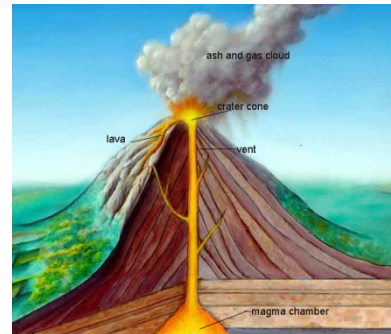


Tour of the Volcano

Discipline: Science

Grade: 3rd-5th

Time: 1 hr



Introduction

Volcanoes continue to be an amazing phenomena of nature. They are essential to shaping the earth by building islands, mountains, and lakes. Volcanoes also provide resources to the people that live near them; the volcanic soil provides nutrients for plants that grown near them. Yet, despite these helpful characteristics, volcanoes can also be extremely dangerous. The unexpected eruption from a volcano can have devastating effects on the earth including the humans, plants, and animals.

Anticipated Student Learning Outcomes

- Students will identify parts of a volcano.
- Students will investigate characteristics of volcanoes.
- Students will create an artistic representation to highlight their understanding of a volcanic eruption.

CRISPA

Connections

Risk-Taking

Imagination

Sensory Experience

Perceptivity

Active Engagement

Overview

This lesson provides an initial investigation of volcanoes from the inside out. Students will learn about the formation of volcanoes on the earth's surface as well as the physical characteristics of a volcano. Students will be exposed to new vocabulary and terminology associated with volcanoes. Utilizing a variety of teaching methods including song, discussion, and art, students explore these impressive land formations.

Materials

- Michael Stanwood's *Volcanoes* song on his CD *Living Together on Planet Earth* (track 4).
- Blank Diagram of Volcano
- CD player or Computer that will play CD
- Overhead projector and transparency copy of volcano diagram, projector, or chart paper
- Writing Utensil
- Coloring Materials- colored pencils, crayons, markers
- Computer and projector with internet access to show *National Geographic* movie, *Volcanoes 101* at <http://video.nationalgeographic.com/video/kids/forces-of-nature-kids/volcanoes-101-kids/>
- Handout, Movie Note Sheet
- handout, *The Story of a Volcano*
- Various resources to create a storyboard. Possible materials include:

- Cardboard
- Paper of different sizes and styles
- Coloring resources
- Paint
- Clay

Evaluation

Students will be evaluated throughout the lesson in a variety of informal and formal ways. Student active engagement and participation in discussions provide an informal assessment of their understanding. The construction of the skeleton puppet and the artistic representation provides a more formal evaluation of student understanding of bones and bone function.

Suggested Procedures

Introduction

1. Provide students a blank diagram of a volcano. In the ground area, ask students to write the things that they know about volcanoes. In the sky area, have students write things that they want to know about volcanoes.
2. As students are working, play Michael Stanwood's, *Living Together on Planet Earth*, Track 4: Volcanoes. Instruct students to listen to the lyrics of the song to activate their prior knowledge as well as provide new vocabulary words and ideas for their visual aid. Continue to play the song as students are completing their visual aid.
3. Provide materials for those students who wish to color their volcano.
4. Complete a classroom volcano either projected or on chart paper. Ask students to submit their individual responses about what they know and want to know and display accordingly.

Activity

1. Watch the *National Geographic* movie, *Volcanoes 101* at <http://video.nationalgeographic.com/video/kids/forces-of-nature-kids/volcanoes-101-kids/> There is a wealth of information in the short video clip. You may wish to have students complete the *Volcano Note Sheet* (found in the appendix) as they view the movie.
2. When the movie is complete, begin a discussion with the students about the presented information. You may wish to utilize the note sheet to begin the conversation.
3. Instruct students to return to their volcano sheet from the introductory portion of the lesson. Using the information from the video clip, their note sheet and the discussion, have students fill out the center of the volcano with what they have learned about volcanoes. You may wish to

prompt students to use new vocabulary words and terminology for this portion. Again, review this section as a class and record student responses on the class volcano.

