

FACES®

OUR REALLY BIG ISSUE

In this issue, students learn about some of the largest organisms and physical features on the Earth. Explore with your students how these organisms and features evolved to their current state and which human and natural factors affect their evolution.

CONVERSATION QUESTION

How do human activities and natural processes affect the environment?

TEACHING OBJECTIVES

- Students will learn about coral reef systems.
- Students will learn about pando forests.
- Students will learn about the Grand Canyon.
- Students will explain how the environmental characteristics of places change over time.
- Students will analyze the combinations of cultural and environmental characteristics that make places unique.
- 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 write a poem.
- 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

- **Grief Along the Reef**
Expository Nonfiction, ~1050L
- **Pando: Oldest, Heaviest, or Largest?**
Expository Nonfiction, ~950L
- **It's a Grand Canyon**
Expository Nonfiction, ~1050L

Grief Along the Reef

pp. 16–19, Expository Nonfiction

Learn why coral reefs are a vital part of the marine ecosystem and how both human actions and natural physical processes have threatened their survival.



RESOURCES

- Reefs Under Attack

OBJECTIVES

- Students will read and analyze a nonfiction article.
- Students will learn about coral reef systems.
- Students will explain how the environmental characteristics of places change over time.
- Students will use details from a text to write a poem.

KEY VOCABULARY

- commercial harvesting (p. 18)** the harvesting of animals or crops in order to sell them
- development (p. 19)** the process of building a group of houses or other buildings on an area of land
- sustainable (p. 19)** involving methods that do not completely use up or destroy natural resources

ENGAGE

Conversation Question: How do human activities and natural processes affect the environment?

Explain that coral reefs are systems of corals that provide food and shelter for a large majority of marine lifeforms. Ask students to hypothesize how both human activities and natural processes impact coral reef systems. Have them record their ideas. Remind them to check their ideas as they read to see if they were accurate.

INTRODUCE VOCABULARY

Review the vocabulary words and definitions. Then display the sentences below and have students complete them using the vocabulary words. Remind students to look for the vocabulary words as they read the article.

- Both _____ and coastal _____ can threaten the survival of marine lifeforms.
- _____ fishing methods help preserve marine ecosystems.

READ & DISCUSS

Have students read the article with a partner. Then use these prompts for discussion:

- Why are coral reefs important for marine life?
- What human and environmental factors threaten the survival of coral reefs?
- How are humans attempting to protect coral reef systems?

SKILL FOCUS: Explain Change

INSTRUCT: Distribute the *Reefs Under Attack* organizer to students.

Explain that the environmental characteristics of places, such as landforms and plant and animal life, can change over time as the result of both human activities and natural processes.

ASSESS: Have students use the organizer to record information about the impact of human activities and natural processes on coral reef systems. Then have students summarize this information and share their summaries in small groups.

EXTEND

English Language Arts Remind students that the article mentions several ways that coral reef systems are threatened by human activities and natural processes. Have students write a poem about coral reef systems that highlights their importance to marine life and reflects on ways reefs can be saved. Tell students to incorporate factual details from the article in their poems. You might suggest students write their poems from the perspective of a reef-dwelling creature or plant.

Reefs Under Attack

In the first column, record details from the article about the physical characteristics of barrier reefs and fringe reefs. Then record details about human activities and natural processes that affect each type of reef. Note: You may need to make inferences about these activities and processes.

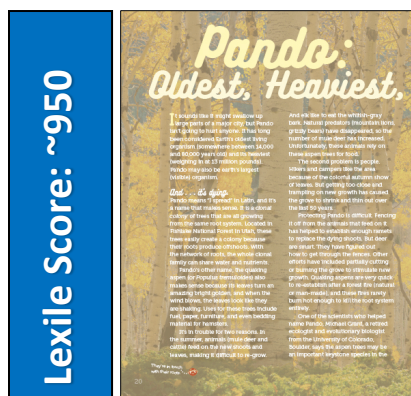
Physical Characteristics of Reefs	Human Activities That Impact the Reef	Natural Processes That Impact the Reef
Barrier Reef:		
Fringe Reef:		

Faces® Teacher Guide: July/August 2019

Pando: Oldest, Heaviest, or Largest?

pp. 20–21, Expository Nonfiction

Learn about a unique forest in Utah where trees share the same root system and both human and animal activities threaten its survival.



