



# The Rock Cycle **KEY**

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

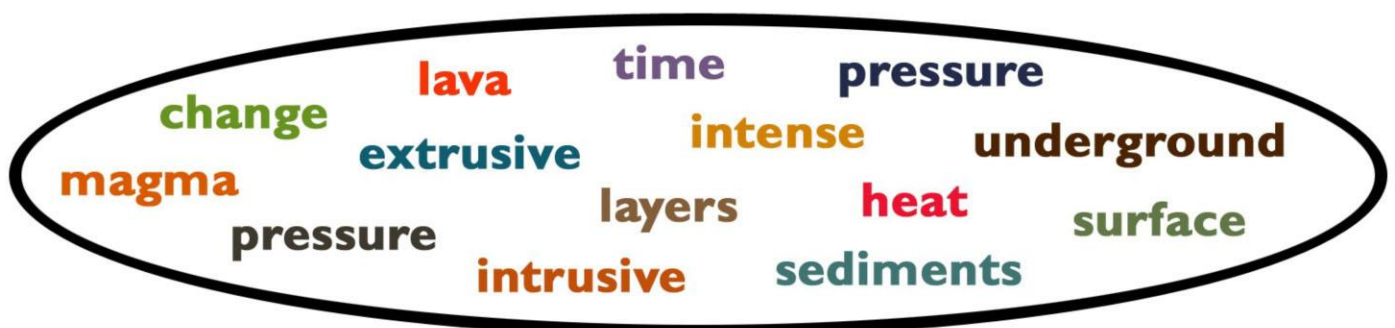
When rocks and minerals are worn and broken down into small pieces by water, wind, or ice, the resulting particles are called sediments. The movement of these eroded particles to a new location is called **deposition**, which often results in distinct layers of sediments building up in a particular area.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

## Metamorphic Rocks

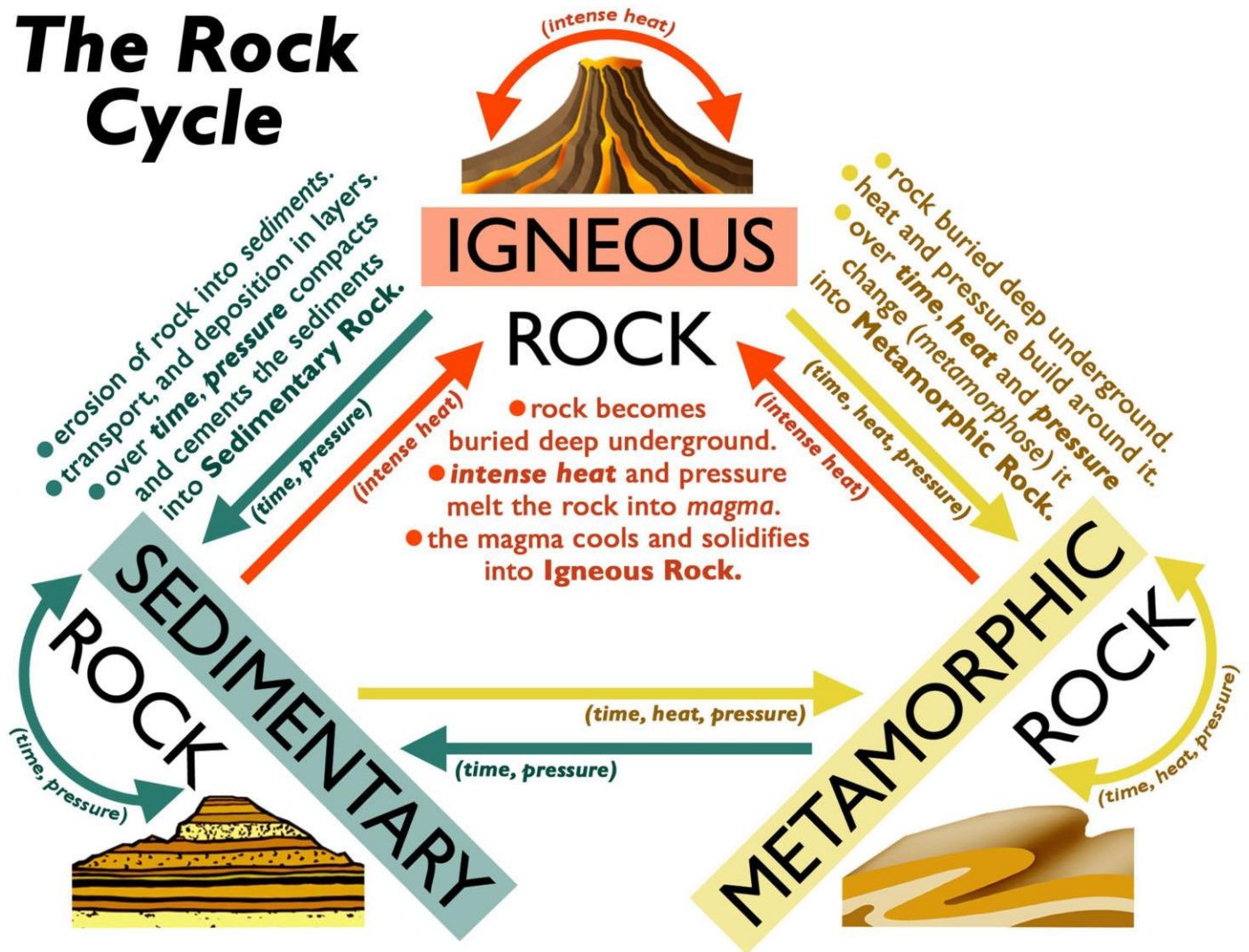
When a rock becomes buried deep underground by natural geological processes, conditions can arise that will change the rock's chemistry, and turn it into a completely different kind of rock. Over much time, if enough heat and pressure build up around the old rock, it will eventually **transform** into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

## Igneous Rocks

When rocks underground become exposed to the intense 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 magma, but if melted rock becomes exposed on the earth's surface through volcanic activity it is called lava. When **magma** is able to cool and solidify underground, it forms intrusive igneous rocks, like granite. When **lava** cools above ground, extrusive igneous rocks, like basalt, obsidian, and pumice, are formed.



# The Rock Cycle

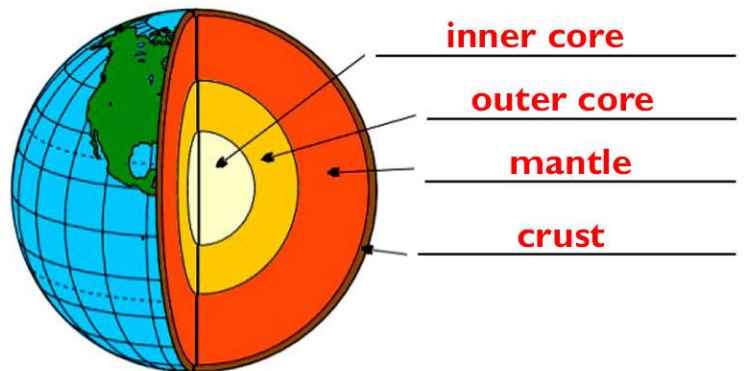


Complete this section about the **earth** and the **matter** which makes it up.

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?

**the crust**



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

What are the three states of matter? **solid** **liquid** **gas**

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 **physical**.

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

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

What is involved in any change in matter? **energy**