

Grade 4 History & Geography

Unit 2: World Mountains

4 lessons and a unit quiz. Use this pack with the **World Mountains Student Reader** (print it, or download it once from the course) to teach the whole unit without the internet.

What is in this pack

- A lesson plan for each chapter: the Big Question, words to know, which pages to read, questions to talk over and the activity pages.
- The unit quiz, ready to print.
- Answers for the teacher at the back: every discussion question and the quiz key.

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Lesson schedule

Two or three lessons a week, about 30 minutes each. Tick each one off as you go.

	Lesson	Reader pages	Activity pages
☐	Chapter 1: Introducing Mountains	PDF pages 61-70	AP 1.1, AP 1.2
☐	Chapter 2: Mountain Animals	PDF pages 71-76	AP 1.1
☐	Chapter 3: Mountains as Barriers	PDF pages 77-84	AP 1.1
☐	Chapter 4: Making the Most of Mountains	PDF pages 85-94	AP 1.1, AP 4.1
☐	Unit quiz	—	—

Page numbers are the PDF page numbers of the Student Reader file, so they match what your PDF reader shows.

Chapter 1: Introducing Mountains

THE BIG QUESTION

How are mountains formed?

Words to know

- **mineral** — a naturally occurring substance found in Earth's crust *Copper is a mineral found in the Rocky Mountains.*
- **barrier** — something that blocks movement *The Sierra Nevada Mountains form a barrier that blocks moisture from traveling east of the mountains.*
- **weathering** — the breaking up of Earth's materials into smaller pieces *Weathering has made the Appalachian Mountains much smoother than younger mountains.*
- **plate** — a large section of Earth's crust that is able to move *When one of Earth's plates folds up over another, it can create a mountain range.*
- **magma** — melted rock from inside Earth's crust *When magma pushes up against Earth's surface, it can create a mountain.*
- **lava** — magma, or melted rock, that reaches Earth's surface *When a volcano explodes, lava often flows down its sides.*
- **extinct** — having died out completely *An extinct volcano no longer explodes.*
- **elevation** — the distance above sea level of a spot on Earth's surface *Mount Everest has the highest elevation of any mountain on Earth.*
- **erosion** — the carrying away of soil and rock by water, ice, or wind *Hills without plants often experience erosion when it rains.*
- **equator** — the imaginary east/west line on a globe or map that is an equal distance from the North and South Poles; 0° latitude *The equator marks the boundary between the Northern and Southern Hemispheres on Earth.*

Read

Read Chapter 1 in the Student Reader: PDF pages 61–70. Look at the pictures and maps together.

Talk it over

1. How have mountains been important to people?
2. How are mountains important in nature?
3. How is each mountain type formed?
4. Why are the Appalachian Mountains not as high as the Rocky Mountains?

Answers are at the back of this pack.

Check for understanding

- Answer the Big Question in a sentence or two: How are mountains formed?

- Use one of today's words in a sentence of your own.

Activity pages

- Activity Page 1.1: . — Teacher Guide PDF page 120
- Activity Page 1.2 — Teacher Guide PDF pages 136-137

Chapter 2: Mountain Animals

THE BIG QUESTION

How do animals survive in the mountains?

Words to know

- **surefooted** — not likely to fall *A person who does gymnastics needs to be surefooted.*
- **survive** — to stay alive *Some animals grow extra thick winter coats to survive the cold weather.*
- **hibernate** — to go into a sleeplike state during winter and live off body fat *Some animals, such as bears, may hibernate during winter in caves in mountains.*
- **myth** — an idea or story that many people believe but that is not true *The Ancient Greeks used a myth to explain why we have the seasons of winter and summer.*

Read

Read Chapter 2 in the Student Reader: PDF pages 71–76. Look at the pictures and maps together.

Talk it over

1. How do goats' bodies make it easier for them to move around the mountain slopes?
2. What are the four ways that animals survive the cold weather?
3. Why do mountain lions now live mostly in the mountains?
4. What are three other animals that live in mountains?
5. Why is the yeti considered a myth?

Answers are at the back of this pack.

