

Name \_\_\_\_\_

## The Birth of Volcanoes: Unveiling Their Mysterious Origins

### Open-Ended Response Answer Key

1. Answers may include using seismometers to monitor ground vibrations, gas analyzers to measure gas emissions, and satellite imagery to track changes in the volcano's shape. Safety measures for communities may include evacuation plans and education on volcanic risks.
2. Answers may vary but should provide reasons for considering both destructive (e.g., destruction of communities) and constructive (e.g., creation of fertile soil) aspects of volcanoes.
3. Answers should discuss the differences in plate movement and causes of volcanic eruptions at convergent and transform boundaries, as well as the potential consequences of each type of eruption.
4. Answers may include proximity to valuable resources (e.g., geothermal energy), cultural and historical significance, and an acceptance of the inherent risks. Precautions should include emergency plans, early warning systems, and building structures to withstand volcanic hazards.

