

# PELE SEARCHES FOR A HOME: VOLCANOES!

## Lesson 1

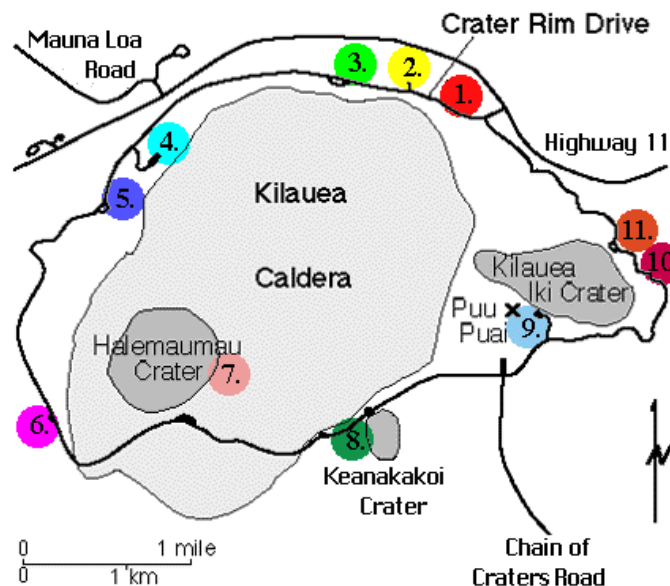
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*Focus, Make Connections, and Reflect*

**Driving Question:** *Why should we know about volcanoes in Hawai'i?*

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# Pele Searches for a Home: Volcanoes!

## Lesson 1

*E Pūlama I ka Ho‘oilina (Cherish Your Heritage)*

Over millions of years, volcanic activity in the middle of the Pacific Ocean has shaped, and continues to reshape, the incredible landforms of the Hawaiian islands. How is the story, Pele Searches for a Home, related to the forces that shape and reshape Hawai‘i?



Eruption on the ridge at Kīlauea

### Lesson Notes

#### I. Reflecting and Connecting

##### Concepts/Themes

Traditional practices, beliefs, values, and behaviors are elements of culture and contribute to the preservation of culture.

Hawaiian culture is the basis of a complex society that uses legends and significant heroes and gods to describe models of social mores.

##### Objective

Student writes at least two reasons why he/she should know about volcanoes in Hawai‘i.

##### Length

45 minutes

##### Materials

Student journals.

### Developing Background

*Focus, Make Connections, and Reflect*

**Driving Question:** *Why should we know about volcanoes in Hawai‘i?*

#### I. Reflecting and Connecting

Hold a discussion on the driving question. The responses reflect student experiences and provide insights into the background information that students bring to the lesson. Questions may include:

1. According to Jim Kauahikaua, the Scientist-in-Charge at the Hawai‘i Volcano Observatory, “Living safely on active volcanoes comes from learning what they do and how they behave.”
  - a. *What does he mean?*
  - b. *What might be other reasons why we should know about volcanoes in Hawai‘i?*
  - c. *Are there volcanoes where you live? Describe the volcanoes where you live.*

#### Students Enter Reflections in their Journals

1. *Are there volcanoes where you live? Describe what you*

know about the volcanoes where you live.

2. *Are there stories that are associated with the volcanoes you are describing?*
3. Whether you live near active volcanoes, or not, *why do you think you should know about volcanoes in Hawai'i?*

**Assessment:** Review journals for student's two reasons why they should know about volcanoes.

## II. Understanding the Culminating Project: "Volcanoes Where I Live" Virtual Tour

### **Theme/Concept**

*Sudden changes in the Earth's crust known as fast processes, such as volcanoes, reshape its surface.*

### **Objective**

*Students use the evidence to explain how fast processes (volcanoes) have shaped and reshaped the surface of where they live in a culminating project, "Volcanoes Where I Live."*

### **Length**

*Ongoing*

### **Materials**

*Pele Searches for a Home: Volcanoes! science text-set.*

## II. Understanding the Culminating Project: "Volcanoes Where I Live" Virtual Tour

No matter which island we live on, volcanoes have at one time shaped and reshaped the land where we live. At the end of *Pele Searches for a Home: Volcanoes!*, students create a virtual tour of where they live.

1. See maps on Pages 21–30 in the text-set *Volcanoes!*. The maps and text are starter stories providing information about the volcanoes of the islands. The goal of the task is to add information about the places where students live.
2. Include:
  - a. The nearest volcano.
  - b. Rejuvenated volcanoes, if any.
  - c. Historic information about the volcano.
  - d. Stories related to the volcanoes where students live.
  - e. Landmarks that remind people of these stories.
  - f. Photos and images of the area.  
(Note: A parallel project may focus on volcanic hazards and benefits.)
3. Teachers and students outline the considerations for sharing the project:
  - a. Audience.
  - b. Display.
  - c. Length.
  - d. Method of sharing (PowerPoint, pamphlet, posters, video).
  - e. Criteria for a successful tour.

### III. Listing, Grouping & Labeling Volcano Concepts and Words

#### Objectives

Students generate: (1) at least five words they associate with volcanoes and (2) group words based on attributes or characteristics of the words they select.

#### Length

60 minutes

#### Materials

1. Appendix 1.1: *Volcanoes! List, Group, & Label*.
2. Glossary or dictionary.
3. *Volcanoes!* science text-set.

### IV. Applying the Vocabulary Knowledge Rating Scale

#### Objective

Students rate themselves on the level of their understanding of the target words in *Volcanoes!*

#### Length

15 minutes

#### Materials

1. *Volcanoes!* science text-set.
2. Appendix 1.2: *Volcanoes! Vocabulary Knowledge Rating Scale*.

### V. Drawing a Volcano

#### Objective

Students draw a volcano as an inventory of prior knowledge on volcanoes in Hawai'i.

#### Length

30 minutes

#### Materials

1. Drawing paper.
2. Colored pencils or pens.
3. Student journals.

### III. Listing, Grouping, & Labeling Volcano Concepts and Words

Teachers may start with either *groups* or *categories*, a *list*, or *questions*. (See Appendix 1.1: *Volcanoes! List, Group, & Label*.)

1. If the class completed lessons in earthquakes, recall some of the categories, questions, or groups that were formulated. Sample categories or questions are included on Appendix 1.1: *Volcanoes! List, Group, & Label*.
2. The categories may vary, depending on the attributes and characteristics of the selected words.

### IV. Applying the Vocabulary Knowledge Rating Scale (if applicable)

1. Using the list/categories, students' self-rate the words before reading the *Volcanoes!* text-set. (See Appendix 1.2: *Volcanoes! Vocabulary Knowledge Rating Scale*.)

### V. Drawing a Volcano

1. Ask students to draw a volcano.
2. Have students ask other people to draw a volcano (parents, siblings, friends, etc.).
3. Share the drawings with the class.
  - a. Discuss the results.
  - b. *What surprised you?*
4. Add drawings to their journals.

## Appendix 1.1: *Volcanoes!* List, Group, & Label

### Building on Prior Knowledge

#### What is List, Group, & Label?

The List, Group, & Label strategy is a tool that helps students organize concepts that are presented in expository writing. Listing, grouping, and labeling words provide opportunities for meaningful word associations among the vocabulary words that are part of a particular concept. More importantly, it engages students in activating their background knowledge before reading the text-set.

#### **Purpose**

To build a deeper understanding of the different facets and meanings of a word or concept.

#### **Materials**

1. Selection of words and concepts from a current unit of study.
2. List, Group, & Label template.
3. Elmo, chart, or white board for display of words.

