Name _____

The Birth of Volcanoes: Unveiling Their Mysterious Origins

Short Answer Key

1. Tectonic plate boundaries are the locations where the Earth's crust is in motion. Different types of boundaries (divergent, convergent, and transform) contribute to the formation of volcanoes through various processes.
2. Subduction is the process where an oceanic plate collides with a continental plate, and the denser oceanic plate is forced beneath the continental plate. This subducted plate melts in the mantle due to heat and pressure, forming magma that can lead to volcanic activity on the surface.
3. Magma rises from the Earth's mantle to the surface through fractures and weaknesses in the crust. The ascent of magma can take thousands of years and results in volcanic eruptions when it reaches the surface as lava.
4. Studying volcanoes helps scientists understand their behavior, predict eruptions, and develop early warning systems, all of which are essential for the safety of nearby communities.
5. Divergent boundaries involve plates moving away from each other, convergent boundaries involve plates colliding, and transform boundaries involve plates sliding past each other horizontally.