

Name _____

Shaping the Earth: How the Rock Cycle Sculpts Our Landscapes

Short Answer Key

1. Metamorphic rocks contribute to the rock cycle by forming from pre-existing rocks (either sedimentary or igneous) under high pressure and temperature conditions. The transformation is caused by the recrystallization of minerals within the rocks.
2. Erosion shapes Earth's surface features by wearing down rocks and landforms through the action of natural agents like wind, water, and ice. It sculpts canyons, river valleys, and coastal landscapes by removing and transporting sediment.
3. Volcanic islands form when molten magma erupts from the Earth's surface, cools, and solidifies. The igneous rock cycle is responsible for this process as it creates volcanic landforms like islands through volcanic eruptions.
4. Plateaus come into existence through the slow uplift of large regions of the Earth's crust. Metamorphic rocks can be exposed at the surface of plateaus when erosion removes overlying layers.
5. Sedimentary rocks preserve Earth's history by trapping and layering sediments and fossils. They can contain fossils of ancient life forms, record past environmental conditions, and reveal the history of Earth's landscapes.