Check for understanding

- Answer the Big Question in a sentence or two: How do animals survive in the mountains?
- Use one of today's words in a sentence of your own.

Activity pages

- Activity Page 1.1: . — Teacher Guide PDF page 120

Chapter 3: Mountains as Barriers

THE BIG QUESTION

How have mountains acted as barriers?

Words to know

- **pass** — a place in the mountains that is lower than the surrounding peaks and that people use as a path through the mountains *Construction workers used a low-lying pass to build a road through the mountain range.*
- **tunnel** — a passage through or under a natural feature such as a mountain *When construction workers need for a road to cross a river or other large body of water, they either build a bridge over the river or dig a tunnel under it.*
- **gap** — a low place in the mountains, often created by a river *The Cumberland Gap in the Appalachian Mountains allowed travelers to move between Virginia, Kentucky, and Tennessee.*
- **wagon train** — a line of wagons traveling west in the United States in the 1800s *In the 1840s, wagon trains took people to rich farmland in Oregon.*
- **plateau** — a large area of high, flat ground *Farming is easier on mountain plateaus than on mountain slopes.*

Read

Read Chapter 3 in the Student Reader: PDF pages 77–84. Look at the pictures and maps together.

Talk it over

1. Why is it difficult for humans and other animals to cross the Andes?
2. What are ways people have used to travel across or through mountains?
3. Why do people use gaps and passes to travel across mountains?
4. Who are the Basques? How have mountains helped to shape their culture?
5. What are the effects of higher elevations on people who are not accustomed to them?
6. How have people adapted to living at higher elevations?
7. Why have some groups of people who lived on mountains developed their own ways of life and have little to do with other people?

Answers are at the back of this pack.

Check for understanding

- Answer the Big Question in a sentence or two: How have mountains acted as barriers?
- Use one of today's words in a sentence of your own.

Activity pages

- Activity Page 1.1: . — Teacher Guide PDF page 120

Chapter 4: Making the Most of Mountains

THE BIG QUESTION

How do people benefit from mountains?

Words to know

- **crystal** — a colorless or lightly colored hard mineral *Salt crystals are ground into the table salt we use in our kitchens.*
- **generator** — a machine that makes electricity *After losing electrical power during the snowstorm, we were able to use a generator so the house lights still worked.*
- **dam** — a wall used to stop the flow of water *The Conowingo Dam in Maryland blocks the Susquehanna River.*
- **hydroelectric plant** — a place that uses the force of moving water to power generators that make electricity *Hydroelectric plants near rivers can provide electricity to thousands of homes.*
- **industry** — a business that manufactures a product or provides a service *The automobile industry produces cars and trucks and other vehicles.*
- **yak** — an animal similar to an ox that lives in Asia *People in the Himalayas raise yaks for milk.*
- **terrace** — to build level surfaces on a mountainside *Farmers grow crops on steep mountain slopes by terracing the land.*
- **peak** — the highest point on a mountain *The peak of a mountain is often covered with snow.*

Read

Read Chapter 4 in the Student Reader: PDF pages 85–94. Look at the pictures and maps together.

Talk it over

1. Why are the lands east of the Rocky Mountains drier than the lands west of the mountains?
2. How do hydroelectric plants work?
3. Based on the text in this chapter, why might people build dams?
4. What mountain ranges were described as being rich in minerals?
5. On what continents are the Rocky, Ural, Allegheny, and Appalachian Mountains located?
6. How have people benefited from the coal in American mountains?
7. Why are llamas, alpacas, and yaks suited to life in the mountains?
8. Why would farming be easier on a plateau instead of a mountainside?
9. How do we know that skiing has been important to people for a very long time?

10. Who were the first people to reach the peak of Mount Everest?
11. What challenges do mountain climbers face when they try to reach the peak of Mount Everest?
12. Why might someone want to endure difficult conditions to climb to a mountain peak?

Answers are at the back of this pack.

Check for understanding

- Answer the Big Question in a sentence or two: How do people benefit from mountains?
- Use one of today's words in a sentence of your own.

