



# The Rock Cycle

A learn-along activity sheet to accompany the Gillespie Museum's ROCK CYCLE video/resources

The Rock Cycle is a geological concept that illustrates how the three main types of rock—sedimentary, metamorphic, & igneous—are related, by describing the conditions required to transform one type into another.

Use the word bank below, and the rock cycle diagram from page-2, to fill in the blanks in the following section on the **three rock types** and the **rock cycle**.

## Sedimentary Rocks

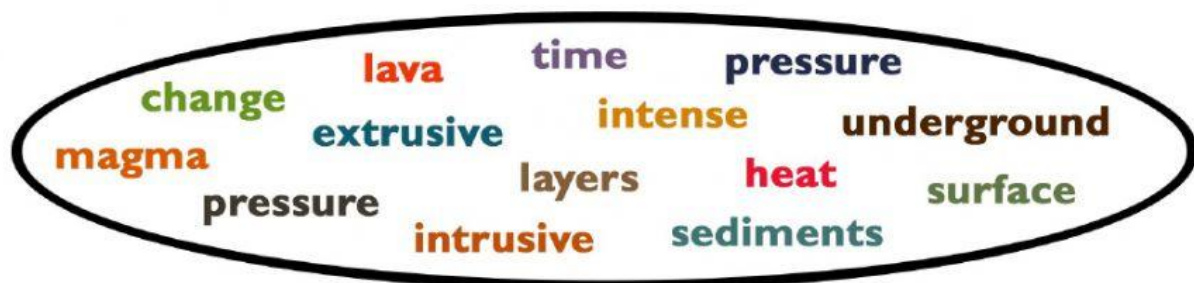
When rocks and minerals are worn and broken down into small pieces by water, wind, or ice, the resulting particles are called \_\_\_\_\_. The movement of these eroded particles to a new location is called **deposition**, which often results in distinct \_\_\_\_\_ of sediments building up in a particular area. Sedimentary rocks form near the \_\_\_\_\_ of the earth. It can take a lot of \_\_\_\_\_, but eventually, if sediments become compacted by \_\_\_\_\_ from the weight of water or overtopping earth, they can solidify into rocks like limestone, sandstone, and shale.

