

Periodic Table

Is a chart that contains all the information of the 118 elements found on Earth.

Elements

Are the simplest type of pure substances.

They occur naturally within the Earth.

The columns are called group or family.

The elements in a group have similar properties.

The family name is based on the first element in the column.

EX:

Group 14 is the Carbon Family

What would Group 15 be?

Nitrogen Family

**The Periodic Table is
arranged by the element's
atomic number.**

The rows are called periods.

A period contains a series of different types of elements from different families.

An element's physical & chemical properties can be predicted from its location in the periodic table.

**Metals are left of the
stair steps.**

**They usually give up
their valence
electrons.**

Nonmetals are to the right of the stair steps.

They usually gain or share their valence electrons.

Hydrogen has unique properties.

It may be classified as a metal or nonmetal depending on how it reacts with a given substance.

Metalloids are found on either side of the stair steps.

They have properties of both metals & nonmetals.

Patterns

of the

Periodic Table

**Density increases
down a group.**

**Melting points of metals
decrease while those of
nonmetals increase.**

Metals on the left react violently with water but the reaction decreases as you move to the right.

This is opposite with the nonmetals.

Group 17 is the most reactive.

Group 18 is the exception.

They almost never react.

**In a row of eight elements,
the valence electrons
increase by one going left
to right.**

Elements in the same family have the same number of valence electrons.

**Group 1 has one, Group
2 has two, Group 13 has
three, etc.**

**How many valence
electrons does Group 16
elements have?**

Six