OBJECTIVES

- Students will read and analyze a nonfiction article.
- Students will learn about pando forests.
- Students will analyze the combinations of cultural and environmental characteristics that make places unique.
- Students will conduct research using print and digital sources.

KEY VOCABULARY

- **root system (p. 20)** the network of roots that a plant develops
- **ramet (p. 20)** an independent member of a cloned plant group
- **keystone (p. 20)** something on which other things depend for support

ENGAGE

Conversation Question: How do human activities and natural processes affect the environment?

Ask students to share what they know about different types of forests in the United States. What makes them similar to and different from one another? Then tell them they're going to learn about an unusual forest in Utah where the trees all share the same root system.

INTRODUCE VOCABULARY

Review the vocabulary words and definitions. Then ask students to use the vocabulary words to predict something they will learn about the forest in Utah from the article. If necessary, help students make predictions by revealing the title of the article. Then remind students to look for the vocabulary words as they read the article.

READ & DISCUSS

Have students read the article with a partner. Then use these prompts for discussion:

1. How is the pando forest in Utah unique?
2. How does animal behavior impact the survival of the pando forest in Utah?
3. How does human activity impact the survival of the pando forest in Utah?

SKILL FOCUS: Analyze Place

INSTRUCT: Explain to students that combinations of environmental characteristics, such as plants and animals, and cultural characteristics, such as leisure preferences, make places unique. Point out that the very characteristics that make places unique are sometimes threatened by natural and human activity.

ASSESS: Have students reread the article to identify at least one cultural and one environmental characteristic that make the pando forest in Utah unique. Invite students to check their work by discussing their findings with a partner. Then ask students to hypothesize how a change in either animal or human behavior might impact the pando forest.

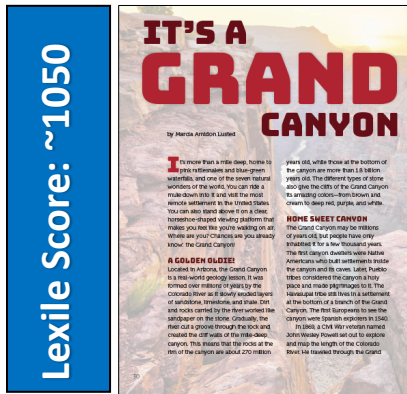
EXTEND

Social Studies Have students use print and digital resources to identify and research another unique forest in the world. Ask students to write a short summary of the environmental and cultural characteristics of the forest. Encourage students to use maps, drawings, and diagrams to help them summarize information. Invite students to share their work with the class.

It's a Grand Canyon

pp. 30–33, Expository Nonfiction

Discover how the Grand Canyon was formed and how humans have both adapted to and modified its environment over time.



OBJECTIVES

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

KEY VOCABULARY

- **settlement (p. 30)** a place where people have come to live and where few or no people lived before
- **attraction (p. 31)** something interesting or enjoyable that people want to visit, see, or do
- **jurisdiction (p. 31)** the power or right to make judgments about the law

ENGAGE

Conversation Question: How do human activities and natural processes affect the environment?

Ask students to share what they know about the Grand Canyon. Then invite students to hypothesize why some people would want to live there and what the challenges of living in the canyon might be. Finally, explain that this article describes ways humans have both adapted to and modified the environment of the canyon.

INTRODUCE VOCABULARY

Review the vocabulary words and definitions. Then have students work in pairs to write a sentence for each vocabulary word, using the word correctly. Invite students to share their sentences. Then remind them to look for these words as they read the article.

READ & DISCUSS

Have students read the article with a partner. Then use these prompts for discussion:

1. What characteristics of the Grand Canyon made it an ideal home for some indigenous people?
2. How have humans modified the environment of the Grand Canyon?

SKILL FOCUS: Explain Influence

INSTRUCT: Inform students that the geographic features of a place influence the types of activities people can do there. Also explain that cultures develop patterns of behavior and make economic decisions based on these geographic features.

ASSESS: Have students work in pairs to review the article and identify two geographic features of the Grand Canyon that have influenced cultural patterns or economic decisions. Then have partners draw conclusions about how cultural patterns and economic decisions may be influenced by the presence or lack of water in an area.

EXTEND

Science Remind students that the article describes how the Hoover Dam changed the natural flow of water through the Grand Canyon. Have students conduct research to compare water flow through the canyon before and after the construction of the Hoover Dam. Then ask students to create a short multimedia presentation to explain how the Hoover Dam changed water flow through the canyon.