



This teacher sheet provides answers for the Geologic Changes Activity on the Shape It Up student sheet.

1. Order Pictures in a Time Series

Picture #2. 2,000,000 - two million

Picture #1. 10,000 - ten thousand

Picture #3. 100 - one hundred

2. Describe the Process of Change in Nature

In Picture #1, the force of wind blowing over 10,000 years wears away the particles of rock and sand that made up the original mound of rock. This gradual removal of rock particles is called weathering, or erosion.

In Picture #2, the picture shows a different part of the life cycle of a volcano, sort of its teenage years. It grows from just a "baby bump" caused by heat from tectonic movement, to a mountain of cooled magma called lava that grows and grows over 2,000,000 years until the giant cone-shaped mountain pierces the surface of the ocean—and we can easily see it.

In Picture #3, heat from the magma—molten rock—underneath the earth's mantle is erupting after rocky tectonic plates that underlie the continents collide and cause a tear that lets out molten rock. Eruptions can happen suddenly and catastrophically. But earthquake scientists know when they are occurring because they monitor the movements of the tectonic plates and the pressures building up.

3. Form a Hypothesis

In Picture #1, wind is the force of nature that is changing the landscape. In Picture #2, heat is the force of nature changing the land. In Picture #3, the force of nature here is also heat.