

### Naming Binary Acids:

Acids are hydrogen-containing compounds that yield hydrogen ions ( $\text{H}^+$ ) when dissolved in water. Binary acids are acids that consist of two elements.

Rules for naming binary **acids**: Use these rules when the compound is in the aqueous state only!

#### Type 1 – No polyatomic ion

1. Start with "hydro"
2. Name the second element, ending in -ic
3. Suffix: "acid"

Example:

$\text{HCl}$  = Hydrochloric Acid

#### Type 2 – Containing a polyatomic ion

1. Name the polyatomic ion, ending in -ic
2. Suffix: "acid"

Example:

$\text{H}_2\text{SO}_4$  = Sulphuric Acid or Sulfuric Acid

Exercises:

**Name each of the following acids:**

1.  $\text{HBr}$  \_\_\_\_\_
2.  $\text{HF}$  \_\_\_\_\_
3.  $\text{H}_2\text{S}$  \_\_\_\_\_
4.  $\text{H}_3\text{P}$  \_\_\_\_\_
5.  $\text{HNO}_3$  \_\_\_\_\_
6.  $\text{H}_2\text{SO}_4$  \_\_\_\_\_
7.  $\text{H}_3\text{PO}_4$  \_\_\_\_\_

**Given the name, provide the formula for each of the following acids:**

1. Hydroiodic Acid \_\_\_\_\_

2. Carbonic Acid \_\_\_\_\_

3. Hydrochloric Acid \_\_\_\_\_

4. Phosphoric Acid \_\_\_\_\_