

Nature of Science & Math: Analyzing the Presence in Everyday Communication

Growing up, living, and teaching in Hawai'i is the perfect classroom scenario. Living on an island in the middle of the ocean may feel isolating to some, but having a backyard that is ever changing and growing fully embodies the Nature of Science. This response will further analyze the presence of science and math in everyday communication, namely in the National Geographic article by Alejandra Borunda.

Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena

In this first tenet, the article dives right in to the natural phenomena that surrounds the active volcano Kilauea and how the islands of Hawai'i are continually growing and changing in shape and size. The article first grabs the reader's attention by saying that a new mini island has formed off the island's coast and not a mere days later, it turned into a islet of sorts. This engaging phenomena invites the reader to explore more to understand what is causing this reshaping of the earth. The article then dives right into the "hot spot" theory and explains how magma travels from deep within the Earth's mantle to the crust. Engaging the reader with this science explanation helps to describe the natural events that are occurring.

Science is a Human Endeavor

The next tenet of science affecting everyday life is evident throughout the article. Spouting lava in the Leilani Estates subdivision allows the reader to consider how this lava is affecting human life. It provokes the question on whether lava could erupt in one's own backyard and what some residents, like Andrew Hara, are experiencing. The sights, smells and feelings that residents are feeling during this time are likely unprecedented.

Science is a Way of Knowing

Science is both a body of knowledge and a process that adds new knowledge. As this eruption continues, the amount of information and data that the researchers and scientists are collecting must be astounding. Much of volcano studies have come from digging in the past to uncover what has occurred millions of years ago. The current researchers are now living and witnessing this wonder first hand and are experiencing first hand accounts of the nature of science.

Math Practices

The math practices are neatly woven throughout the article as a way to show the great enormity of time that it has taken to create the Hawaiian archipelago. In addition to highlighting that the oldest islands are over 60 million years old, it also showcases how quickly this new volcanic activity has reshaped the Earth in such a short period of time. This encourages the reader to reason abstractly and quantitatively (mathematical practice 2) to make sense of what is occurring. The idea of sharing that the lava is traveling 20 to 30 miles per hour and the relation to a car travelling serves as a model with mathematics (mathematical practice 4). These concrete models are appropriate tools (mathematical practice 5) that are strategically placed throughout the article so that the reader can understand the Nature of Science that is occurring in the Big Island of Hawai'i.

“See How the Kilauea Eruption Is—Literally—Reshaping Hawaii” By Alejandra Borunda in National Geographic Link to report <https://www.nationalgeographic.com/science/2018/07/news-kilauea-volcano-eruption-lava-new-island-photos/>