1 Periodic Table Lecture

- Mr. Kunishima's Class

2 Organization of the Periodic Table

- Metals, Nonmetals & Metalloids
- Groups – columns (18 vertical) (Also called Families)
- Periods – rows (horizontal)

3 Groups

- The groups (families) are organized according to valence electron #.
  - Ex. Group 1 has 1 valence electron
  - Group 2 has 2 valence electron
  - Group 3 has 3 valence electrons
  - Group 4 has 4 valence electrons
  - Group 7 has 7 valence electrons
  - Group 8 has 8 valence electrons

4 Metals

The group of elements on the left side of the periodic table. To the left of the staircase

Properties – are metal based of hardness, shininess, malleability, and ductility.

(Malleable – pounded into shapes)

(Ductile – drawn out into long wire)

5 More on metals

- Metals are...
  - Good conductors
  - Show a variety of chemical properties.

Alloys are a mixture of metals.
Ex. Brass is copper and zinc.
Bronze is copper and tin.

6 Alkali Metals

- Group One:
  - Highly reactive
    - ⋆ Hydrogen, Lithium, Sodium, Potassium, Rubidium, Cesium, Francium.

    All have one valence electron. Which means they can combine with many other elements.

7 Alkaline Metals

8 Transition Metals

- Transition metals are located in groups 3 – 12.
- They form a bridge between the highly reactive metals on the left side with the less reactive metals on the right.
- Examples are gold, iron, nickle and silver.