#### **Procedure**

1. Teacher writes *Volcanoes* on the board, or projection device such as an elmo or white board.
2. Invite students to generate words or phrases they associate with volcanoes.
  - a. Students may use the text-set, *Volcanoes!*, to generate words.
  - b. An alternative is for the teacher to present a list of words associated with volcanoes.
3. Once students have generated about 30 words, students work in pairs, or groups of three, to categorize the words and label the categories.
  - a. Determine which words and phrases belong together. Help students to consider attributes and characteristics of the words that guide their grouping.
  - b. Students may add other words or eliminate words that do not belong to the group.
  - c. Categories or groups can be reworded into questions. Students sometimes find it easier to generate questions.
4. Share the categorized list with the class. Emphasize that the categories generated can be categorized in a number of ways.
  - a. It is important that the students base their categories on the attributes and characteristics they define.

#### **References**

Macceca, Stephanie. (n.d.) *Reading strategies for science*. Huntington Beach, CA: Shell Education.

## List, Group, & Label

### Example

#### Topic: Volcanoes

#### Groups or Categories/Questions

<i>What is a volcano?</i>	<i>What are the different types of volcanoes?</i>	<i>How does a volcano form?</i>
magma mantle crust molten rock erupts lava mountain tectonic plate stationary seamount hot spot	classify erupt shield volcanoes resemble summit ridge flank vents strato pressure explosive pyroclastic cinder cones	origin formation preshield caldera subaerial shield resembles pāhoehoe 'a'ā postshield erosional rejuvenated coral reef guyot subsidence
<i>Which volcanoes are still active?</i>	<i>How many types of eruptions and flows are there?</i>	<i>What are the different lava products from an eruption?</i>
active extinct locate source	fountains spatter cones fragment pyroclastic lava lakes crater lava tubes channels	'a'ā pāhoehoe cinder volcanic ash Pele's hair Pele's tears
<i>What are volcano landforms and wonders?</i>	<i>What are the hazards of volcanoes?</i>	<i>Others</i>
shields summit caldera rift zones cinder cones spatter cones crater lava trees tree molds kīpuka	vog haze deltas	

## List, Group, & Label

1. Write the topic, and then list the words or phrases that are associated with the topic.
2. Group the words that are related. Think of the attributes or characteristics of the listed words.
3. Label each group or category.

**Topic:** \_\_\_\_\_

**Word List:**

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Groups or Categories:**

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

## Appendix 1.2: *Volcanoes!* Vocabulary Knowledge Rating

### Vocabulary Knowledge Rating

Vocabulary knowledge rating is best used in conjunction with content texts. Knowing the meaning of a word is not something that happens all at once (Blachowicz, 1986). Word knowledge usually develops from not knowing anything about the word, to knowing something of the meaning (e.g., features, examples), to a rich and deep understanding of the word. This metacognitive process makes students more aware of their understanding of the concepts in texts. Teachers can also use the rating as a tool to determine which words and strategies would be most effective. In vocabulary knowledge rating, students are presented with a list of words and asked to rate their understanding of each word.

#### **Purpose**

*To develop metacognitive skill in determining the level of word knowledge.*

#### **Materials**

1. *Blank Vocabulary Knowledge Rating Scale (see Page 10).*
2. *Volcanoes! text-set.*

#### **Procedure**

1. Emphasize with students that knowing the meaning of words is something that happens over time, through multiple exposures. We know some words well, some vaguely, and some not at all. The vocabulary knowledge rating process can be used as a tool to rate each student's own vocabulary knowledge.
2. Demonstrate the process using words encountered in the *Volcanoes!* text-set.
3. Present students with a list of words, and have them rate their understanding of each word. (See the Vocabulary Knowledge Rating Scale and focus on categories of words or phrases.)
4. Discuss each word, highlighting what it means to know a word well, vaguely, or not at all.
  - a. **Well:** Able to use the word in writing and understand its meaning quickly and automatically when reading.
  - b. **Have Heard and Seen It:** Know the word enough to get the gist of the text, but not necessarily enough to have it be part of the active vocabulary.
  - c. **Not at all, No Clue:** Do not know the meaning of the word at all.
5. Have students share what they think the content or unit



theme would be by looking at the words listed on the chart.

6. After a discussion, and based on the results of the chart, determine the focus of vocabulary instruction
7. Predict some of the features and examples that the author would include about the listed words.
8. After reading the text and vocabulary instruction, students go back to their rating scale and complete the sheet with a different marking.
9. After several exposures to the word in different activities, students continue to check their rating scales.

**Extension**

Students independently apply the use of the Vocabulary Knowledge Rating Scale when a unit of study is introduced.

**References**

Blachowicz, C. & Fisher, P. (2002). *Teaching vocabulary in all classrooms* (2nd ed.). Columbus, OH: Merrill Prentice Hall

**Vocabulary Knowledge Rating Scale (Sample)**

Rate Your Knowledge of the Following Words				
Word	Know It Well	Have Seen or Heard It	Not At All, No Clue	What I know about the word:
magma	x			
mantle			x	
plate tectonics			x	
crust		x		
molten rock			x	
erupt	x			
lava	x			
hot spot		x		
location	x			
pressure			x	
formation		x		





# PELE SEARCHES FOR A HOME: VOLCANOES!

## Lesson 2

### Table of Contents

#### Understanding Volcanoes

*Acquire, Process, Understand, and Conceptualize Knowledge*

**Driving Question:** *What are volcanoes?*

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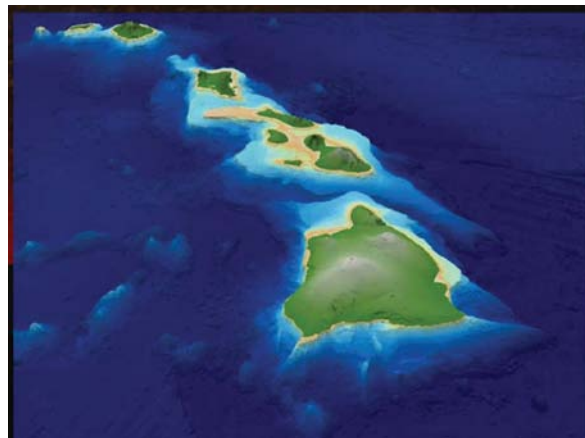


# Pele Searches for a Home: Volcanoes!

## Lesson 2

*E Pūlama I ka Ho‘oilina (Cherish Your Heritage)*

The Hawaiian islands are located in the middle of the Pacific Plate, 1,988 miles from the nearest plate boundary.



### Lesson Notes

#### I. Describing a Volcano

##### Concept/Theme

Sudden changes in the Earth's crust, known as fast processes, such as volcanoes, reshape its surface.

##### Objective

Students write a paragraph demonstrating their understanding of a volcano, by accurately using the identified target words.

##### Length

45 minutes

##### Materials

1. *Earthquakes!* and *Volcanoes!* text-sets.
2. Student journals.

### Understanding Volcanoes

*Acquire, Process, Understand, and Conceptualize Knowledge*

**Driving Question:** *What are volcanoes?*

#### I. Describing a Volcano

Review the “Pacific Plate” and “Hot Spot” sections in the *Earthquakes!* text-set (Pages 11 and 12).

