**Part I: Classifying Matter**

Periodic Table

The vertical columns on the periodic table are called \_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_.

Groups are numbered 1-18 on the periodic table

Elements belonging to the same group have similar properties

The horizontal row of elements on the periodic table are called \_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_.

Periods are numbered \_\_\_\_\_\_\_\_\_\_.

Metals, nonmetals, and metalloids can be located on the periodic table by knowing where to find the \_\_\_\_\_\_\_\_\_\_\_\_ line, which begins under the element \_\_\_\_\_\_\_\_\_\_.

**Pause for a Cause**

**Learning Activity #1**

**Identify the element located in:**

1. **Group 2 Period 4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Group 17 Period 6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. **Group 13 Period 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. **Group 10 Period 4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
5. **Group 1 Period 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Properties of Metals

\_\_\_\_\_\_\_\_\_\_\_\_\_- metals are good conductors of heat and electricity

\_\_\_\_\_\_\_\_\_\_\_\_- metals can be hammered into thin sheets

\_\_\_\_\_\_\_\_\_\_\_\_- can be drawn into thin wire

\_\_\_\_\_\_\_\_\_\_\_\_\_- metals have high tensile strength and resist being pulled apart

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- metals are recognized by their shine

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, is the only metal that exists as a liquid at room temperature

Properties of Nonmetals

\_\_\_\_\_\_\_\_\_\_\_, the graphite in “pencil lead” is a great example of a nonmetallic element.

Nonmetals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of heat and electricity

Nonmetals tend to be \_\_\_\_\_\_\_\_\_\_\_

Many nonmetals are \_\_\_\_\_\_\_\_\_\_ at room temperature

Properties of Metalloids

They have properties of both \_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_.

Metalloids are more \_\_\_\_\_\_\_\_ than metals, less \_\_\_\_\_\_ than most nonmetallic solids

Metalloids are \_\_\_\_\_\_\_\_\_\_\_\_ of electricity

Some metalloids possess \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Pause for a Cause   
Learning Activity #2**

**Tell whether each of the following elements is a metal, nonmetal, metalloid:**

1. **Silicon**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Chlorine** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. **Sodium** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **Iron**\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. **Antimony**\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. **Radon**\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. **Cesium** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. **Sulfur** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The Alkali Metals

Have a \_\_\_\_\_\_\_\_\_\_\_\_\_ appearance and are soft enough to cut with a \_\_\_\_\_\_\_\_\_\_\_.

Not found in nature as \_\_\_\_\_\_\_\_\_\_ elements.

React \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

React with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The Alkaline-Earth Metals

Harder, denser, and stronger than \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Higher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than alkali metals.

Not found in nature as \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The Transition Elements

Good \_\_\_\_\_\_\_\_\_\_\_\_ of electricity and have a higher \_\_\_\_\_\_\_\_\_\_\_.

Less \_\_\_\_\_\_\_\_\_\_\_\_\_ than the alkali metals and the alkaline-earth metals

Some exist as \_\_\_\_\_\_\_\_\_\_\_\_\_

Halogens

Most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ nonmetals.

React with most \_\_\_\_\_\_\_\_\_\_\_\_\_ to form salts.

Noble Gases

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_at room temperature

Neon, argon, krypton and xenon are used in \_\_\_\_\_\_\_\_\_\_\_\_

Helium is used in \_\_\_\_\_\_\_\_\_\_\_\_\_\_