

### Iceland

Covered less in ice than it is in moss, Iceland is one of the world's most magical destinations. This issue of FACES magazine explores how Iceland's geography helps shape its unique culture and independence from fossil fuels.

#### **CONVERSATION QUESTION**

How does Iceland's geography influence its culture?

#### TFACHING OBJECTIVES

- Students will learn about Icelandic geography and cuisine.
- Students will learn about Iceland's unpredictable weather
- Students will learn about Iceland's geothermal natural resources.
- Students will examine the connection between physical characteristics of a place and its culture.
- Students will analyze the impact of location.
- Students will construct explanations using relevant information from a nonfiction article.
- Students will use a mathematical process to convert measurements.
- Students will conduct a classic earth science experiment.
- Students will investigate how natural resources are used in their region.



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**

- A Creative Cuisine
   Expository Nonfiction, ~1150L
- Weathering the Weather Expository Nonfiction, ~1150L
- The Eco-Friendliest Country on Earth Expository Nonfiction, ~1150L

### A Creative Cuisine

#### pp. 12-15, Expository Nonfiction

Icelandic food walks the line between artful delicacy and simple sustenance. This article explores how the rugged geography and climate of Iceland have influenced its farming practices and cuisine.

Lexile: ~1150L



#### **RESOURCES**

A Creative Cuisine: Vocabulary Word Map

Examine Physical and Cultural Connections: Climate Cuisine

#### **OBJECTIVES**

- Students will learn about Icelandic geography and cuisine.
- Students will examine the connection between physical characteristics of a place and its culture.
- Students will use a mathematical process to convert measurements.

#### KFY VOCABULARY

- pristine (p. 12) completely clean and fresh; not spoiled, corrupted, or polluted
- geothermal (p. 13) relating to or producing the internal heat of the earth
- humble (p. 13) not costly or luxurious

#### **ENGAGE**

**Conversation Question:** How does Iceland's geography influence its culture?

Inform students that the article that they will be reading introduces them to a country that is one of the most diverse and environmentally friendly countries in the world. Display a world map and give students the following clues, one at a time, so that they can locate the country being studied. (Iceland)

- This country is an island.
- It is a Nordic country located between the North Atlantic and Arctic Oceans.
- This country sits on the Mid-Atlantic Ridge where tectonic plates are drifting apart.
- Its nearest neighbors are Greenland, the Faroe Islands, and Norway.
- This country's capital city is Reykjavík.

#### INTRODUCE VOCABULARY

A word map engages students in developing a definition, synonyms, antonyms, and a picture connection for a given word or concept. It is a visual organizer that promotes vocabulary development. Discuss the key words and definitions and have students choose one word to map. Use A Creative Cuisine: Vocabulary Word Map as a template.

### **READ & DISCUSS**

Pose the following questions to facilitate meaningful discussion.

- 1. How is modern Icelandic cuisine similar to Viking cuisine?
- 2. How does the change of seasons affect food sources?
- 3. Explain how the farming practices of Iceland differ from much of the world.
- 4. What kinds of sweet treats are enjoyed in Iceland?