1. Students look at the Pacific Plate. Have them notice where most of the volcanoes occur. *Where are Hawai‘i’s volcanoes located?*
2. Read Pages 11 and 12 in the *Earthquakes!* text-set as a class and elicit from students that the whole island they live on is a volcano.
3. Using the words in List, Group & Label, have students do a pre-reading written paragraph describing a volcano in their journals. Discuss words that they had no clue about or words that they have seen or heard, but are not sure about their meanings.

**What is a Volcano?** (Scan Pages 3 and 4 for other words that students should understand.)

magma	mantle	crust	molten rock
erupts	lava	mountain	tectonic plate
stationary	seamount	hot spot	

4. Read Pages 3 and 4 in the *Volcanoes!* text-set as a class.
  - a. As they read, stop and compare their pre-reading paragraph with the information in the text.
5. Allow time for students to rewrite their paragraphs on *What is a volcano?*
6. Conduct a quick discussion to scan the class' understanding of volcanoes.
  - a. Use the question stem, *"I now know that..."*
  - b. Students base their responses on their second written paragraph.
  - c. Clarify other words that students are not sure about.
7. Read "Making Connections" on Page 4 in the *Volcanoes!* text-set.
  - a. *Which island is the oldest? How old? The youngest?*
  - b. Respond to the questions posted.
  - c. Summarize by asking, *What is unique about the volcanoes in Hawai'i?*

**Assessment:** Review student paragraphs for accurate use of volcano vocabulary words.

## II. Creating Sensory Webs

### **Objective**

*Student pairs link five descriptive text items using details and vivid language to describe a word, topic, or concept.*

### **Length**

*45 minutes*

### **Materials**

1. *Appendix 2.1: Volcanoes! Sensory Webs.*
2. *List of volcano target words.*

## III. Classifying Volcanoes

### **Concept/Theme**

*Scientists classify volcanoes to organize and share information they observe and research.*

## II. Creating Sensory Webs

1. Students select one of the words from List, Group, & Label and create a sensory web.
  - a. This strategy helps students build a deeper understanding of the words.
  - b. Have students work in pairs to generate ideas through their interactive discussions.
2. Combine the five descriptive text items into a sensory poem.
3. See the example in Appendix 2.1: *Volcanoes! Sensory Webs.*

**Assessment:** Students generate five descriptive phrases of a given concept or word, then combine them into a written sensory poem.

## III. Classifying Volcanoes

Scientists classify volcanoes according to characteristics that will help them organize information they observe and research. The classification helps them to communicate information easily and accurately.

**Objective**

Students identify similarities and differences among the Hawaiian volcanoes and accurately identify the type of volcano where they live.

**Length**

60 minutes

**Materials**

1. *Volcanoes!* text-set.
2. Appendix 2.2: *Volcanoes! Compare and Contrast Volcanoes.*

1. Scan Pages 5 and 6 in the *Volcanoes!* text-set.
  - a. Look at the headings, sub-headings, and images. Ask students: *What text structure did the author use to help you understand volcanoes?* Elicit supportive responses to the question.
2. Jigsaw the assignment by having one group chart the information from one type of volcano, such as shield, strato, or pyroclastic. (Use the template in Appendix 2.2: *Volcanoes! Compare and Contrast.*)
  - a. If information will be presented in a wall chart, have students record their information on strips of construction paper.
3. Record on a class chart as groups report their information.
4. Discuss similarities among the different types of volcanoes.
5. Discuss differences:
  - a. Between Hawai'i's volcanoes and the others.
6. Have students compare their drawing of a volcano in Lesson 1 with the images of types of volcanoes on Pages 5 and 6 in *Volcanoes!*.
7. Ask students to think about what type of volcano they are living on. *What is the name of the volcano?* (To be used in their culminating project.) See "Making Connections" on Page 6 of *Volcanoes!*.
8.
  - a. Look for their island on Pages 21–30 in *Volcanoes!*
  - b. Point out where they live.  
*What volcano(s) make up their island? What kind of volcano is it?*  
Look at online satellite maps to see what the island volcanoes look like. Go to the following website and click on *hybrid, satellite, terrain*, to see the different maps and information provided on the maps.  
[[www.nationsonline.org/oneworld/map/google\\_map\\_Honolulu.htm](http://www.nationsonline.org/oneworld/map/google_map_Honolulu.htm)]
9. Summarize understandings of Hawaiian volcano types.

**Assessment:** Students accurately 1) classify volcanoes and 2) identify the volcano where they live.

#### IV. Understanding the Typical Life Stages of a Volcano in Hawai'i

##### Objective

Students are able to identify the stage of growth of the volcano where they live.

##### Materials

1. *Volcanoes!* text-set.
2. Appendix 2.3: *Volcanoes! Life Stages of a Hawaiian Volcano.*
3. Colored drawing pencils.
4. PowerPoint Software, if applicable.
5. Computer.

#### IV. Understanding the Typical Life Stages of a Volcano in Hawai'i

Each Hawaiian island has gone through similar stages of growth. The formation of the islands starts below the surface of the ocean at the hot spot. There are a varying number of stages; however, all volcanoes go through the same progression.

Students read about the typical life stages of a volcano, emphasizing the shaping and reshaping that occur as the islands are formed.

1. Divide the class into six groups. Each group is responsible for one stage of volcano development.
  - a. Follow the directions in Appendix 2.3: *Volcanoes! Life Stages of a Hawaiian Volcano.*
  - b. Review the directions with the groups.
2. Note: This activity could also be completed using PowerPoint or a computer graphic program.
  - a. The individual stage contributes to a class slideshow on the stages of volcanic development.
  - b. Links can be added for information, web resources, and vocabulary words/definitions.
3. Prior to reading, have student groups arrange themselves according to what they think the typical stages might be.
  - a. Visually check in Pages 7–12 in *Volcanoes!*
4. After completing each stage, students review their “Life Stages of a Volcano Checklist” in Appendix 2.3: *Volcanoes! Life Stages of a Hawaiian Volcano.*
5. Have each group present their typical life stage of a Hawaiian volcano.
6. See the “Think About It” section on Page 8 in *Volcanoes!*
  - a. Students discuss the stage of their island’s volcano or volcanoes.
  - b. Identify the rejuvenated volcanoes where they live.

**Assessment:** 1) Observe student’s contribution to group completion of a stage of volcanic development. 2) Students are able to accurately identify the stage of volcanic development of where they live.



## V. Connecting Pele's Migration with Volcano Stages

### Objective

Students are able to state one connection between the story, *Pele Searches for a Home*, and the science of shaping and reshaping of the Hawaiian islands.

### Length

30 minutes

### Materials

1. *Pele Searches for a Home* graphic novel.
2. Map used to trace Pele's migration to Hawai'i.

## VI. Understanding a Word Learning Strategy

### Objective

Students build a schema for words by providing a visual representation of related synonyms and antonyms.

### Length

45 minutes

### Materials

1. *Pele Searches for a Home* graphic novel.
2. Appendix .2.4: *Volcanoes! Synonym-Antonym Word Map*

## V. Connecting Pele's Migration with Volcano Stages

1. Have students read through the graphic novel, *Pele Searches for a Home*.
  - a. Locate the places where Pele tried to find a home.
  - b. *Where were these places?*
  - c. *What kinds of volcanoes are located in these areas?*
  - d. *Why couldn't she find fire on Kaua'i? What happened on O'ahu? Maui? Hawai'i?*
2. What connections can be made between the stories and the science of the shaping of the islands?

**Assessment:** Student is able to state one connection between the story, *Pele Searches for a Home* and the volcanoes on the islands.

## VI. Understanding a Word Learning Strategy

Understanding the difference between active and extinct volcanoes:  
Note: According to the USGS, there are active and inactive or extinct volcanoes (no dormant volcanoes).

