



QUESTION GUIDE

Mount St. Helens Cluster Quakes

Grade 5

Reading Level: Z

Word Count: 249

Text Type: Nonfiction/Informational

Text Structure: Cause and Effect

Have students read the passage three times, each with a different purpose. After each read, ask the questions below and discuss the answers in small groups or as a class.

Read 1 What Does the Text Say?

1. Why did scientists investigate matters at Mount St. Helens in the spring of 2016?
2. What evidence did scientists look for to determine if Mount St. Helens was getting ready to erupt?
3. Did the scientists find any evidence to support an eruption in the near future?

Read 2 How Does the Text Say What It Says?

4. What is a seismologist? What clues in the passage help readers understand the job of a seismologist?
5. What cause-and-effect relationships are present in this passage?

Read 3 What Is the Meaning and Value of the Text?

6. What steps did the scientists take to determine if the cluster quakes will lead to another eruption? How is this connected to the scientific process?
7. What might the seismologists have done if they discovered evidence that Mount St. Helens was getting ready to erupt?
8. In what other instances can the scientific process be used?



Extension Activity

Why is the scientific process important?

Write a paper explaining why the scientific process is important, including at least one specific example.

Optional Question Bank

Read 1

1. What happened on May 18, 1980?
2. Do scientists believe that Mount St. Helens will erupt again?

Read 2

3. The earthquakes below Mount St. Helens were occurring with alarming frequency. What does this mean?
4. Why did the author include these photographs?

Read 3

5. What conclusion can readers draw after reading the third and fourth paragraphs in combination with the information in the "Do You Know?" box?
6. What is the scientific process? Explain the importance of each step.

Read 1 What Does the Text Say?

1. Scientists investigated Mount St. Helens in the spring of 2016 because they detected over one hundred earthquakes below the volcano.
2. The scientists looked for unusual gases and other signs that magma might be building up beneath Mount St. Helens.
3. The scientists did not find evidence that Mount St. Helens was ready to erupt.

Read 2 How Does the Text Say What It Says?

4. A seismologist is a scientist who studies earthquakes. The clues in the passage that help readers understand the work of a seismologist include the following: when scientists at the U.S. Geological Survey began detecting a cluster of more than one hundred earthquakes; the earthquakes were small, with most measuring just 0.5 or less on the Richter scale.
5. The eruption in 1980 caused changes to the mountain as well as landslides and floods that led to deaths, the observation of the cluster quakes led to scientists monitoring the volcano, and the findings caused scientists to determine the volcano will not erupt anytime soon.

Read 3 What Is the Meaning and Value of the Text?

6. The scientists observed the clusters of earthquakes below Mount St. Helens and hypothesized that they were a sign that the volcano would erupt soon. They ran some tests to determine if there were other signs to support their thinking. After running the tests, they analyzed the data and then drew conclusions about the future of the volcano. The steps they followed are those presented in the scientific process.
7. If seismologists had discovered unusual gases, magma, and other signs of a volcanic eruption, they likely would have taken precautions to prevent the damage that resulted from the eruption in 1980.
8. Answers will vary.

**Extension Activity**

Student responses will vary based on students' discussion and research.

Optional Question Bank**Read 1**

1. On May 18, 1980, Mount St. Helens exploded in a violent eruption that blew off the top and side of the mountain. The eruption caused huge landslides and floods. More than fifty-six people died as a result of the eruption.
2. Scientists do believe that Mount St. Helens will erupt at some point in the future, but it is unlikely to happen anytime soon.

Read 2

3. Frequency means the number of times that something happens during a particular period, and alarming means surprising. So, it was surprisingly often that the earthquakes were happening.
4. The author included a photograph of Mount St. Helens so readers can see the physical impact of the eruption that took place in 1980. The second photograph informs readers about the equipment that scientists used to monitor the volcano.

Read 3

5. The information in these places in the passage leads readers to the conclusion that magma beneath the surface of a volcano can mean the volcano is going to erupt soon, but if the magma is very deep below the surface, then it can cause earthquakes but not mean that the volcano will erupt soon.
6. Answers will vary.