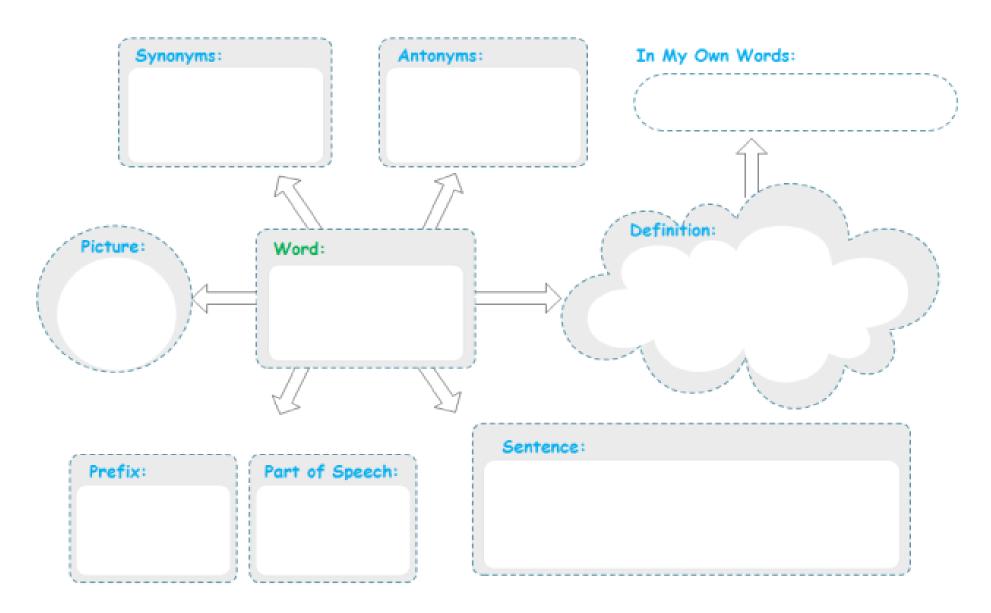
#### SKILL FOCUS: Examine Connections

**INSTRUCT:** Inform students that the geographic characteristics of a place include landforms, as well as climate and weather. These characteristics can influence the customs and practices of cultures. Discuss examples from the article. Distribute the *Climate Cuisine* worksheet for independent practice.

**ASSESS:** Invite students to share their responses and amend their lists.

#### **EXTEND**

Mathematics: Read aloud the recipe for Holiday Spesiur Cookies located at the bottom of page 15. The paragraph states that if you cut the recipe in half, you'll have approximately 40 treats. Ask: If you don't cut the recipe in half, how many treats would you have? Have students rewrite the recipe so that the yield is cut in half. Then, have them rewrite measurements again so that the original recipe is doubled. Ask: How many treats will the doubled recipe yield? Remind students that being able to convert measurements helps us to standardize and understand the world around us.



**A Creative Cuisine** 

## **Climate Cuisine**













**Examine Physical and Cultural Connections:** Use information from the article to explain how various geographical characteristics influence the way that food is enjoyed, grown, and/or cooked in Iceland.

Geographical Characteristic	Influence on Cuisine
1.	
2.	
3.	

Weathering the Weather

#### pp. 16-19, Expository Nonfiction

Life in Iceland is influenced by its unique weather patterns. Readers will discover how climate affects the citizens and culture of this stunning country.

**Lexile:** ~1150L



## **RESOURCES**

Impact of Location: Whether or Not

### **OBJECTIVES**

- Students will learn about Iceland's unpredictable weather.
- Students will analyze the impact of location.
- Students will conduct a classic earth science experiment.

### **KEY VOCABULARY**

- climate (p. 16) the weather conditions that prevail in an area
- latitude (p. 16) angular distance north or south of the equator, measured in 90 degrees
- topographical (p. 16) the artistic representation of a particular locality such as mountains and rivers

#### **ENGAGE**

**Conversation Question:** How does Iceland's geography influence its culture?

Give students the opportunity to discuss the weather in their region and ask them to consider temperatures, precipitation, and wind patterns. Expand the discussion to include other parts of the United States. Ask: Why do different regions experience different weather? Next, show students the location of Iceland on a map. Based on its location, ask students to speculate what the weather is like in this Mid-Atlantic country.

#### INTRODUCE VOCABULARY

Read aloud the vocabulary words and definitions. Next, have students work in pairs to determine how the words are connected. Then, present the title of the article and have them predict how these words will connect to the topic of Iceland's weather. Invite students to share their thoughts and remind them to look for these words as they read the article. Have students revisit their predictions after the reading.

#### **READ & DISCUSS**

Have students read the article with a partner. Lead a class discussion based on the following prompts.

- 1. Which winds influence the climate of Iceland?
- 2. What makes the air in Iceland feel much warmer?
- 3. What is Iceland's driest season?
- 4. Why is the weather in Iceland so unpredictable?
- 5. How does the northern latitude of Iceland affect the activities of Icelanders at different times of the year?

## SKILL FOCUS: Impact of Location

**INSTRUCT:** Remind students of the location of Iceland on the map. Guide them to recall how human life and plant life are greatly affected by drastic light and temperature variations. The article states that winter and summer are the only two seasons that most Icelanders acknowledge. Students will use information from the article as well as their own critical thinking skills to complete the *Whether or Not* chart.

**ASSESS:** Circulate and discuss as students are working. Review the chart with the class and have volunteers read their answer to the **THINK TANK** question.

