

A \_\_\_\_\_ is a solid material made up of one or more minerals.

There are 3 types of ROCKS:

1. \_\_\_\_\_

- Was once \_\_\_\_\_, but it has cooled and hardened.
- The melted materials is called \_\_\_\_\_.
- They may be \_\_\_\_\_ with crystals of different types of minerals in them.
- Example: \_\_\_\_\_

2. \_\_\_\_\_

- Usually made up of pieces of rock called \_\_\_\_\_ that have been pressed and cemented together.
- Some may contain pieces of animals, shells, or plants, called \_\_\_\_\_.
- Example: \_\_\_\_\_ and \_\_\_\_\_

3. \_\_\_\_\_

- Was once another type of rock deep inside Earth, but \_\_\_\_\_ and \_\_\_\_\_ caused the minerals to CHANGE.
  - Rocks that were pressed down could have the minerals line up in \_\_\_\_\_.
  - Sometimes \_\_\_\_\_ just changes the size of the minerals crystals.
  - Example: \_\_\_\_\_ and \_\_\_\_\_
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There are 4 types of SOILS:

1. \_\_\_\_\_

- A soil that is made up of \_\_\_\_\_ of once-living organisms.
- It is \_\_\_\_\_, soft, and very crumbly.

2. \_\_\_\_\_

- A soil that has \_\_\_\_\_ grains and large spaces between the grains.
- This lets water leave it quickly. It feels \_\_\_\_\_.

3. \_\_\_\_\_

- A soil that has very small \_\_\_\_\_ and holds water easily.
- This is sticky when wet, but when it dries, it becomes \_\_\_\_\_.

4. \_\_\_\_\_

- A soil that has pieces that are smaller than \_\_\_\_\_.
- It feels like \_\_\_\_\_.

\*Some soils are combinations of these soil types. For example, \_\_\_\_\_ has large and small grains with lots of humus. This makes it dark and rich soil for plants.

\_\_\_\_\_ are solid, formed in nature, have never been alive, and have properties by which they can be identified.

#### Examples of PHYSICAL PROPERTIES:

1. \_\_\_\_\_

- Refers to whether the mineral can be \_\_\_\_\_ or can \_\_\_\_\_ something else.
- The harder the mineral, the \_\_\_\_\_ things can scratch it.
- The hardness is numbered \_\_\_\_\_, with 1 being the \_\_\_\_\_ and 10 being the \_\_\_\_\_. \_\_\_\_\_ is the hardest mineral.

2. \_\_\_\_\_

- Since many minerals have the same color, it cannot be used as the \_\_\_\_\_ property for identification.
- Color can be used along with other properties to help identify a mineral.

3. \_\_\_\_\_

- How a mineral reflects light.
- Some minerals can be very shiny, pearly, or glassy and other minerals are dull.

4. Special Properties

- If an acid (like vinegar) is placed on a mineral, it may bubble or fizz.
- Some minerals split into thin sheets.
- Some minerals have magnetic properties.

\*A mineral identification key is a chart that will give information about the properties of the minerals listed on the key. (Page 82 of PASS Coach)

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#### **Vocabulary:**

1. Mineral - is a solid, nonliving substance found in nature
2. Luster - describes the way light bounces off a mineral
3. Rock - is a solid material made up of one or more minerals
4. Sedimentary Rock - is a kind of rock that forms from layers of sediment
5. Igneous Rock - is a kind of rock that forms when melted rock cools and hardens
6. Metamorphic Rock - is a rock that has been changed by heating and squeezing deep inside the Earth
7. Magma - hot melted material deep inside the Earth
8. Lava - Melted rock that flows onto the LAND
9. Soil - made of up tiny pieces, or particles of rock
10. Sand - soil made with the largest particles, does not hold water well
11. Silt - smaller particles than sand, feels smooth like powder, holds water better than sand
12. Clay - a kind of soil with the smallest particles, feels sticky and smooth, holds water very well
13. Humus - soil made up of the remains of dead plant and animals,
14. Loam - soil that is sand, silt, clay, and humus mixed together, best for growing plants