

FACES®

MAJESTIC MOUNTAINS

Travel around the world as you explore what makes people drawn to mountains and how people adapt to and affect their environments.

CONVERSATION QUESTION

How do people adapt to and affect their environments?

TEACHING OBJECTIVES

- Students will read and analyze a nonfiction article.
- Students will learn about mountain geography.
- Students will analyze how the cultural characteristics of places change over time.
- Students will explain how culture influences the way people modify and adapt to their environments.
- Students will explain how cultural and environmental characteristics of places change over time.
- Students will explain how cultural patterns and economic decisions influence environments and the daily lives of people.
- Students will use details from a text to create an annotated diagram.
- Students will conduct research using print and digital sources.
- Students will create a multimedia presentation.



In addition to supplemental materials focused on core Social Studies skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and cross-curricular activities.

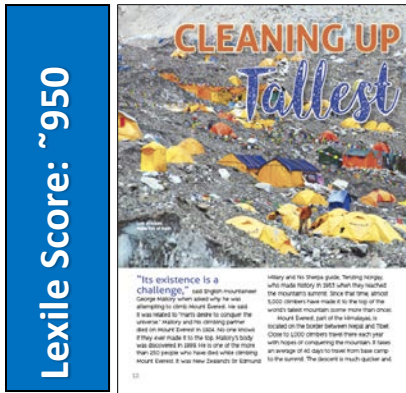
SELECTIONS

- **Cleaning Up the World's Tallest Mountain**
Expository Nonfiction, ~950
- **Big Bangs: Volcanoes Through the Ages**
Expository Nonfiction, ~1250L
- **Trollstigen: A Scene Straight Out of a Folktale**
Expository Nonfiction, ~1050L

Cleaning Up the World's Tallest Mountain

pp. 12–15, Expository Nonfiction

Each year thousands of pounds of human waste are left by hikers on Mt. Everest. Discover how this problem is being tackled by individuals and organizations.



RESOURCES

- Change over Time

OBJECTIVES

- Students will read and analyze a nonfiction article.
- Students will learn about mountain geography.
- Students will analyze how the cultural characteristics of places change over time.
- Students will use details from a text to create an annotated diagram.

KEY VOCABULARY

- **base camp** (p. 12) a camp located at the base of a mountain from which hiking expeditions set out
- **summit** (p. 12) the highest point of a mountain
- **decomposing** (p. 13) the decaying or breaking down of organic matter into simpler parts or substances

ENGAGE

Conversation Question: How do people adapt to and affect their environments?

Ask students to think about how humans dispose of both trash and human waste. Then, ask them how these tasks might be accomplished by people hiking up mountains. Last, instruct students to check their predictions as they read the article.

INTRODUCE VOCABULARY

Write the following sentences on the board. Then, ask students to decide which words from the vocabulary list should be used to complete the sentence.

- At the _____ frigid temperatures prevent human waste from _____.
- When hiking from _____ to the _____, people generate a lot of trash and waste that contaminates the environment.

READ & DISCUSS

Read the article with a partner, and then use these prompts for discussion:

- How do humans contaminate the environment on Mt. Everest?
- Why is contamination from human waste and trash on Mt. Everest a problem?
- What strategies have been used to limit the contamination of Mt. Everest by trash and human waste?

CONCEPT/SKILL FOCUS: Analyze Change

INSTRUCT: Pass out copies of the *Change over Time* graphic organizer. Have students record the ways that human trash and waste accumulated on Mt. Everest and was disposed of. Arrange students in pairs to discuss how the cultural characteristics of hiking on Mt. Everest have evolved over time.

ASSESS: Invite pairs to share their findings with the rest of the class, supporting their reasoning with evidence from the text. Also, encourage students to draw inferences about *why* cultural characteristics of hiking on Mt. Everest have changed over time (e.g., what values or capabilities have changed in human populations that may have led to such changes).

EXTEND

Social Studies Diagrams help geographers visualize how human populations impact the world around them. Use details from the text to create a diagram of Mt. Everest showing how trash and human waste accumulates on the mountain and how it gets removed.

Change over Time

As you read the article, record the ways human trash and waste has accumulated on Mt. Everest and was disposed of at different points in time.

Hint: You may have to infer the timing of certain developments based on details provided in the article.