#### **EXTEND**

**Earth Science:** Page 18 of the article describes extreme differences in daylight that are experienced in Iceland due to its northern latitude. Use a globe and a flashlight to replicate the way sunlight shines on Earth, causing seasonal changes and light differences. Have students choose a few different places around the globe. Then guide them to notice that during the winter, the Northern Hemisphere leans away from the sun and there are fewer daylight hours. Locate Iceland on the globe and demonstrate that the farther away you are from the equator, the greater the difference in hours of daylight and night.

Weathering the Weather

## Whether or Not

**Impact of Location:** Explain specific ways that the people of Iceland are impacted by its location on Earth. Use details to describe how the Icelanders adapt to the different seasons.

Icelandic Winter		
1.		
2.		
3.		
Icelandic Summer		
1.		
2.		
3.		

**THINK TANK:** How does the combination of cultural and environmental characteristics make Iceland unique? Answer in paragraph form on the back of this paper. Include details from the article.

# The Eco-Friendliest Country on Earth

#### pp. 30-33, Expository Nonfiction

Icelanders have made tough decisions to use clean energy and have earned the title, the "eco-friendliest" country in the world. Readers will discover how Iceland has harnessed their abundance of natural resources to create energy.



#### **RESOURCES**

Construct Explanations: Energy Efficient

#### **OBJECTIVES**

- Students will learn about Iceland's geothermal natural resources.
- Students will construct explanations using relevant information from a nonfiction article.
- Students will investigate how natural resources are used in their region.

#### KEY VOCABULARY

- fossil fuel (p. 31) fuel such as coal, oil, or natural gas, that is formed in Earth from dead plants or animals
- renewable energy (p. 32) energy from a source that is not depleted when it is used, such as wind or solar power
- turbine (p. 32) an engine used to produce continuous power in which a rotor is made to revolve by a fastmoving flow of water, air, or gas

#### **ENGAGE**

**Conversation Question:** How does Iceland's geography influence its culture?

Ask students what people use energy for. Guide them to understand that energy is primarily used to provide electricity and heat. Ask them what natural resources they think Iceland has that it can use to produce energy, given what they know about Iceland's geography. Explain that while energy in most countries is produced by burning fossil fuels such as oil, Iceland has a variety of alternative sources of energy available to it. Distribute the article.

#### INTRODUCE VOCABULARY

Review and discuss the key vocabulary words and their definitions. Have students write a sentence for each word that demonstrates an understanding of its meaning. Then, challenge them to write one super sentence that uses all three words. Have volunteers share their sentences. Emphasize the key words as they appear in the article.

### **READ & DISCUSS**

Reinforce comprehension of the concepts presented in the article by using the following questions to direct discussion.

- 1. How are homes in Iceland heated?
- 2. What methods does Iceland use to produce electricity?
- 3. How does Icelandic baker, Rafn Hilmarsson, bake his bread?
- 4. Why do Icelanders want to access steam trapped under the earth?
- 5. How is Iceland sharing its expertise about geothermal heating with the world?

## SKILL FOCUS: Impact of Location

**INSTRUCT:** Advise students to review the article and to study the information under the subheadings *Geothermal Power, Heating Homes,* and *The Future of Fuel*. Then, have them work in pairs to complete the graphic organizer, *Energy Efficient*. Remind students to provide clear explanations under each heading.

**ASSESS:** Review chart and discuss how geographic features of a place influence the types of resources available there. Guide students to realize that cultures develop patterns of behavior and make economic decisions based on the types of resources available to them. Discuss why Iceland is the considered the "eco-friendliest" place in the world.

#### **EXTEND**

**Social Studies:** Icelanders use the natural resources available to them to reduce their dependence on fossil fuels and to produce and use energy in an eco-friendly manner. Have students use print and digital resources to research how geothermal and hydro energy are used in their region or country. Instruct students to create a multimedia presentation (or written essay) describing at least one way in which the production or use of geothermal or hydro energy in their area influences people's daily lives.

The Eco-Friendliest Country on Earth

## **Energy Efficient**

**Construct Explanations:** Refer to the article and locate information that provides explanations about the different types of natural resources used in Iceland.

Geothermal Power (p. 30)			
What is geothermal power?	How does the process work?		
Examples/details:			
Heating Homes (p. 31)			
How are homes in Iceland heated?	How does the process work?		
Examples/details:			

The Future of Fuel (p. 32)			
What future plans does Iceland have regarding its energy sources?	How will the process work?		
Examples/details:			