The Rock Cycle

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.
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? __________________________