## Metamorphic Rocks

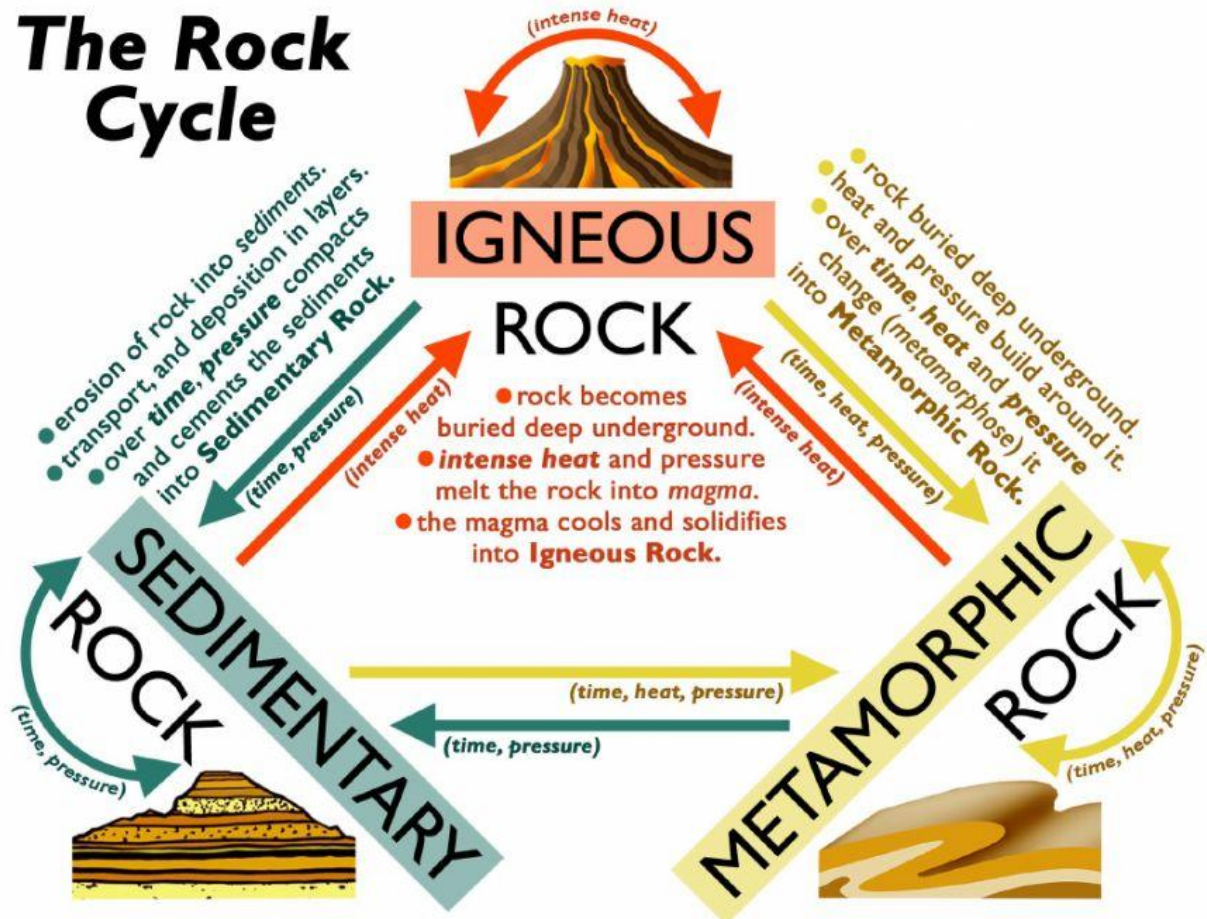
When a rock becomes buried deep \_\_\_\_\_ by natural geological processes, conditions can arise that will \_\_\_\_\_ the rock's chemistry, and turn it into a completely different kind of rock. Over much time, if enough \_\_\_\_\_ and \_\_\_\_\_ build up around the old rock, it will eventually **transform** into a new, metamorphic rock, like marble, quartzite, or slate.

## Igneous Rocks

When rocks underground become exposed to the \_\_\_\_\_ heat resulting from geological processes occurring in the earth's interior, they can actually melt. Melted, or molten rock located below the ground level is called \_\_\_\_\_, but if melted rock becomes exposed on the earth's surface through volcanic activity it is called \_\_\_\_\_. When **magma** is able to cool and solidify underground, it forms \_\_\_\_\_ igneous rocks, like granite. When **lava** cools above ground, \_\_\_\_\_ igneous rocks, like basalt, obsidian, and pumice, are formed.



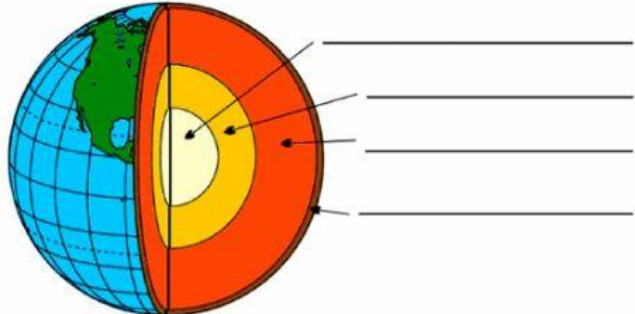
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Complete this section about the **earth** and the **matter** which makes it up.

Correctly label the diagram with the layers of the earth (**crust**, **mantle**, **inner core**, **outer core**).

All three types of rock form in which earth layer?



**Matter is anything that has mass (similar to weight) and takes up space (has volume).**

What are the three states of matter? \_\_\_\_\_

Matter can change *physically* and *chemically*. Label the two definitions below as **physical** or **chemical** change.

A reversible change, where appearance is altered, but the composition stays the same is \_\_\_\_\_.

An irreversible change that alters the chemical makeup of a substance is \_\_\_\_\_.

Is the melting of ice into liquid water a physical or chemical change? \_\_\_\_\_

What is involved in any change in matter? \_\_\_\_\_