1. Combine the lesson on affixes (in-, im-, ir-) with synonyms and antonyms.
2. Complete the Synonym-Antonym Word Map. (See Appendix 2.4: *Volcanoes! Synonym-Antonym Word Map*)
3. Focus on the vocabulary words in *Pele Searches for a Home, Volcanoes!*
4. Have students share their synonym-antonym word maps.

**Assessment:** Students accurately demonstrate own graphic representations of synonyms and antonyms for selected target words.

Note: Content for volcanoes (type of eruptions, flows, and products) can be retrieved by students as they work on their culminating project.

## Appendix 2.1: *Volcanoes!* Sensory Webs

### Sensory Webs

Using the sensory web strategy helps support students to use more thoughtful word choices in their speaking and writing (Graves, 2006).

#### **Purpose**

To build a deeper understanding of the different facets and meanings of a word or concept.

#### **Materials**

1. Selection of words and concepts from a current unit of study.
2. Sensory web template.

#### **What is it?**

Sensory webs are a type of visual organizer that scaffolds students' ability to compose descriptive text using details and vivid language to describe a new word, topic, or concept.

#### **Procedure**

1. The word is placed in the center, and students fill in what the word smells like, tastes like, looks like, sounds like, and feels like.

<b>Looks Like</b> <i>an inflated balloon, ready to burst</i>		
<b>Smells Like</b> <i>sparklers crackling and sizzling</i>	<b>Word</b> <b>PRESSURE</b>	<b>Sounds Like</b> <i>explosive volcanic swooshing</i>
<b>Tastes Like</b> <i>pop rocks popping on my tongue</i>		<b>Feels Like</b> <i>my head, ready to burst!</i>

2. The web can then be easily turned into a sensory poem that students can also illustrate.

#### **PRESSURE**

Looks like an inflated balloon, ready to burst!  
 Smells like sparklers crackling and sizzling;  
 Feels like my head, ready to burst;  
 Tastes like pop rocks popping on my tongue;  
 Sounds like explosive volcanic swooshing!

#### **References**

Graves, Michael F. (2006). *The vocabulary book*. Learning & instruction. New York: Teachers College Press. Columbia University.

# Sensory Web

Looks Like		
Smells Like	Word	Sounds Like
Tastes Like		Feels Like

## Sensory Poem

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix 2.2: *Volcanoes!* Compare and Contrast

### Compare/Contrast *Explicit Instruction*

#### **What is a Text Structure?**

Text structures are the way authors organize the information in text. The most common informational text structures include the following: compare/contrast, problem/solution, cause/effect, sequence, and description. Most informational texts contain a variety of integrated types of text structures.

#### **Compare/Contrast**

One of the text structures that authors use to organize text is called compare/contrast. “Research has suggested that, of the most common expository text structures, the compare/contrast structure may be one of the more difficult for students to navigate” (e.g., Englert, & Hiebert, 1984; Raphael, Elglert, Kirschner, 1986) (Dreher, p. 134). It has also been stated that becoming familiar with the text structure of compare/contrast is particularly helpful to English Language Learners because it helps them to compare their own background knowledge with the new information. See Table 1 found below for additional information about the text structure of compare/contrast.

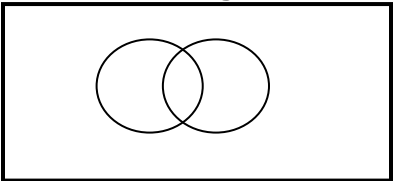
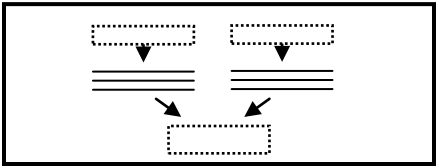
#### **Signal Words**

The way a reader can understand the text structure, or the organization pattern of a text is through the use of signal words. Signal words are specific words that are clues or sign posts to the structure of the text. Each type of informational text has signal words that are unique to that structure. Signal words are clues to the reader that the author has organized the text in a specific way. In higher level texts, the signal words are often inferred rather than explicitly stated. See Table 1 for signal words that are commonly used with the text structure of compare/contrast and cause and effect.

#### **Graphic Organizer**

A graphic organizer is “A visual representation of information that shows the relationship between ideas or their organization” (Fountas & Pinnell, 2006, p. 490). Graphic organizers can be used to outline the text structure or pattern. They keep students actively engaged in the reading and they help students see the structure and remember the important points. Graphic organizers keep students actively involved by helping them organize information, see how major ideas are related, and remember key ideas that they read. See Table 2 for examples of graphic organizers for the compare/contrast and the cause/effect text structure.

**Table 1: Text Structure of Compare/Contrast**

<b>Text Structures and Signal Words</b>																			
<b>Text Structure</b>	<b>Description of Structure</b>	<b>Signal Words: Words</b>	<b>Sample Graphic Organizers</b>																
<b>Compare/Contrast</b>	<p>Texts that follow this structure describe similarities and differences between two or more things, places, or events.</p> <p>Example: Haleakala is a dormant volcano found in Hawaii while Mount Rainier is a dormant volcano found in the state of Washington. Haleakala is 10,023 feet tall whereas Mount Rainier is 14,410 feet tall.</p>	<p>Different from, same as, alike, like, unlike, similar to, as well as, yet, not only... but also, either...or, most however, on the other hand, opposite, opposed to, while, both, by contrast, compared with, different from, however, in common, instead of, on the other hand, otherwise, still, unlike, whereas, yet</p>	<p><b>Venn Diagram</b></p> 																
			<p><b>Compare/Contrast Matrix</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Attribute</th> <th style="padding: 5px;">Item</th> <th style="padding: 5px;">Item</th> <th style="padding: 5px;">Item</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Attribute 1</td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Attribute 2</td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Attribute 3</td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> </tbody> </table>	Attribute	Item	Item	Item	Attribute 1				Attribute 2				Attribute 3			
			Attribute	Item	Item	Item													
Attribute 1																			
Attribute 2																			
Attribute 3																			
<p><b>Compare/Contrast</b></p> 																			

*Written by Susan Hanson, Reading Specialist at PREL (Pacific Resources for Education and Learning)*

**References**

Dreher, M. J., Gray, J. L. (October, 2009). Compare, contrast, and comprehend: Using compare-contrast text structures with ELLs in K–3 classrooms. *The Reading Teacher*, 63(2),132–141.

Fisher, D., Frey, N., & Lapp, D. (2009). *In a reading state of mind: Brain research, teacher modeling, and comprehension instruction*. Newark, DE: International Reading Association.

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Williams, J. P., Nubla-Kung, A. M., Pollini, S., & Stafford, K. B. (March/April, 2007) Teaching cause-effect text structure through social studies content to at-risk second graders. *Journal of Learning Disabilities*, 40(2), 111–120.

