Name _____

Subduction: The Earth's Subterranean Conveyor Belt

Short Answer Key

1. Subduction is the process where one tectonic plate is forced beneath another into the Earth's mantle at a subduction zone. At the subduction zone, the descending plate gets pulled deeper into the mantle, melts, and forms pockets of magma, leading to volcanic eruptions and earthquakes.
2. Volcanic eruptions occur due to the rising magma generated by the melting oceanic plate, while earthquakes result from the release of stress and friction along the plate boundaries.
3. Oceanic plates are denser and thinner than continental plates, making them more prone to subduction. The denser oceanic plate sinks beneath the less dense continental plate, initiating the subduction process.
4. The Pacific Ring of Fire is a horseshoe-shaped region encircling the Pacific Ocean, known for its frequent volcanic eruptions and earthquakes due to numerous subduction zones in the area.
5. Subduction recycles old oceanic crust back into the Earth's mantle, ensuring that Earth's surface is constantly renewed and reshaped over geological time.

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