Time Period	Ways human trash and waste accumulated on Mt. Everest and was disposed of
By the late 1980s	
In the 1990s	
Starting in the 2000s	

Big Bangs: Volcanoes Through the Ages

pp. 16–19, Expository Nonfiction

Learn how volcanic eruptions in ancient and modern times have impacted the environment in which humans live. Discover the ways that people have had to adapt to their presence.



OBJECTIVES

- Students will read and analyze a nonfiction article.
- Students will learn about mountain geography.
- Students will explain how cultural and environmental characteristics of places change over time.
- Students will conduct research using print and digital sources.

KEY VOCABULARY

- **ecosystems (p. 16)** a biological community of interacting organisms and their physical environment
- **catastrophic (p. 16)** involving or causing sudden great damage or suffering
- **ash (p. 17)** fine particles of material ejected from a volcanic vent

ENGAGE

Conversation Question: How do people adapt to and affect their environments?

Ask students to think about a volcanic explosion. How does it impact the environment and people living both near and far away? Explain that the article discusses some ways that people have been forced to adapt to the changes brought about by volcanic eruptions.

INTRODUCE VOCABULARY

As a class, review the vocabulary words and read them aloud. Then, ask students to make predictions about the topic of the text using the vocabulary words. If necessary, help students guess the topic by revealing the title of the article.

READ & DISCUSS

Read the article with a partner, and then use these prompts for discussion:

- What events can occur when a volcano erupts?
- How have volcanic eruptions impacted human settlements?
- What inferences can you make about how people have adapted to the danger posed by volcanoes?

CONCEPT/SKILL FOCUS: Explain Places

INSTRUCT: Explain to students that cultural and environmental characteristics of places change over time. Sometimes, a natural event occurs that changes both the physical and human characteristics of a place.

ASSESS: Have students reread the article to gather information about the impact that volcanic activity had on the Mayan civilization and how that civilization adapted to such activity. Invite students to check their work by discussing their findings with a peer.

EXTEND

Science The article mentioned several large volcanic eruptions that have occurred in the past and how they have devastated people and environments. Using print and digital sources, conduct research to identify various ways in which people have adapted to the threat of danger posed by volcanoes. Hint: How do people monitor volcanoes? How do people prepare for the effects of volcanoes? What are scientists still trying to learn about volcanoes?

Trollstigen: A Scene Straight Out of a Folktale

pp. 36–38, Expository Nonfiction

Discover why engineers decided to build a road through some of the steepest mountains in the world.



OBJECTIVES

- Students will read and analyze a nonfiction article.
- Students will learn about mountain geography.
- Students will explain how cultural patterns and economic decisions influence environments and the daily lives of people.
- Students will create a multimedia presentation.

KEY VOCABULARY

- **incline** (p. 36) a slope, especially on a road or railway
- **switchbacks** (p. 36) a 180-degree bend in a road or path
- **insurmountable** (p. 36) too great to be overcome

ENGAGE

Conversation Question: How do people adapt to and affect their environments?

Ask students to share what they know about mountain geography. Invite them to share ideas about how people living in or near mountains might change the environment to suit their cultural or economic needs. Then, tell students that they're going to learn about a road that was built through the mountains to help connect a mountain village to the rest of the country.

INTRODUCE VOCABULARY

Define each word with students. Then, arrange students in small groups and have them practice using all three words in a single sentence. Finally, tell students to look for these words as they read the story.

READ & DISCUSS

Read the article with a partner, and then use these prompts for discussion:

- Why was Trollstigen first built?
- How has the road been modified since it was first built? Why?
- How has the roadway affected people living in and visiting the mountains?

CONCEPT/SKILL FOCUS: Describe Influence

INSTRUCT: Inform students that cultural patterns and economic decisions influence environments and the daily lives of people. Explain that the article discusses ways that the environment of Norway was originally modified by people to help achieve specific economic goals.

ASSESS: Have students reread the article to identify the economic goals that have been achieved by the original construction of the roadway and also later achieved by modifications (i.e., the viewing platforms). Then, have students share their findings with the rest of the class.

EXTEND

Engineering The article describes how a roadway was built in the mountains of Norway. Conduct research to learn about one other example of how people adapted to challenging physical environments by building bridges or roads. Gather images and details regarding the engineering accomplishment and synthesize them into a multimedia presentation that you share with your class.