Inside the Restless Earth **Rocks: Mineral Mixtures: Chapter 2 Section 1:**

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a naturally formed, inorganic solid with a crystalline structure.

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a solid mixture of crystals of one or more minerals or other materials.

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the process by which one rock type changes into another rock type.

**Rocks are classified into three main types depending on how they are formed.**

**Scientists further classify rocks according to two criteria- composition and texture.**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - is the makeup of a rock; it describes the minerals or elements present in the rock.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the size, shape and positions of the grains that the rock is made up of.

**Types of Rocks:**

**A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-** rock that forms from the cooling and hardening of magma.

**Classifying Igneous Rock according to its Composition:**

**1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**tends to be light colored and made of silicon, aluminum, sodium, and potassium. These rocks are less dense then mafic igneous rocks.

**2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- igneous rocks that are dark in color and are made of iron, magnesium, and calcium. These rocks are more dense then felsic igneous rocks.

**Classifying Igneous Rock according to its Texture:**

**1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**the type of igneous rock that forms when magma cools and solidifies **beneath** the Earth’s surface. Intrusive igneous rocks have larger crystals because they cool down slowly.

**2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**the type of igneous rock that forms when lava cools and solidifies **on** the Earth’s surface. Extrusive igneous rocks have small or no crystals because they cool faster and crystal formation cannot occur.

Molten rock formed occurs when rock and minerals within the earth melt forming a hot liquid called is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. .

Magma that reaches the earth’s surface is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**-rock that forms when sediments are compacted and cemented together over a long period of time.

Sedimentary rocks are classified according by the way it forms.

**Sedimentary Rock Classifications:**

**1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.- sedimentary rock is made of rock and mineral fragments that are compacted and cemented together. Ex. conglomerates

**2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- a form of sedimentary rock that forms when minerals come out of solution and settle on the ocean floor. **Ex. Calcite**

**3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**- A form of sedimentary rock that forms, from the remains of once- living things. **Ex. Coquina.**

**4**. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is the process by which rocks are broken down by wind, water, or plants, forming sediment.

**5**. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the movement of sediment to new locations.

Sedimentary rock features can tell you about how the rock was formed.

Sedimentary rocks sometimes record the motion of the wind, and water on lakes, rivers and streams and sand dunes.

6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ layers of sedimentary rock that forms from the deposition of sediment.

7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the layering of sedimentary rock.

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-** rock that forms from the cooling of magma.

**C .\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**rock forms when the texture and composition of preexisting rock changes due to heat and pressure.

**Classifying Metamorphic Rock according to its Texture:**

**1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**has mineral grains that align in layers or bands.

**2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**mineral grains show no alignment like those in foliated metamorphic rock.