Appendix 2.2: *Volcanoes* Compare and Contrast Signal Words

## Compare and Contrast Signal Words

<b>Compare (Similarities)</b>	<b>Contrast (Differences)</b>
<p><b>alike</b> <b>as well as</b> <b>both</b> <b>but also</b> <b>compared to</b> <b>in common</b> <b>just like</b> <b>like</b> <b>not only</b> <b>same</b> <b>similar to</b></p>	<p><b>although</b> <b>by contrast</b> <b>different from</b> <b>however</b> <b>in contrast to</b> <b>instead of</b> <b>most however</b> <b>on the other hand</b> <b>opposite</b> <b>opposed to</b> <b>unlike</b> <b>while</b> <b>yet</b></p>

# Classification of Volcanoes

Compare and Contrast

Types of Volcanoes	Meaning of its Name	Shape	Size	Type of Eruption	Lava Flows and Type	Examples
Hawaiian						
Strato						
Pyroclastic						

### Appendix 2.3: *Volcanoes!* Life Stages of a Hawaiian Volcano

You are a team of scientists presenting the “Typical Life Stages of a Hawaiian Volcano.” The other scientists are interested in:

1. The stage of the volcanic growth.
2. Length of the stage.
3. Description of the formation at this stage.
4. Description of the eruption at this stage.
5. Examples of volcanoes at these stages.

#### Life Stages of a Volcano Checklist

Does your stage include:	Yes	No
1. Length of the stage?		
2. Description or characteristics of the formation at this stage?		
3. Description of the type of eruption that occurs at this stage?		
4. Examples of volcanoes at this stage?		
5. Words from the List, Group & Label list?		
6. Illustrations or images?		
7. Other (teacher/students to add)		



**Stage:**

*Caption*

Name \_\_\_\_\_ Date \_\_\_\_\_

## Appendix 2.4: Volcanoes! Synonym-Antonym Word Map

### Synonym-Antonym Word Map

A synonym-antonym word map is a visual organizer that establishes semantic relationships among words to help develop a deeper understanding of word meanings.

#### Purposes

1. To establish word relationships that develop a rich understanding of new words or concepts.
2. To build a schema for words by providing a visual representation of related terms.

#### Materials

1. Dictionary.
2. Thesaurus.

By providing examples of word usage for each synonym and antonym, appropriate contexts for words are also reinforced. The following is a generic teaching strategy featuring a synonym-antonym word map that is based on a word map developed by Honig, Diamond, & Gutlohn (2000).

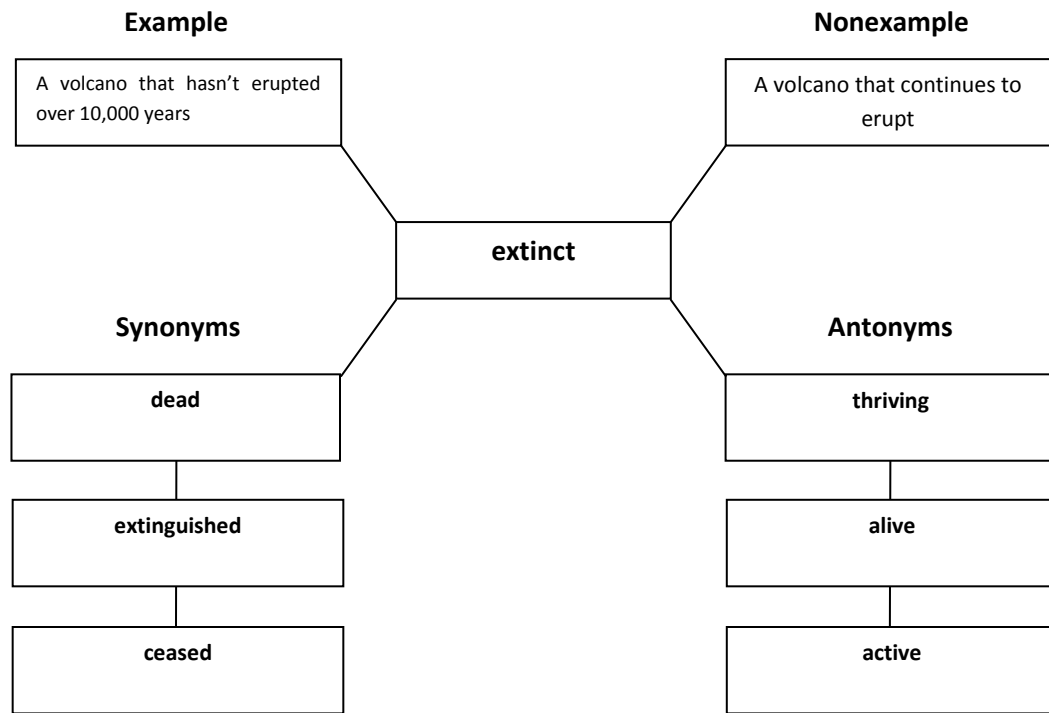
#### Procedure

1. Some of the volcanoes in Hawai'i are no longer active. Review the reason why they are no longer active. (They have moved away from the hot spot.) Another word for *not active* is *extinct*. Extinct, inactive, and not active are synonyms, or words that have similar meanings.
  - a. Discuss other contexts in which the word *extinct* is used, such as some birds are extinct, plants in the rainforest that have been crowded out by the kähili ginger are extinct.
2. In the word map (see the given example), write *extinct* in the center rectangle. Guide students to think of another word or phrase for extinct.
3. Explain how a dictionary and a thesaurus are good resources for finding synonyms. Model and list the synonyms *dead*, *inactive*, *extinguished*. Ask for other examples of word usage.
4. Discuss what would be a nonexample for *extinct*.
5. Review the definition of *antonyms*, or words that have opposite or nearly opposite meanings. Brainstorm antonyms for the word *extinct*. Ask for examples of word usage.
6. Provide guided and independent practice with other words (e.g., ***collapse***, ***continuous***, ***frequent***, ***severe***, and ***ancient***). Point out that the amount of synonyms and antonyms for any given word varies, and they may find that some words have only one.

### Synonym and Antonym Extension Activities

After the class has accumulated a list of instructed words with antonyms and synonyms, create games with the words. The following are two ideas:

- Present the instructed word with its synonym or antonym. On their own dry erase boards or paper, students write an “S” for synonym if they think the words have the same meaning, or an “A” for antonyms.
- Divide the class into teams that are labeled as either synonyms or antonyms. State a word. The team that provides a synonym or an antonym for the word first wins a point.

