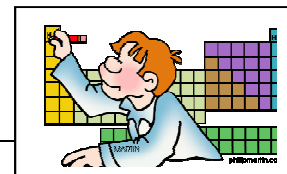


Week 7 – SCIENCE NOTE PAGE

Elements & Periodic Table



Elements:

- **REVIEW:** When something is made up of only ONE TYPE OF ATOM, we call it an _____.
- **Elements** are materials that cannot be broken down further.

Periodic Table of Elements:

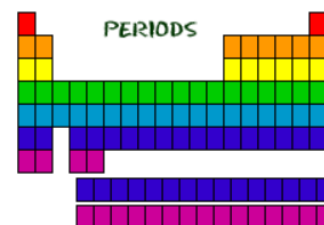
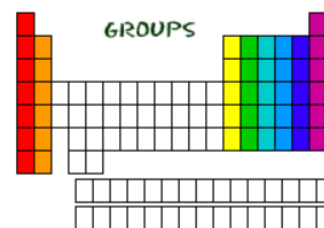
- Scientists tried to classify elements in **groups** with similar properties.
 - **Properties** means the way elements break down or combine with other elements.
- The arrangement of the _____ in an atom *determines the properties of the element*.
- The grouping of elements with similar properties is shown in the **Periodic Table of the Elements**.
- **Periodic Law:** states that the properties of elements are periodic or recurring as the elements increase in **atomic number** (remember that's the number of _____).

Identifying Information on the Periodic Table

- From the Periodic Table, you can find the following information about an element: **name, symbol, atomic number, and atomic mass ... LABEL each below!**

8
O
Oxygen
15.999

←
←
←
←



Organization of the Periodic Table

- **Elements are arranged** in the Periodic Table according to:
 1. Atomic number (1, 2, 3, 4, etc...)
 2. Number of electrons in the outer _____
- Elements in the same _____ or **family** (column) have the same number of outer shell electrons (valence electrons). These elements have similar properties or react relatively the same.
- Elements that are in the same _____ (row) have the same number of orbital shells. However, elements in the same period do NOT have similar chemical properties.

Types of Elements

Metals - Metals have the ability to easily _____ the electrons.

Nonmetals - Most nonmetals _____ electrons easily.

Halogens – type of nonmetals; the halogens are highly reactive because they tend to gain electrons.

Noble Gases – type of nonmetals; the noble gases are not reactive because they have little tendency to gain or lose electrons.

Metalloids - Elements that have some properties of metals and of nonmetals are called metalloids. These elements can gain or lose _____.

A standard periodic table of elements where different regions are color-coded: Metals (blue), Metalloids (red), Non-Metals (green), and Transition Metals (purple). The table includes element symbols, atomic numbers, and names.