the mountains. Others like the challenge of trying to climb the tallest mountains in the world.

Perhaps the greatest challenge of all is climbing to the **peak** of the world's tallest mountain, Mount Everest. The temperatures



are freezing. The winds are very strong. Snowstorms come up unexpectedly. The air is thin and has little oxygen. Volume CCXIII No. 2785

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AFTER THE RETURN FROM EVEREST—TENSING NORKEY, THE SIRDAR OF THE SHERPA PORTERS, AND EDMUND HILLARY, THE NEW ZEALAND DEEKEFPER AND MOUNTAINEER, SEEN AT THE CAMP BELOW THYANGBOCHE ON THEIR RETURN FROM EVERST: All the way back to Katmandu they have been feted along the route, with endiese schants of victory sung in every village where the multi-coloured banners were put out in the breze to mark the great event.

Who reached the summit of Vectory saing in every vinage where the min Who reached the summit of Vector if first, Tensing Norkey, the Sherpa, or Edmund Hillary, the New Zealander, is an argument which all mountaineers deplore, not least, it can be sure, the two men who, as a result of magnificent team-work by the whole Everest Expedition, reached the goal of long endeavour. The whole matter, it appears, would never have been discussed but for Nepalese insistence that Tensing first reached the top and the visit to Tensing by some excited young nationalists who persuaded him to sign a prepared statement. As Colonel Hunt, the expedition leader, has or rightly said. 'The whole subject is of no account.' The two men were roped together on this historic journey, and who led at one stage Network the substitution of the subject is of no account.' -coloured banners were put out in the Dreck to mark the great event. or at another simply does not matter. While the argument have been raging in Katmandu, the mountaineers have been steadily making their way back from Everest through the last upland villages and so to the little towns of the valley. On June 19 Colonel Hunt, soon to be knighted, retekted out to most the valley. On June 19 Colonel Hunt, soon to be knighted, retekted out to the the valley. On June 19 Colonel Hunt, soon to be knighted, retekted out to the thisse they took part in a triamphant march with all the reargurat of the specific mark of the start in a ground, but here unfortunately the nationalist ferour aroused by the name of Tening was again uppermost. (Further pictures of the climbers appear on page 598.) 1(4): Enswhere Abresd. 2(4)

Sir Edmund Hillary and Tenzing Norgay were the first two people to reach the top of Mount Everest.

Over many years, many people tried to climb the mountain but failed. Then, in 1953, a New Zealander named Sir Edmund Hillary and a Nepalese named Tenzing Norgay managed to reach the top of the mountain. Later, Hillary explained what it was like to try to sleep in a tent on the mountainside.

He described the wind as it screeched across the ridge, causing the most awful noise. He described how cramped the tent was, and how he and his fellow adventurer, Norgay, struggled to rest, hunched up in sleeping bags, unable to stretch out, in freezing conditions. Hillary explained that time seemed to move slowly then, as he and Norgay anxiously awaited the light of day.

Since Hillary and Norgay reached Everest's peak in 1953, thousands of others have followed. Some climbers have made it to the top and back. Many others have not. More than two hundred people have frozen to death or were overwhelmed by avalanches while trying to reach the peak.

Why do so many people risk their lives trying to climb Mount Everest and other tall mountains? Partly it is because human beings like to challenge themselves, but it may also be because human beings are fascinated by mountains.

# Glossary

### В

barrier, n. something that blocks movement (4)

#### C

crystal, n. a colorless or lightly colored hard mineral (26)

#### D

dam, n. a wall used to stop the flow of water (29)

#### E

- elevation, n. the distance above sea level of a spot on Earth's surface (9)
- equator, n. the imaginary east/west line on a globe or map that is an equal distance from the North and South Poles; 0° latitude (9)
- erosion, n. the carrying away of soil and rock by water, ice, or wind (9)
- extinct, adj. having died out completely (8)

#### G

- gap, n. a low place in the mountains, often created by a river (22)
- generator, n. a machine that makes electricity (29)

#### Н

- hibernate, v. to go into a sleeplike state during winter and live off body fat (14)
- hydroelectric plant, n. a place that uses the force of moving water to power generators that make electricity (30)

industry, n. a business that manufactures a product or provides a service (31)

#### L

lava, n. magma, or melted rock, that reaches Earth's surface (7)

#### Μ

- magma, n. melted rock from inside Earth's crust (6)
- mineral, n. a naturally occurring substance found in Earth's crust (4)
- myth, n. an idea or story that many people believe but that is not true (17)

#### Ρ

- pass, n. a place in the mountains that is lower than the surrounding peaks and that people use as a path through the mountains (18)
- peak, n. the highest point on a mountain (33)
- plate, n. a large section of Earth's crust that is able to move (5)
- plateau, n. a large area of high, flat ground (23)

#### S

surefooted, adj. not likely to fall (12)

survive, v. to stay alive (14)

#### Т

- terrace, v. to build level surfaces on a mountainside (31)
- tunnel, n. a passage through or under a natural feature such as a mountain (21)

#### W

- wagon train, n. a line of wagons traveling west in the United States in the 1800s (23)
- weathering, n. the breaking up of Earth's materials into smaller pieces (4)

Υ

yak, n. an animal similar to an ox that lives in Asia (31)



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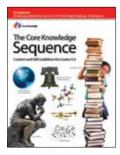
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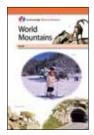
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