Name _____

Rock On! Exploring the Wonders of the Rock Cycle

Open-Ended Response Answer Key

1. Igneous rocks are formed from cooling and solidifying magma or lava. They have a crystalline texture. Sedimentary rocks are formed from the accumulation of particles and often have layered structures. Metamorphic rocks result from the alteration of existing rocks under heat and pressure and have changed minerals and textures.
2. Erosion and weathering break down rocks into smaller particles, which can then be transported and deposited to form sedimentary rocks. This process is crucial in the rock cycle as it provides the raw materials for sedimentary rocks.
3. To determine the rock type, one could examine the rock's texture, color, and mineral composition. Igneous rocks often have a crystalline texture, while sedimentary rocks might have visible layers, and metamorphic rocks exhibit altered minerals and textures.
4. The rock cycle is essential in shaping Earth's surface and geology because it constantly recycles rocks, contributing to the formation of mountains, valleys, and new landforms. It also plays a role in the distribution of minerals and resources, impacting ecosystems and human activities.