Activity pages

- Activity Page 1.1: . — Teacher Guide PDF page 120
- Activity Page 4.1: World Mountains Domain Vocabulary — Teacher Guide PDF pages 138-139

UNIT QUIZ

World Mountains

Name: _____ Date: _____

Circle the letter of the best answer.

1. Which is not a way mountains are formed?
 - a) shifting plate
 - b) volcanic action
 - c) extinctions
 - d) magma movement deep in the earth
2. Which is the highest mountain in Africa?
 - a) Mount Kilimanjaro
 - b) Mount Everest
 - c) Mount Elbrus
 - d) Mount Aconcagua
3. An extinct volcano is
 - a) not likely to erupt.
 - b) likely to erupt.
 - c) flat.
 - d) steep.
4. Two mountain ranges located in North America are
 - a) the Himalayan and the Ural Mountains.
 - b) the Sierra Nevada and the Atlas Mountains.
 - c) the Rocky and the Appalachian Mountains.
 - d) the Alps and the Caucasus Mountains.
5. Which elevation would be the coldest place on a mountain?
 - a) 10,000 feet
 - b) 5,000 feet
 - c) 3,000 feet
 - d) 1,500 feet
6. The highest mountain in the world is
 - a) Mount Aconcagua.
 - b) Mount Kilimanjaro.
 - c) Mont Blanc.
 - d) Mount Everest.
7. What mountain range is located in South America?
 - a) Andes
 - b) Alps
 - c) Atlas
 - d) Himalayas

- 8.** What is the highest mountain in North America?
- a) Mount Everest
 - b) Denali
 - c) Mount Aconcagua
 - d) Mount Elbrus
- 9.** Mount Aconcagua is the highest mountain in
- a) Europe.
 - b) North America.
 - c) South America.
 - d) Asia.
- 10.** Which is one form of adaptation that allows animals to live on mountains?
- a) longer legs on one side of the body
 - b) large antlers
 - c) hoofs with sharp edges
 - d) thin, light hair
- 11.** Which of the following describes a mountain pass?
- a) goes over the top of a mountain
 - b) is a tunnel
 - c) is always close to sea level
 - d) is an easier way to cross a mountain range
- 12.** What is a plateau?
- a) a low place in the mountains, often created by a river
 - b) a jagged place in the mountains lower than surrounding peaks
 - c) a large area of high but level ground
 - d) none of the above
- 13.** People living in the Andes Mountains have adapted to the effects of
- a) frequent, heavy rainfall.
 - b) volcanic eruptions.
 - c) earthquakes.
 - d) high elevation.
- 14.** How do mountains create challenges for people?
- a) People with common interests may face communication problems.
 - b) Armies cannot easily invade a country surrounded by mountains.
 - c) Winds cannot easily carry moisture across mountains.
 - d) all of the above
- 15.** Why are mountains important to people?
- a) They contain minerals.
 - b) They provide places for recreation.
 - c) They are the sources of rivers that provide hydroelectric power.
 - d) all of the above

Answers

Chapter 1: Introducing Mountains

1. **How have mountains been important to people?**

Possible answers: They have played a role in world religions. They have made trade, travel, and invasion difficult. They have been used by tourists, skiers, hikers, and climbers.

2. **How are mountains important in nature?**

Possible answers: They affect weather and climate. They provide a home for animals. They contain minerals.

3. **How is each mountain type formed?**

Folded mountains are created when Earth's crust shifts so that one piece of rock folds over another; fault-block mountains are created by shifting plates where pieces of rock are broken off and shifted upward; dome mountains are created by magma welling up below Earth's surface; volcanic mountains are created by volcanic eruption.

4. **Why are the Appalachian Mountains not as high as the Rocky Mountains?**

The difference in age could explain the difference in elevation. The Appalachian Mountains are more than two hundred million years old, but the Rocky Mountains are only about one million years old. Younger mountains are usually higher and more rugged than older mountains because they have not been worn down by erosion.

Chapter 2: Mountain Animals

1. **How do goats' bodies make it easier for them to move around the mountain slopes?**

Goats have sharp hooves that can grip the steep slopes of the mountains.

