

Will That Volcano Spoil Our Party?

Introduction

The small Caribbean island of Mont Isle is planning to hold a major celebration in three months. The island is ten miles long and is part of an arc of islands that includes Grenada, Barbados, Dominica, and Antigua. At one end of the island is a tall, beautiful, cone-shaped mountain; a composite volcano which the natives call Poco-poco. The mountain is over 1000 meters tall and is also known as a strato volcano. The capitol city of Iguana Cay is located at the base of the mountain in the middle of the island. No one living on the island remembers any volcanic activity coming from Poco-poco. The mayor, Jose Cruz, is concerned that tourists may not come to the celebration because of other volcanic eruptions on nearby islands. He has asked your class to give him a briefing on volcanoes so he can give an explanation to any worried tourists.

The Task

You are to prepare a multimedia report which will explain volcanoes to Mayor Cruz. He will need to know the following:

- A description of the types of volcanoes, giving special attention to the type of volcano near his city,
 - A history of volcanic eruptions in the last two centuries, making sure that at least one of them was from the same type volcano as Poco-poco,
 - Specific examples of volcanic activity in the part of the world near Mont Isle,
 - An explanation of why volcanoes erupt in the part of the world where Mont Isle is located,
 - The major dangers that would be associated with the eruption of a volcano like Poco-poco,
 - What signs, if any, a volcano like Poco-poco might exhibit before an eruption,
 - What steps should be taken to protect the citizens of Iguana Cay if Poco-poco starts to erupt
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Resources

You may use any book or magazine in your classroom or in the library. In addition you will find information on volcanoes in the Grolier Multimedia Encyclopedia CD-ROM. Your primary resource will be the Internet. Do NOT do a search for volcanoes! Use only the four Internet web sites listed below this paragraph. Warning, do not look for Mont Isle, Iguana Cay, or Poco-poco; they do not exist. However, volcanoes and islands like them exist throughout the Caribbean. The [Volcanoes in the Learning Web](#) is maintained by the U S Geological Service. This site is an excellent overview of the subject and includes cutaway drawings as well as some great photos. The [Volcano World](#) is a site sponsored by NASA. One of the features of this site is the Ask a Volcanologist section. You can send a question to be answered by a Volcano scientist.

The [Cascades Volcano Observatory](#) includes a Living With Volcanoes page in its Educational Outreach section. This includes a great outline about volcanoes. You can also find a photo archive here.

The [The Volcano Information Center](#) is sponsored by University of California at Santa Barbara, Department of Geological Sciences. There are over a dozen different volcano topics covered at this page.

The Process

You will work together in teams of three. Each person on your team will have a specific job.

1. One person is to be the **Geologist**. That person is to gather data on each of the types of volcanoes, the reasons why volcanoes happen, and what the major dangers involved in an eruption are.
 2. One person on each team is to be the **Photographer**. That person is to gather photos that would fit with the geologists report and with the historian.
 3. One person on the team is to be the **Historian**. That person is to gather specific information about the history of volcanic eruptions around the world and also in the Caribbean.
 4. Each person in the team must coordinate their activities with the other. For example, the **Historian** might tell the **Photographer** what pictures he needs, or the **Photographer** could tell the **Historian** what picture could be found.
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When you find an image that you want to use in your multimedia report save the image to your disk. To do that; position the cursor on any part of the image, click and hold down the mouse button (right button if you are using an IBM), move the cursor to the Save this Image choice and let go. Name the image so you will know what it is when you start to write your report. Make sure that the saving location is your disk and not the hard drive of the computer. When you find information you want to use in your report use an old form of technology - pencil and paper - to record what you want to use in the report. After you have collected data and pictures to answer each of the seven question asked by Mayor Cruz put together a multimedia report to show to the Mayor. You may use either HyperStudio or PowerPoint. This is a group report and you will share a group grade.

Conclusion

You have learned that volcanic activity is related to movement of the earth's tectonic plates. In addition, you have seen that most of that activity takes place at the edge of those plates. What is your prediction of the chance of volcanic activity at your location? Can you list some of the major features on earth that have been produced by the movement of these plates? Have you found any relationship between earthquakes and volcanoes?

Teacher Notes

Students should not waste time looking for Mont Isle, Poco-poco, Iguana Cay, or even Jose Cruz. All of these names are fictitious. However, the situation is very real. The other islands associated with the fictitious Mont Isle lie at the edge of a plate boundary. Processes at this plate boundary provide the volcanism which has produced these islands, and which can still produce volcanic activity in this region. In 1902 eruptions on two islands in the region killed over 30,000 people. On the island of St. Vincent, Soufriere erupted killing 1,680 people. On the island of Martinique, Mt. Pelee erupted killing 29,025 people. Recently the Soufriere Hills of Monserrat has been erupting for the first time in the recorded history of the island. Regarding searches, students should NOT use any of the search engines like Infoseek, Alta Vista, Yahoo, etc. There are more than enough links in the resources section.

Evaluation

Your project will be evaluated using the following rubric:

Excellent:

- Give a complete answer to all seven questions Mayor Cruz needs to have answered
- Include at least seven pictures of volcanoes
- All group members participate in the report.
- Include at least seven cards in your HyperStudio stack, or seven slides in a Power Point presentation

An Excellent rating will result in a grade of A for each member of the group

Advanced:

- Give a complete answer to any five of the questions Mayor Cruz needs to have answered, or partial answers to all seven questions
- Include at least five pictures of volcanoes
- Most group members participate in the multimedia report.
- Include at least five cards in your HyperStudio stack, or five slides in a Power Point presentation

An Advanced rating will result in a grade of B for each member of the group

Accepted:

- Give a complete answer to any three questions Mayor Cruz needs to have answered, or partial answers to any five questions
- Include at least three pictures of volcanoes
- most group members participate in the multimedia report.
- Include at least three cards in your HyperStudio stack, or three slides in a Power Point presentation

An Accepted rating will result in a grade of C for each member of the group

Novice:

- Give a complete answer to one of the questions Mayor Cruz needs to have answered, or partial answers to any three of the questions
- Include at least two pictures of volcanoes
- Only one group member participates in the multimedia report.
- Include at least two cards in your HyperStudio stack, or two slides in a Power Point presentation

A Novice rating will result in a grade of D for each member of the group

