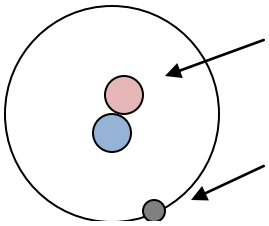
Study Guide for Periodic Table Test

# of protons = Atomic #

Protons are _____

Electrons are _____

Neutrons are _____



Protons and Neutrons go in the nucleus

Electrons are in orbits around the nucleus

# of protons = 1

In a neutral atom there is 1 electron for every proton

1

H

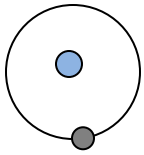
Hydrogen

1.0079

Atomic # = # of _____

Atomic Mass = # of _____

Neutrons = Atomic Mass − Atomic #



Hydrogen Atomic # = 1
1 proton
1 electron

Reading the Periodic Table

Different # of protons = different element

47

Ag

Silver

107.87

Atomic # = # of protons

Chemical Symbol

Element Name

Atomic Mass

How much mass would 2 atoms of silver have?

_____

Find the chemical symbols for these elements:
Gold: _____
Fluorine: _____
Sulfur: _____

Find the names for these elements:
Mg: _____
N: _____
He: _____

Use your periodic table to find the answers to these

Find the atomic numbers for these elements:
Oxygen: _____
B: _____
Lithium: _____

Find the atomic mass for these elements:
H: _____
Neon: _____
Al: _____

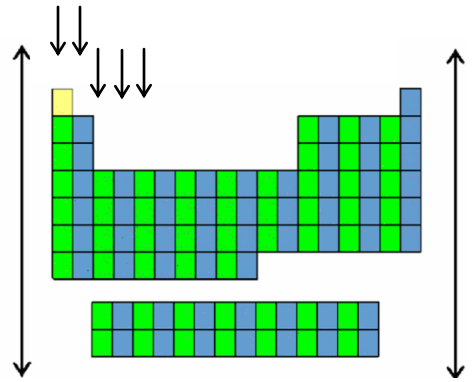
Find the molecular mass of MgO.

_____

(Combine the Mass of each element)

Mass of Mg + Mass of O = Mass of MgO

The Periodic table is designed to help you predict what an element's physical and chemical properties are



Elements in the Periodic Table are grouped into **families**, which are the vertical columns.

Elements in families/groups have similar properties

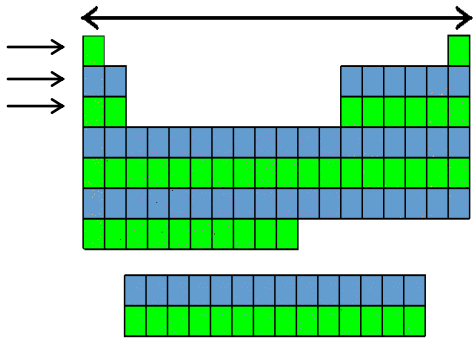
There are 18 Groups

Periods and Groups

Thinking like the game "Battleship", you can find an element by its period and group.

Elements are also put into horizontal rows called **periods**

Elements in periods can have very different properties



What element is in Period 2 and Group 16?
Period 2 is row 2; Group 16 is Column 16.
The element is oxygen.

What element is in Group 13 and Period 3?
_____

What element is in Group 2 and Period 2?
_____

What group and period is Chlorine in?
Group: _____ Period: _____

What about Magnesium?
Group: _____ Period: _____

Metals vs. Non-Metals

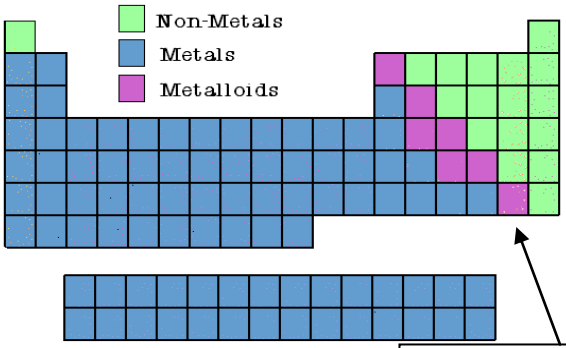
Elements can be divided into three main categories. **Metals, Non-Metals, and Metalloids.**

Metals are on the left

Non-Metals are on the right

On either side of the divide are the metalloids or semi-metals—they have characteristics of both: B, Si, Ge, As.

