

Name _____

Volcanoes and Climate Change: Uncovering the Connection

Open-Ended Response Answer Key

1. Volcanic eruptions release greenhouse gases like carbon dioxide (CO₂). While volcanic emissions can contribute to long-term warming, human activities, such as burning fossil fuels, release significantly larger amounts of CO₂, exacerbating the warming effect.
2. Eruptions like Mount Tambora's in 1815 caused the "Year Without a Summer," leading to crop failures and food shortages. This, in turn, had social and economic repercussions, illustrating how volcanic eruptions can shape human history.
3. Computer models are valuable for simulating volcanic eruptions, but they require accurate data. Improved modeling can enhance our understanding of volcanic impacts, aiding in climate predictions and the development of effective mitigation strategies.
4. International cooperation involves sharing data, coordinating monitoring efforts, and responding to volcanic eruptions. Organizations like the World Meteorological Organization (WMO) facilitate collaboration, ensuring a global response to volcanic and climate-related challenges.

