**Group 7 - The Halogens**

Group 7 is the only group that contains elements in all three states of matter. They are all reactive non-metals.

**Iodine & Astatine**
- Solids at room temperature

**Bromine**
- Liquid at room temperature

**Fluorine & Chlorine**
- Gases at room temperature

**Hydrofluoric Acid**
- Leaches calcium from bones and can cause very painful burns.
  - It also dissolves glass.

**The reactivity of the halogens decreases down the group as it becomes harder to add an electron.**

**Uses of the Halogens**
- **Fluorine**
  - Toothpaste
  - Refrigerant gases
- **Chlorine**
  - Bleach
  - Chemical warfare
- **Bromine**
  - Fire retardant materials
- **Iodine**
  - Disinfectants

**All of the Group 7 elements have seven valence electrons.**

**The halogens react with oxygen to form halogen oxides.**

**The halogens react with metals to form metal halides.**

**1 gram estimated amount of Astatine in the Earth’s crust at any one time.**

**Ununseptium**
- 117 Uus

**Fluorine**
- 9 F

**Chlorine**
- 17 Cl

**Bromine**
- 35 Br

**Iodine**
- 53 I

**Astatine**
- 85 At