Metals: Easy to remember by which side iron (Fe) is on—the left side!



Potassium: _____
Bromine:_____
Beryllium: _____
Helium:_____
Fluorine: _____
Hydrogen _____
Silver_____
Nitrogen _____

Metal or Non-Metal?

Dividing Line - **Metalloids**

Matching!

1. Proton—
2. Neutron –
3. Electron—
4. Nucleus—
5. Atom—

a) Particles with no charge that exists in the nucleus of most atoms.

b) Center of the atom, contains most of the atom's mass.

c) Positively charged particle in the nucleus of the atom. Determines the element.

d) The smallest part of an element or molecule. Building block of all things.

e) Negative particles in the nucleus of the atom.

f) Negatively charged particle that exists in the space around the nucleus.

a) Total number of protons and neutrons in the nucleus of an atom.

b) Number of protons in an atom; also the way the elements are numbered.

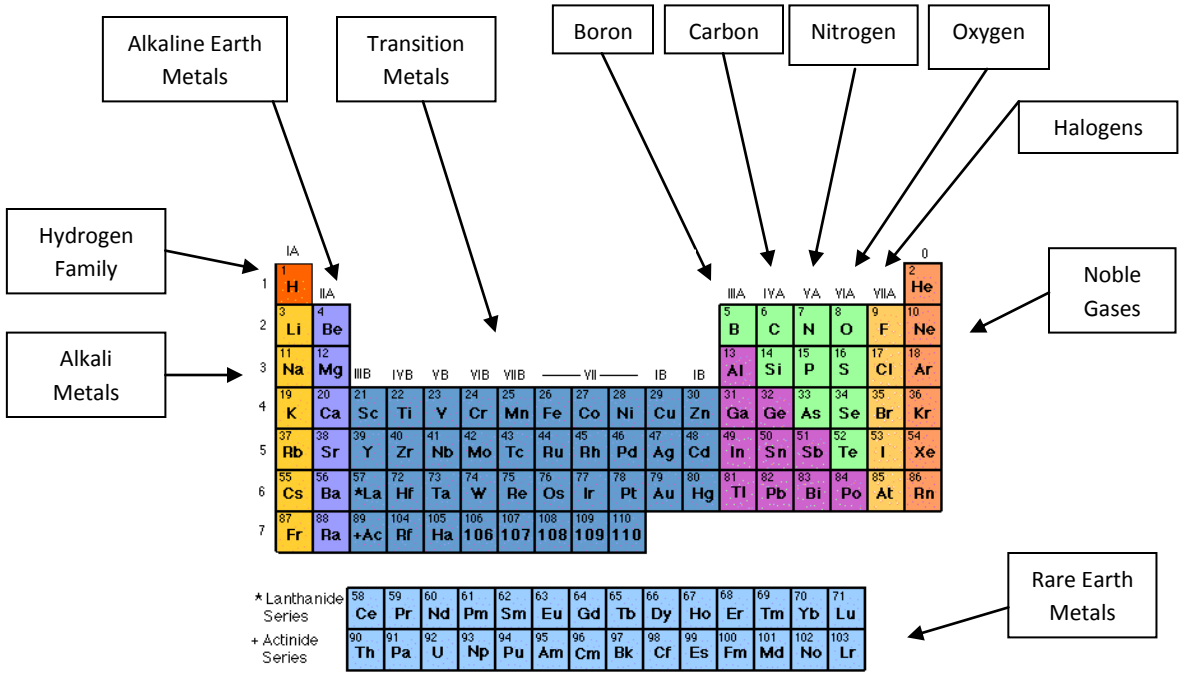
c) Two or more elements combined.

d) Two or more elements mixed together. Can be separated physically.

1. Atomic Number—
2. Molecule—
3. Mixture—
4. Mass Number—

Elements at the top of the table are the least massive

The right side of the table is very stable and unreactive



Ductile — Something can be drawn into a wire easily without breaking.

Metals are usually ductile. Ex: Copper (Cu)

Malleable — Something can be hammered into a thin sheet.

Some metals are malleable. Ex: Aluminum (Al)

Compound — 2 or more elements stuck together

CO_2 H_2O MgO NaCl HCl

Pure Substance —

H C O N NaCl

Mixture —

Salt water, Salad