

Name _____

Seafloor Spreading: Unveiling Earth's Hidden Secrets

Open-Ended Response Answer Key

1. Seafloor spreading can impact oceanic ecosystems by creating new habitats as the seafloor changes. It plays a role in continental drift by pushing continents apart or together. Geological hazards like earthquakes and volcanic eruptions can occur at subduction zones.
2. Seafloor spreading affects ocean circulation, influencing global weather patterns. It can impact heat distribution, affecting climate. Understanding this process is crucial for climate research.
3. Continental crust is thicker, less dense, and made of granitic rock, while oceanic crust is thinner, denser, and composed of basaltic rock. Seafloor spreading creates oceanic crust at mid-ocean ridges, and subduction recycles it at subduction zones. Examples include the Mid-Atlantic Ridge.
4. Seafloor spreading has shaped Earth's geological history by creating and reshaping ocean basins. It has played a role in the breakup of supercontinents and the formation of new continents over millions of years.

