

1 ☐ Periodic Table Lecture II

- Mr. Kunishima's Class

2 ☐ Metals, cont.

- Rare earth metals

- ◆ Actinides

- ◆ Lanthanides

- ★ Soft, malleable, shiny and high conductivity.

Uranium & Thorium are the only 2 elements that are found in significant amounts.

All elements after Uranium were created artificially.

3 ☐ Non-metals

- Are located to the right of the staircase.
- Lack the properties of metals.
- 17 non-metals include, carbon, hydrogen, oxygen
- Characteristics – dull, brittle, poor conductors, not malleable or ductile, lower densities.

4 ☐ Carbon Family

- Group 14
- Each element has 4 valence electrons
- Carbon is the element of life.
- Carbon is the only non-metal in this group.
- Silicon and Germanium are metalloids
- Tin and lead are metals.

5 ☐ Nitrogen Family

- Group 15
- All elements in this group have 5 valence electrons.
- The air we breath is 80% nitrogen.
- Nitrogen & Phosphorus are non-metals.
- Arsenic and Antimony are metalloids.
- Bismuth is a metal.

6 ☐ Oxygen Family

- Group 16
- All elements in this group have 6 valence electrons.
- Oxygen, Sulfur and Selenium are the nonmetals.
- Tellurium is a metalloid.
- Polonium is a metal.

7 ☐ Halogen Family

8 ☐ Noble Gases

- Group 18
- All of the elements in group 18 have 8 valence electrons.

- All noble gasses are non-metals.
- They do not mix with other elements.

9 Hydrogen

- Does not fit with any family.
- Simplest element.
- 1 proton and 1 electron.

10 Metalloids

- 7 elements between metals and non-metals.
- Properties of both metals and non-metals.
- Silicon is most popular. (Combined with oxygen, glass, sand.)
- Computer industry uses metalloids in their computer chips.