

**Team Number:** MELHS36

**School Name:** Melrose High School

**Area of Science:** Geology

**Project Title:** Volcanos

**Problem:**

This year we are studying how a volcano effected the environment in Pompeii. We wanted to study volcanoes this year because we thought it would be interesting to see why they are so harmful to the people and the environments around them. We wanted to study the volcano specifically in Pompeii because it was a large eruption and one of the most famous that has happened.

**Problem Solution:**

In our NetLogo program we would like to set an area for a volcano on the screen. The entire screen will be a map of an area and its terrain with elevation information. It will also show trees and vegetation lined up throughout the rest of the program area. Other areas will represent human structures. There will be a button that will make it to where lava is erupting from a randomized spot on the volcano, making it pour down the slopes. Then, we can measure the impacts of the burned areas and ash on the ecology and the people around it. The sky around it will have an ashy affect to stimulate the smoke. This can affect the area as well.

**Progress to Date:**

Our group has started to design what we would want in the program and the programming language we are using is NetLogo. We will show how volcanoes effect the environments and the area we are describing is Pompeii. We have done the research to find how much is was destroyed and how many people and animals must have died or been injured. We plan to visit an area where there was a volcano somewhere in New Mexico to see some effects near where we live. One member of our group has also started the actual programming.

**Expected Results:**

The importance of our project is to show how dangerous any volcano can be, especially the one we specifically chose which is in Pompeii. We want to show what happened in the past because it can show people what might eventually happen again in the future. This can also help people keep clear out or stay safe around a volcano. If we succeed, we can help more people stay safe around the globe.

**Citations:**

<http://volcano.oregonstate.edu/how-do-volcanoes-affect-people>

<https://www.theguardian.com/environment/2011/feb/09/volcanoes-climate>

<https://www.scientificamerican.com/article/how-do-volcanoes-affect-w/>

<https://sites.google.com/a/bvsd.org/aeris-volcanoes/how-do-volcanoes-affect-the-earths-surface>

Book: Earth Science Publisher: Glencoe Date: 2012 Author: Alton L. Biggs

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