

NATURE'S MYSTERIES

Lesson Plan

Differing Definitions

Lesson Plan for *Minnesota's Devil's Kettle*

Grade 4

Objective

To help students practice identifying and articulating differences in the meanings of words related to volcanoes.

Things Needed

- *Minnesota's Devil's Kettle* book
- Access to the "Minnesota's Devil's Kettle" web page on the Pop! website:
<https://popbooksonline.com/natures-mysteries/devils-kettle>
- Whiteboard
- Access to the Merriam-Webster Online Dictionary:
<https://www.merriam-webster.com/>
- Pencils and paper

Before the Activity

Read the *Minnesota's Devil's Kettle* book out loud to students, or have students read it on their own. Open the "Minnesota's Devil's Kettle" web page in your internet browser and pull up the "Learn More" tab.

Activity

The rocks near Devil's Kettle in Minnesota are made of rhyolite. This type of volcanic rock is found all over Earth. To learn more about rhyolite, choose a student to read the caption on the "Learn More" tab aloud. Ask the following questions:

- What kind of rock does this caption say rhyolite is? (Answer: "Rhyolite is an igneous rock.")
- What definition does the caption give for the word *igneous*? (Answer: "Igneous rocks form when hot magma cools down and becomes solid.")
- In the book, page 10 says, "The waterfall's rocks are volcanic." What definition does the book's glossary give for the word *volcanic*? (Answer: "made by a volcano")



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- How are the meanings of *volcanic* and *igneous* similar? (Answer: Both are related to volcanoes.)
- How are they different? (Answer: The definition for *igneous* gives more details.)
- What new information about rhyolite do we get from the word *igneous*? (Answers: We learn that the magma that formed this rock was part of a volcano. We learn that this kind of rock forms after magma cools.)

Next, write the words *lava* and *magma* on the whiteboard. Explain that these two words also have similar meanings, but (like *igneous* and *volcanic*) they are not identical. Students should look up each word's meaning in the Merriam-Webster Online Dictionary, scrolling down until they reach the section called "Kids Definition." Then, students should write four sentences on a piece of paper:

- one sentence for each word, explaining its definition
- a sentence describing how the words are similar
- a sentence describing how the words are different

Evaluation

Collect students' work and give each student up to 4 points, using the following sample sentences as a guide:

- Lava is "melted rock coming from a volcano or after it has cooled and hardened."
- Magma is "molten rock within the earth."
- Both words describe hot, melted rock.
- *Magma* describes melted rock that is still underground, while *lava* can describe melted rock that has come out of a volcano or solid rock that forms after that melted rock has cooled.

Standards

This lesson plan may be used to address the Common Core State Standards' reading standards for informational texts, grade 4 (RI 4.4, 4.9), and language standards, grade 4 (L 4.4, 4.5).