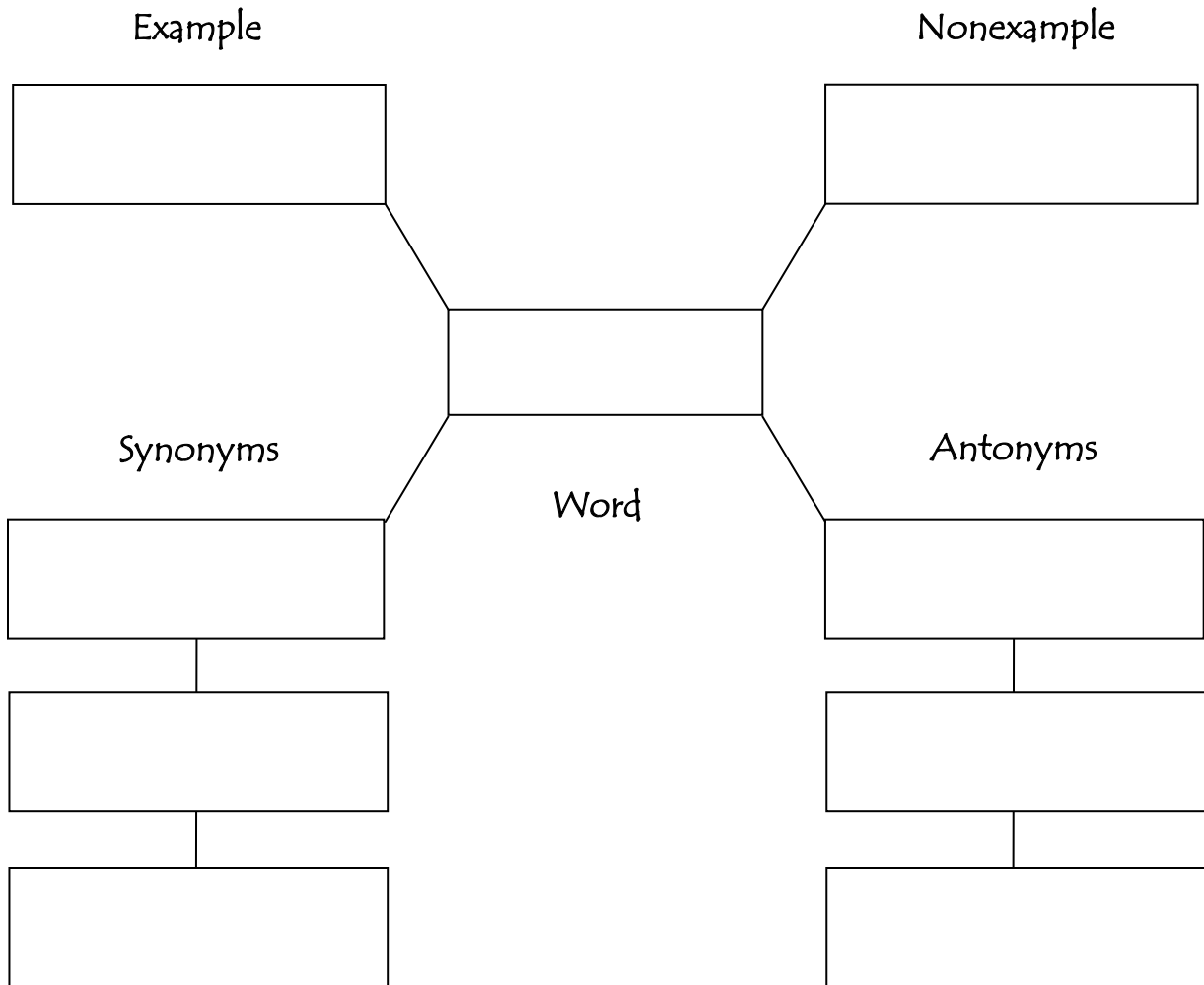


### Synonym-Antonym Word Map

#### References

Honig, B., Diamond, L., & Gutlohn, L. (2000). *Teaching reading sourcebook for kindergarten through eighth grade*. Novato, CA: Core Inc., Arena Press.

# Synonym-Antonym Word Map



Name: \_\_\_\_\_ Date: \_\_\_\_\_

# PELE SEARCHES FOR A HOME: VOLCANOES!

## Lesson 3

### Table of Contents

**Extending Understanding of Volcanoes**  
*Practice, Clarify, Internalize, and Demonstrate*

**Driving Question:** *How do volcanoes shape and reshape where I live?*

Learning Engagements	Pages
I. Understanding the “Volcanoes Where I Live” culminating project (See Appendix 3.1: <i>Volcanoes!</i> Culminating Project)	30 32
II. Providing resources to understand the “Volcanoes Where I Live” project	31
III. Researching and developing the “Volcanoes Where I Live” project	31



*Aerial photo, Diamond Head 2011*

## Pele Searches for a Home: Volcanoes!

### Lesson 3

*E Pūlama I ka Ho‘oilina (Cherish Your Heritage)*

“Volcanoes Where I Live”, a living laboratory for understanding volcanoes in Hawai‘i.



Halema‘uma‘u 2011

#### Lesson Notes

##### I. Understanding “Volcanoes Where I Live”

###### Concepts/Themes

Slow changes in the Earth’s crust, known as slow processes (tectonic plates), reshape its surface over time.

Sudden changes in the Earth’s crust, known as fast processes, reshape its surface over time (e.g., volcanic eruptions, earthquakes, floods, and tsunamis).

###### Objective

Students are able to identify and use resources (online, community, kūpuna, and scientists) to retrieve information needed to complete the virtual tour of where they live.

###### Length

Approximately three 45-minute sessions.

###### Materials

1. Appendix 3.1: Volcanoes! Volcanoes Where I Live.
2. Volcanoes! science text-set.

#### Extending Understanding of Volcanoes

*Practice, Clarify, Internalize, and Demonstrate*

**Driving Question:** *How do volcanoes shape and reshape where I live?*

##### I. Understanding “Volcanoes Where I Live”

Pages 21–30 in the *Volcanoes!* text-set are meant for students to explore volcanoes where they live. The pages include general information about the Hawaiian islands. The intent is for the classes to use the information as starter information to explore and expand their understanding of the volcanoes where they live.

1. Review the culminating project in Appendix 3.1: *Volcanoes! Volcanoes Where I Live*.
2. Review the information located on Pages 21–30 in the text-set, *Volcanoes!*, on the island where the class is located.

3. *Digital cameras.*
4. *Computer and Internet access.*
5. *People resources from the community (kūpuna, historical groups, scientists).*

## II. Providing a Variety of Resources for Students to Understand Volcanoes “Where I Live”

1. See “Resources and References” in the science text-set, *Volcanoes!*.
2. Contact community resources (kūpuna, historical groups, scientists, etc.).
3. Do Internet searches for more information about volcanoes where they live.

### Links

1. Virtual Tour of Kīlauea Crater Rim Drive:  
[[http://volcano.oregonstate.edu/oldroot/crater\\_rim\\_drive/menu5.html](http://volcano.oregonstate.edu/oldroot/crater_rim_drive/menu5.html)]
2. The Hawai‘i Volcano Observatory site provides information related to volcanoes in Hawai‘i. Includes articles, webcam, and videos.  
[<http://hvo.wr.usgs.gov/>]
3. Mythic Hawai‘i includes Pele stories:  
[[www.mythichawaii.com/hawaiian-mythology.htm](http://www.mythichawaii.com/hawaiian-mythology.htm)]
4. Dialogue for kids:  
[<http://idahoptv.org/dialogue4kids/season12/earthquakes/facts.cfm>]
5. Erupting volcano includes activities related to volcanoes:  
[[www.activitytv.com/138-erupting-volcano](http://www.activitytv.com/138-erupting-volcano)]
6. USGS photo glossary of volcanic terms:  
[<http://volcanoes.usgs.gov/images/pglossary/>]

## III. Researching and Recording Information

Provide students the time to do research for their culminating project.

**Assessment:** Students apply research skills to complete their culminating projects, Volcanoes “Where I Live.”

## Appendix 3.1: *Volcanoes!* Culminating Project

### Culminating Project

#### Define the *Volcanoes!* Culminating Project

No matter which island we live on, volcanoes have at one time shaped and reshaped the land where we live. Students create a virtual tour of where they live.

#### **Concepts/Themes**

*Slow changes in the Earth's crust, known as slow processes (tectonic plates), reshape its surface over time.*

*Sudden changes in the Earth's crust, known as fast processes, reshape its surface over time (e.g., volcanic eruptions, earthquakes, floods, and tsunamis).*

#### **Purpose**

*Practice, clarify, and internalize how earthquakes shape and reshape our land in Hawai'i.*

#### **Procedure**

1. See maps on Pages 21–30 in the *Volcanoes!* text-set. The maps and text are starter stories with information about the volcanoes of the islands. The goal of the task is to add information about the places where students live.
2. Include:
  - a. Nearest volcano.
  - b. Historic information about the volcano.
  - c. Rejuvenated volcanoes.
  - d. Stories related to the volcanoes where students live, including excerpts from *Pele Searches for a Home*.
  - e. Landmarks that remind people of the stories.
  - f. Photos and images of the area.
3. Teacher provides an authentic forum for students to share their culminating project.