4. Distribute the handout, *The Story of a Volcano*. Explain to students that they are going to create a storyboard for a volcano. Explain that a storyboard was originally utilized by Walt Disney for their animation films. A storyboard is used when creating a movie and is a graphic organizer composed of a series of images arranged in sequential order. As you read through the assignment with the students, be certain to highlight the requirements for the storyboards.
 - There are numerous examples of storyboards online. Find one that is appropriate to use with your kids to provide as an example.
 - You may wish to utilize a template. There are many sample templates available online. One example can be found at
http://hollandlastopmotion.files.wordpress.com/2011/03/storyboard_template.jpg.
5. Provide students time and various materials to complete their storyboard. You may wish to provide a variety of different materials such as various shapes, sizes and styles of paper, cardboard, paint, colored pencils, clay, etc so that children can explore different ways to express their understanding. During this time, it may be helpful to have a variety of research materials on volcanoes available to the students. Some suggested materials are provided in the additional resources section of this lesson plan.
6. Give students the opportunity to share their storyboard with one another.

Possible Extensions

1. Create a volcano in your classroom. Follow these simple procedures utilizing kitchen ingredients for a life-like explosion! <http://chemistry.about.com/cs/howtos/ht/buildavolcano.htm>
2. Make a maze representing the flow of magma as it turns to lava.
3. Create a map indicating the various plates on the earth's surface.
4. Research one current volcano and provide this information in a brochure.
5. Instruct students to take an online quiz at *National Geographic for Kids*.
6. Explore past civilizations that have been impacted by volcanoes. Make an artifacts museum by creating artifacts that represent this culture. Explain the significance and relationship between the artifacts and the culture.
7. Create a play that depicts a tour of a volcano.

Appendix

Additional Resources

Websites:

<http://video.nationalgeographic.com/video/kids/forces-of-nature-kids/volcanoes-101-kids/>

<http://environment.nationalgeographic.com/environment/natural-disasters/volcano-profile/>

Magic School Bus. Scholastic. <http://www.scholastic.com/magicschoolbus/tv/index.htm>

Volcano Explorer. Discovery Kids. <http://kids.discovery.com/games/build-play/volcano-explorer>

Movies

Blows Its Top: Volcanoes. Magic School Bus.

<http://www.scholastic.com/magicschoolbus/tv/index.htm>

Volcano: Nature's Inferno DVD. National Geographic.

