



Volcanoes

by Monica Halpern

Overview

This book highlights how volcanoes have changed the Earth's surface over time. It describes how and why volcanoes erupt and the effect they have on the environment.

Literacy Focus

High Frequency Words

blown, Earth, forest, gases, island, measure, mountain, rocks, scientists, world

Content Words

volcano, erupt, crust, mantle, magma, core, lava, shield volcano, composite volcano, cinder cone, plates, dormant, extinct, volcanologists

Word Attack and Vocabulary Skills

- Using -ed with past tense verbs

- Adding -ion to verbs to make nouns
- Adding the suffix -ly to make adverbs

Comprehension/Thinking Skills

- Identifying the cause and effect of volcanic eruptions
- Distinguishing facts from opinions
- Comparing and contrasting different types of volcanoes

Book Parts and Text Features

- Chapters and subheads

- Captions
- Charts, maps, and diagrams

Writing/Speaking and Listening

- Using new vocabulary
- Discussing similarities and differences among volcanic eruptions
- Writing a newspaper report based on historical facts

Observe/Assess

See *Multiple-Choice Test* in the Assessment Handbook, page 87.

Science Focus

Content and Thinking Skills

- Identifying the causes of volcanic eruptions
- Recognizing different types of volcanoes and how they form
- Understanding how environments change after volcanic eruptions

- Exploring the consequences of famous volcanic eruptions

Background Information

Natural forces such as volcanic eruptions constantly change Earth's surface. Volcanoes differ in appearance, location, and in the ways they erupt. Throughout history, there have been many volcanic eruptions. By studying

how and why volcanoes erupt, volcanologists can recognize warning signs and make predictions about future eruptions.

Correlation to National Standards Science

- Earth and Space Science

See *Standards Chart* on page 140.

Literacy Focus

Set the Scene

Draw a volcano shape and ask children to discuss what they know about volcanoes. Record any facts given inside the shape. Ask:

What is a volcano?

Where in the world are volcanoes?

Discuss any knowledge about eruptions.

Read and Discuss

Cover, Title Page, and Contents Page
Show children the cover and title pages. Ask:

What is this book likely to be about?

What kind of information might you find?

Focus on finding factual information about volcanoes and eruptions.

Pages 3-6

Read the recount/eyewitness report. Point out that a person is observing the event firsthand. Encourage children to identify the facts. Then together look at the photographs and discuss them.

Pages 7-15

Focus on the facts. Encourage children to read and define the words in bold print. Ask:

What are the facts? Is there any other supporting information on the page?

Pages 16-19

Encourage children to make connections to information already given. Discuss whether history confirms this information. Record the names of volcanoes on a chart to locate on a world map after reading.

Pages 20-22

Discuss the change in the style of writing. Help children make connections to the recount at the beginning of the book.

Respond

- Remind children that a suffix changes the meaning and use of a word. Demonstrate how adding -ion can change a verb to a noun—*erupt, eruption*. Continue with *predict, destruct, and act*.
- Explain that adding -ed to a verb makes it tell about an

action that happened in the past. Ask children to add -ed to these verbs and use them in a sentence.

○ look	○ knock
○ explode	○ watch
○ form	○ learn
○ erupt	○ discover

- Write the adjective *slow* on the board. Have children change the word to an adverb by adding -ly. Have them find other -ly words in the book and link each one to the verb it describes.

Understanding Information

Activity Master, page 132

Ask children to find and write facts about each key word.

Meeting Individual Needs

For specific teaching strategies for meeting individual needs, see pages 134-139.

Science Focus

Science Concept

Volcanoes have erupted throughout history and have affected how the Earth's surface is formed and where people live.

Activities

Volcanoes in History

Have children select from the list on page 18 a famous volcano to research. They can write a newspaper report telling of the

key facts. Remind them to include the *who, what, where, when, and why* facts.

Making Comparisons

Have children record the differences and similarities between the volcanoes featured in the book.

Make a Model

Have children work in groups to make a model of a cross-section

of a volcano using recycled materials (such as cardboard and papier-mâché) and label the parts.

A Volcanic Eruption

Activity Master, page 133

Have children draw and label pictures about a volcanic eruption on the Activity Master.

Name _____

Volcanoes

Use the book to find and write two facts about each key word.

Volcano

1. _____

2. _____

Earth

1. _____

2. _____

Volcanologists

1. _____

2. _____

Eruptions

1. _____

2. _____

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Name _____

Volcanoes

Follow the directions.

1. Draw and label one type of volcano.

2. Draw and label a volcanic eruption.

3. Draw a place right after a volcano erupted.

4. Draw the same place many years later.

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