2. **What are the four ways that animals survive the cold weather?**

Animals move lower on the mountain where it is warmer and they have more shelter, they grow thicker coats of fur, they find shelter underground or under the snow, or they hibernate.

3. **Why do mountain lions now live mostly in the mountains?**

The movement and settlement of people in the lowlands pushed the lions into the mountains.

4. **What are three other animals that live in mountains?**

Possible answers include guanacos, ibex, wolf spiders, giant pandas, eagles, and condors.

5. **Why is the yeti considered a myth?**

No one has been able to prove that it really exists. Activity Page

Chapter 3: Mountains as Barriers

1. **Why is it difficult for humans and other animals to cross the Andes?**

The mountains in the Andes have steep slopes. Because the passes are at high

elevations, it is very cold and windy. Because the air has less oxygen, it can be hard to breathe.

2. **What are ways people have used to travel across or through mountains?**

People have built and used S-curve roads, and tunnels.

3. **Why do people use gaps and passes to travel across mountains?**

People use gaps and passes because they are not as high as the rest of the mountain range.

4. **Who are the Basques? How have mountains helped to shape their culture?**

The Basques are a people who settled in the Pyrenees Mountains between Spain and France. The mountains cut them off from other people, allowing the Basques to develop a language very different from Spanish and French.

5. **What are the effects of higher elevations on people who are not accustomed to them?**

They tire easily, have difficulty breathing, and get headaches.

6. **How have people adapted to living at higher elevations?**

Their bodies have adapted to the thinner air so they don't get short of breath or get headaches.

7. **Why have some groups of people who lived on mountains developed their own ways of life and have little to do with other people?**

People who live on mountains do not usually have many visitors, nor is it easy for them to travel and meet new people. This means that there are fewer opportunities to learn about other people's ideas or ways of life and incorporate these ideas into their own culture.

Chapter 4: Making the Most of Mountains

1. **Why are the lands east of the Rocky Mountains drier than the lands west of the mountains?**

Moist winds coming off the ocean are cooled as they rise up the mountains. Since cool air holds less moisture than warmer air does, the moisture falls as rain or snow on the western side. By the time the wind crosses over the mountains to the east, it has lost most of its moisture.

2. **How do hydroelectric plants work?**

Running water turns generators. The generators make electricity.

3. **Based on the text in this chapter, why might people build dams?**

Dams allow water to be held back. When it is released, its force turns generators, which create electricity.

4. **What mountain ranges were described as being rich in minerals?**

The Rocky, Ural, Allegheny, and Appalachian Mountains all are rich in different kinds of minerals.

5. **On what continents are the Rocky, Ural, Allegheny, and Appalachian Mountains located?**

The Rocky, Allegheny, and Appalachian Mountains are all located in North America.

The Ural Mountains in Russia are part of the boundary between Europe and Asia.

6. **How have people benefited from the coal in American mountains?**

The coal in American mountains such as the Appalachians and Alleghenies helped American industry grow.

7. **Why are llamas, alpacas, and yaks suited to life in the mountains?**

They are surefooted and used to traveling up and down mountainsides for food.

8. **Why would farming be easier on a plateau instead of a mountainside?**

Plateaus are flat. It is easier to move and plant on a flat surface than on a steep surface.

9. **How do we know that skiing has been important to people for a very long time?**

Archaeologists have found skis from thousands of years ago. Norwegian soldiers used skis in 1200. People have held skiing competitions since the 1800s.

10. **Who were the first people to reach the peak of Mount Everest?**

Sir Edmund Hillary and Tenzing Norgay

11. **What challenges do mountain climbers face when they try to reach the peak of Mount Everest?**

They face freezing temperatures, strong winds, thin air, and unexpected snowstorms.

12. **Why might someone want to endure difficult conditions to climb to a mountain peak?**

Answers may vary. Students may cite that some people enjoy challenges. Students may say that it would be an honor to be the first person to climb a mountain. Accept all reasonable answers.

Unit quiz key

1. c 2. a 3. a 4. c 5. a 6. d 7. a 8. b 9. c 10. c 11. d 12. c 13. d 14. d 15. d