

Name _____

Volcanoes and Climate Change: Uncovering the Connection

Short Answer Key

1. Volcanoes release carbon dioxide (CO₂), a greenhouse gas that contributes to long-term warming. However, they can also release sulfur dioxide (SO₂) aerosols that cause short-term cooling by reflecting sunlight back into space.
2. Volcanic eruptions can disrupt weather patterns, leading to changes in precipitation. Some regions may experience increased rainfall, while others may face drought conditions, impacting agriculture, water resources, and ecosystems.
3. One example is the eruption of Mount Tambora in 1815, which led to the "Year Without a Summer" in 1816, causing widespread crop failures and food shortages.
4. Scientists monitor volcanic activity using satellites, ground-based sensors, and computer models. They study volcanic emissions and their effects on climate to improve our understanding of these interactions.
5. Understanding the impact of volcanoes on climate change is essential because it helps us differentiate between natural and human-induced climate drivers. This knowledge is crucial for developing effective climate mitigation and adaptation strategies.