# PELE SEARCHES FOR A HOME: VOLCANOES!

## Lesson 4

### Table of Contents

#### Adapting and Integrating the Understanding of Volcanoes *Adapt, Exhibit, and Pose New Questions*

**Driving Question:** *Now that you understand volcanoes, what can you do with this understanding?*

Learning Engagements	Pages
I. Completing the culminating project, “Volcanoes Where I Live” (See Appendix 4.1: <i>Volcanoes! Volcanoes Where I Live</i> )	34 36
II. Presenting “Where I Live” (Appendix 4.2: <i>Volcanoes! Volcano Checklist</i> )	35 37



*Diamond Head, 2011*

## Pele Searches for a Home: Volcanoes!

### Lesson 4

*E Pūlama I ka Ho‘oilina (Cherish Your Heritage)*

#### Your Turn!

#### “Volcanoes Where I Live” Project



*Hanauma Bay, Koko Head 2011*

#### Lesson Notes

##### I. Completing and Presenting the “Volcanoes Where I Live” Project

###### **Concept/Theme**

*Sudden changes in the Earth’s crust, known as fast processes, reshape its surface over time (e.g., volcanic eruptions, earthquakes, floods, and tsunamis).*

###### **Objective**

*Students use evidence to explain how fast processes have shaped and reshaped the surface of the Earth where they live.*

###### **Length**

*Dependent on the scope of the project*

###### **Materials**

1. Access to computers and Internet services.
2. PowerPoint software, if

#### Adapting and Integrating the Understanding of Volcanoes

*Adapt, Exhibit, and Pose New Questions*

**Driving Question:** *Now that you understand volcanoes, what can you do with this understanding?*

##### I. Completing the Culminating Project, “Volcanoes Where I Live”

1. With the students, outline the procedure for completing the task.
  - a. Determine what they already know.
  - b. Determine what questions they need for further research and the resources they need to answer their questions.
  - c. Outline an action plan.
  - d. Complete the project and present it to a school or community-based organization.
2. Students and teacher review the criteria before, during, and after the project. (See Appendix 4.1: *Volcanoes! Volcanoes Where I Live.*)
3. Note: Provide tutorial sessions on use of PowerPoint, if this is an option for the project.

needed.

3. Group defined materials to complete the project.

## II. Presenting “Volcanoes Where I Live”

### **Objective**

Students satisfactorily meet the project criteria.

### **Length**

Dependent on the scope of the presentation

### **Materials**

1. Presentation material.
2. Completed project.

## II. Presenting “Where I Live”

Arrange for authentic audiences for students to present their final product.

1. Present to groups beyond the classroom with the intent to add to the community information about the place where they live.
2. Present to other classrooms.

**Assessment:** Student projects meet the project criteria. See Appendix 4.2: *Volcanoes!* Project Criteria Checklist.

Note: Volcanic Hazards and Benefits can also be developed as a culminating project. Or, this topic can be presented during health and social studies lessons. See “Ka Nūhou” on Pages 31–32 in *Volcanoes!*.

## Appendix 4.1: *Volcanoes!* Culminating Project

### Culminating Project

#### Define and Complete the *Volcanoes!* Culminating Project

No matter which island we live on, volcanoes have at one time shaped and reshaped the land where we live. Students create a virtual tour of where they live.

##### **Concepts/Themes**

*Slow changes in the Earth's crust, known as slow processes (tectonic plates), reshape its surface over time.*

*Sudden changes in the Earth's crust, known as fast processes, reshape its surface over time (e.g., volcanic eruptions, earthquakes, floods, and tsunamis).*

##### **Purpose**

*Practice, clarify, and internalize how earthquakes shape and reshape our land in Hawai'i.*

1. See maps on Pages 21–30 in the *Volcanoes!* text-set. The maps and text are starter stories with information about the volcanoes of the islands. The goal of the task is to add information about the places where students live.
2. Include:
  - a. Nearest volcano.
  - b. Historic information about the volcano.
  - c. Rejuvenated volcanoes.
  - d. Stories related to the volcanoes where students live including excerpts from *Pele Searches for a Home*.
  - e. Landmarks that remind people of the stories.
  - f. Photos and images of the area.

## Appendix 4.2: *Volcanoes!* Project Criteria Checklist

Project Criteria Checklist		
Criteria	Yes	No
1. Does the project show how volcanoes have shaped and/or reshaped the land?		
2. Do participants apply collaborative practices in completing the project?		
3. Is the project authentic and relevant to all 4th grade students?		
4. Does the project summary use evidence to explain the impact of volcanoes in the area where they live?		
5. Does the project incorporate class goals/performance targets in writing and presentation of material?		

# Vocabulary Practice

PELE SEARCHES FOR A HOME: VOLCANOES!

## **Pele Searches for a Home: *Volcanoes!***

### **Cloze Sentences**

***Select the appropriate word to complete each sentence.***

1. Kilauea and Mauna Loa could \_\_\_\_ at anytime.
  - a. erupt
  - b. disrupt
  - c. interrupt
  - d. abrupt
  
2. The earth's \_\_\_\_\_ lies between the core and crust.
  - a. manual
  - b. mantle
  - c. mandate
  - d. manta
  
3. When the molten \_\_\_\_\_ erupts from a volcano, it is called lava.
  - a. magnet
  - b. magnesium
  - c. magma
  - d. magic
  
4. The grove of the \_\_\_\_ koa trees went back a century or so.
  - a. anecdote
  - b. anemia
  - c. ancient
  - d. antenna
  
5. The people near the volcano were evacuated to \_\_\_\_ any more disasters.
  - a. avoid
  - b. afford
  - c. attract
  - d. arrange
  
6. We need your help to \_\_\_\_\_ the dog that has been missing for 2 days.
  - a. lock
  - b. lose
  - c. locate
  - d. loosen
  
7. The great \_\_\_\_ of the magma beneath the earth's crust caused the volcano to erupt.
  - a. peddler
  - b. pressure
  - c. ledger
  - d. prefer

8. The monkey is \_\_\_\_\_ because of its injury.
- a. inventive
  - b. intensive
  - c. inactive
  - d. incentive
9. There was an underground \_\_\_\_ of gold that was recently unearthed.
- a. deposit
  - b. disburse
  - c. department
  - d. desert
10. The strong winds and hot sun create unusual rock \_\_\_\_\_ in the desert.
- a. formulations
  - b. flotations
  - c. fountains
  - d. formations



## **Pele Searches for a Home: *Volcanoes!***

### **Matching Words with Definitions**

***Select the word for the definition that is provided.***

1. to explode or burst out suddenly
  - a. corrupt
  - b. erupt
  - c. disrupt
  - d. Egypt
  
2. the part of Earth that lies between the crust and core
  - a. gentle
  - b. nestle
  - c. settle
  - d. mantle
  
3. hot, liquid volcano matter; it is the molten rock beneath the earth's surface
  - a. mazda
  - b. manna
  - c. magma
  - d. mantra
  
4. very old; having existed for a long time
  - a. ancient
  - b. ailment
  - c. agent
  - d. anchor
  
5. evade; miss; neglect
  - a. avow
  - b. annoy
  - c. avoid
  - d. void
  
6. to find
  - a. locate
  - b. locket
  - c. local
  - d. lock
  
7. a steady physical force upon a surface; weight
  - a. pleasure
  - b. pressure
  - c. pester
  - d. pepper