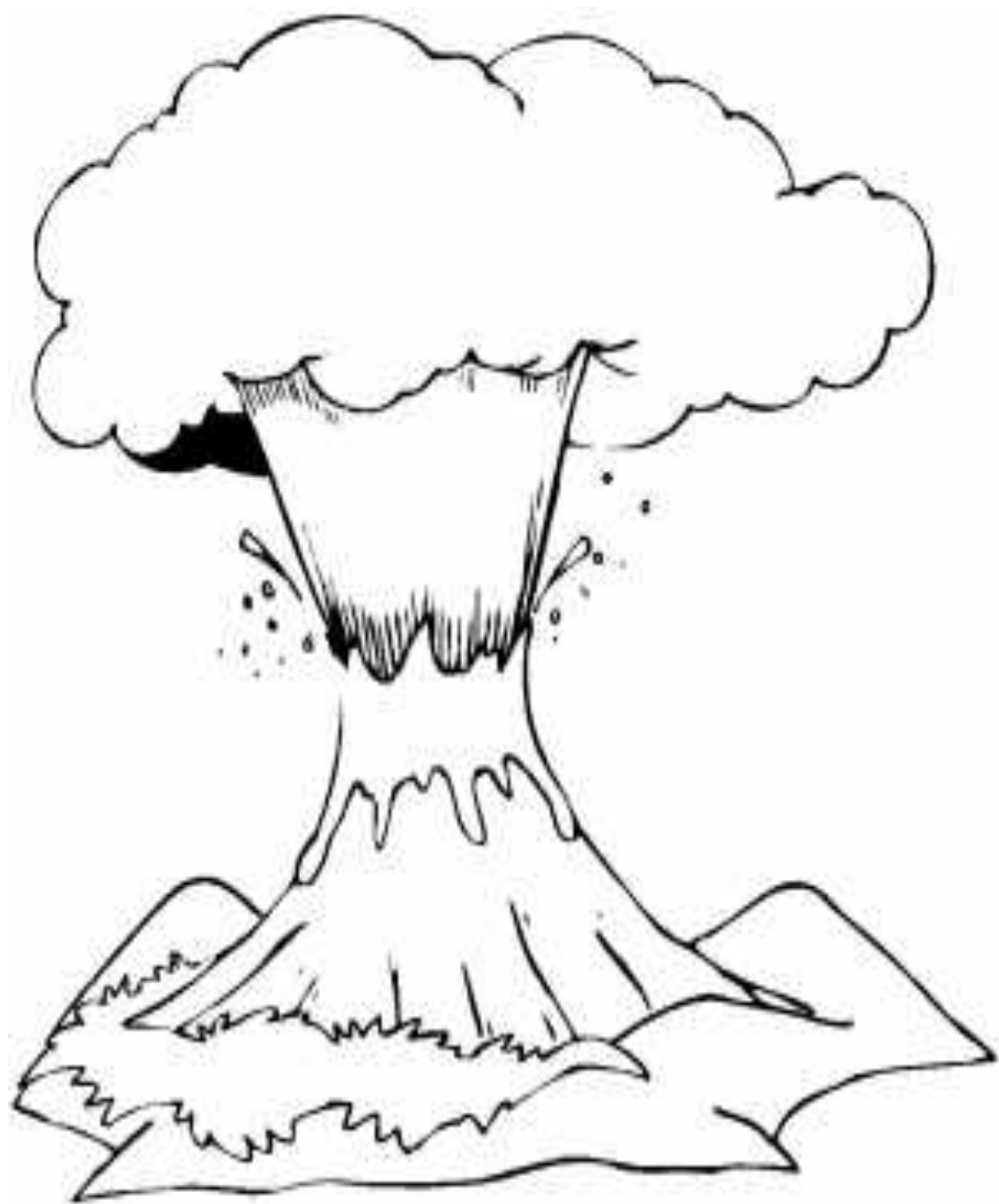
<http://shop.nationalgeographic.com/ngs/product/dvds/science-and-space/volcano%3A-nature%27s-inferno-dvd>

Books

The Best Book of Volcanoes by Simon Adams (Sep 15, 2007)

Volcanoes! (National Geographic Readers) by Anne Schreiber (Jul 8, 2008)

Volcanoes. (Let's Read and Find Out. Science 2) by Franklyn M. Branley and Megan Lloyd (Mar 25, 2008)



National Geographic Volcanoes 101

Note Sheet



Name: _____

Directions: As you watch the movie, answer the questions below.

1. What are volcanoes?
2. How many volcanoes around the world are classified as active?
3. Where are most volcanoes located? Why are so many volcanoes located here?
4. How do plates play a role in forming volcanoes?
5. What is another name for molten rock?
6. What is magma called when it is released from the earth?
7. Name three different types of volcanoes and provide some of their defining characteristics.
8. What is one of the most active volcanoes on the planet? Provide one piece of information about this volcano.
9. What happened to the people of Pompeii?
10. Provide some benefits of volcanoes.

Story of a Volcano



Directions

You are going to create a storyboard depicting the events of a volcanic eruption. A storyboard is a series of images or illustrations with captions used by film makers to create a movie. Typically, storyboards are created using sketches or computer images, however, you can use a variety of different materials to illustrate a volcano. Be as creative as you want in your display of information and be sure to include the following:

- 🍏 7-10 individual images or illustrations with accompanying captions
- 🍏 An illustration and explanation of how volcanoes are formed
- 🍏 An Illustration/diagram of the interior of a volcano
- 🍏 7-10 new vocabulary words either included in the diagram or the caption