

Name _____

Seafloor Spreading: Unveiling Earth's Hidden Secrets

Short Answer Key

1. Seafloor spreading is the process by which new oceanic crust is formed at mid-ocean ridges, pushing older crust away. It is essential in plate tectonics because it explains the movement of tectonic plates and the recycling of oceanic crust.
2. Mid-ocean ridges are underwater mountain ranges where magma from the mantle wells up and solidifies, creating new oceanic crust. As more crust is added, it pushes the existing crust away, contributing to seafloor spreading.
3. Magnetic stripes on the ocean floor are evidence of seafloor spreading. These stripes show alternating bands of normal and reversed magnetic polarity on either side of mid-ocean ridges, indicating the movement of the seafloor away from the ridge. They reveal the Earth's magnetic history.
4. After being formed at mid-ocean ridges, oceanic crust gradually moves away from the ridge. Eventually, it reaches a subduction zone, where it sinks back into the mantle. This recycling of crust is part of the overall movement of tectonic plates.
5. Seafloor spreading is significant because it provides insights into the Earth's dynamic processes, plate tectonics, and the history of the oceans. It has contributed to our understanding of geological hazards and the formation of ocean basins.