8. not in motion or use, not active
  - a. attentive
  - b. attractive
  - c. incentive
  - d. inactive
  
9. let fall as sediment; accumulation of solid
  - a. deposit
  - b. deport
  - c. depot
  - d. deprave
  
10. something that has been formed or shaped (e.g., rock formation, cloud formation)
  - a. location
  - b. vegetation
  - c. formation
  - d. observation

## Pele Searches for a Home: Volcanoes!

### Word Antonyms

*Select the appropriate antonym. Write the word in the blank.*

1. Short is to long as **erupt** is to \_\_\_\_\_.
  - a. active
  - b. awake
  - c. inactive
  - d. alive
  
2. Vivid is to pale as **ancient** is to \_\_\_\_\_.
  - a. young
  - b. aged
  - c. relic
  - d. elderly
  
3. Soft is to tough as **avoid** is to \_\_\_\_\_.
  - a. avert
  - b. elude
  - c. flee
  - d. face
  
4. Few is to many as **locate** is to \_\_\_\_\_.
  - a. find
  - b. keep
  - c. lose
  - d. place
  
5. Adults are to children as **pressure** is to \_\_\_\_\_.
  - a. ease
  - b. tension
  - c. weight
  - d. burden
  
6. Tough is to soft as **deposit** is to \_\_\_\_\_.
  - a. heap
  - b. pile
  - c. dislodge
  - d. amass
  
7. Truth is to false as **formation** is to \_\_\_\_\_.
  - a. destruction
  - b. development
  - c. composition
  - d. resignation

## **Pele Searches for a Home: Volcanoes!**

### **Semantic Association of Words**

**Select 2 words that are associated with the first word.**

- 1. erupt**
  - a. volcano
  - b. lava
  - c. river
  - d. ocean
- 2. mantle**
  - a. earth's layer
  - b. surface
  - c. core
  - d. below surface
- 3. magma**
  - a. gas
  - b. water
  - c. rock
  - d. hot
- 4. ancient**
  - a. antique
  - b. modern
  - c. new
  - d. archaic
- 5. avoid**
  - a. avert
  - b. want
  - c. look for
  - d. keep away
- 6. locate**
  - a. find
  - b. lose
  - c. search
  - d. disappear
- 7. pressure**
  - a. force
  - b. limp
  - c. weak
  - d. exertion
- 8. inactive**
  - a. still
  - b. lively
  - c. motionless
  - d. moving
- 9. deposit**
  - a. clump
  - b. limp
  - c. sediment
  - d. air
- 10. formation**
  - a. cloud
  - b. shapeless
  - c. watery
  - d. rock

## Pele Searches for a Home: *Volcanoes!*

### Vocabulary Challenge 1

1. Something is said to **erupt** when it \_\_\_\_\_.
  - a. is caused by an earthquake
  - b. happens in a sudden burst
  - c. starts with a slow leak
  - d. is caused by fire
  
2. If you drill down to the Earth's **mantle**, you will find yourself \_\_\_\_\_.
  - a. at the bottom of a marsh
  - b. at sea level
  - c. in the middle of the mountain
  - d. between the Earth's crust and core
  
3. When **magma** is deposited on the earth's surface, we call it \_\_\_\_\_.
  - a. lava
  - b. a fault
  - c. a glacier
  - d. a mountain
  
4. Which word does not describe something as **ancient**?
  - a. old
  - b. prehistoric
  - c. modern
  - d. from long ago
  
5. To **avoid** something unpleasant you would need to \_\_\_\_\_.
  - a. look for it
  - b. keep away from it
  - c. walk towards it
  - d. overpower it
  
6. If you're trying to **locate** something, it is likely to be an item \_\_\_\_\_.
  - a. you're lifting
  - b. you're wrapping
  - c. you've just baked
  - d. you've lost
  
7. Which of the following things depend upon air **pressure** to keep their shape?
  - a. an inflated balloon
  - b. a swimming pool
  - c. an airplane
  - d. lava

8. Which of the following is an example of being **inactive**?
- a. playing basketball with the team
  - b. watching TV all day
  - c. dirt biking
  - d. swimming every afternoon
9. Kīlauea volcano has been erupting for many years leaving \_\_\_\_ of lava on many acres of land.
- a. pressure
  - b. undetected amounts
  - c. tiny amounts
  - d. deposits
10. When you describe the **formation** of something, you tell about how it \_\_\_\_\_.
- a. was discovered
  - b. got its shape
  - c. is used
  - d. moves

## Pele Searches for a Home: *Volcanoes!*

### Vocabulary Challenge 2

1. When a volcano erupts, \_\_\_\_\_ is violently thrown up and out onto the earth's surface.
  - a. lava
  - b. water
  - c. ice
  - d. river sediment
2. The Earth's **mantle** is \_\_\_\_\_.
  - a. a book all about the Earth
  - b. any large mountain range
  - c. between the Earth's core and crust
  - d. the exact center of the planet
3. What is the physical state of **magma**?
  - a. solid
  - b. gas
  - c. sedimentary
  - d. a molten liquid
4. A study of **ancient** civilizations tells about the times and people
  - a. who are our neighbors
  - b. who lived many years ago
  - c. who grew up with our parents
  - d. who wrote history books
5. Which of the following is not an example of trying to **avoid** someone?
  - a. ignore them
  - b. walk away from them
  - c. hide from them
  - d. help them
6. Which of the following is NOT an example of **locate**?
  - a. finding a lost puppy
  - b. bolting a door
  - c. discovering a stolen watch
  - d. getting hold of a missing map
7. Which of the following words does not describe a feeling of **pressure**?
  - a. origin
  - b. force
  - c. stress
  - d. weight

8. Something that is **inactive** is \_\_\_\_\_.
- a. not good enough
  - b. not proper
  - c. not in motion
  - d. not real
9. To make a **deposit** to your bank account, you need to
- a. take money out
  - b. put money into it
  - c. leave the same amount
  - d. ask for change
10. Which word does not describe the **formation** of an object?
- a. height
  - b. weight
  - c. color
  - d. ancient



**Pele Searches for a Home: *Volcanoes!***

**Vocabulary Answer Sheet**

<b>Cloze Sentences</b>	<b>Word Definitions</b>	<b>Word Antonyms</b>	<b>Semantic Associations</b>	<b>Challenge 1</b>	<b>Challenge 2</b>
1. erupt	1. erupt	1. inactive	1. volcano / lava	1. b. happens in a sudden burst	1. a. lava
2. mantle	2. mantle	2. young	2. earth's layer / below surface	2. d. between the Earth's crust and core	2. c. between the Earth's core and crust
3. magma	3. magma	3. face	3. rock / hot	3. a. lava	3. d. a molten liquid
4. ancient	4. ancient	4. lose	4. antique / archaic	4. c. modern	4. b. who lived many years ago
5. avoid	5. avoid	5. ease	5. avert / keep away	5. b. keep away from it	5. d. help them
6. locate	6. locate	6. dislodge	6. find / search	6. d. you've lost	6. b. bolting a door
7. pressure	7. pressure	7. destruction	7. force / exertion	7. a. an inflated balloon	7. a. origin
8. inactive	8. inactive		8. still / motionless	8. b. watching TV all day	8. c. not in motion
9. deposit	9. deposit		9. clump / sediment	9. d. deposits	9. b. put money into it
10. formation	10. formations		10. cloud / rock	10. b. got its shape	10. d. ancient