- **Arrhenius Acids and Bases**
  - Write dissociation reactions for the following Arrhenius acids and bases:
    - $HCl + H_2O \rightarrow$
    - $HF + H_2O \rightarrow$
    - $NaOH \rightarrow$
    - $H_2SO_4 + H_2O \rightarrow$
    - $KOH \rightarrow$
- **Bronsted-Lowry Acids and Bases**
  - For each of the following reactions, label the Bronsted-Lowry acid, base, conjugate acid and conjugate base.
    - $HCl + H_2O \text{ --> } H_3O^+ + Cl^-$
      - Acid: _____
      - Base: _____
      - Conjugate Acid: _____
      - Conjugate Base: _____
    - $NH_3 + H_2O \rightarrow NH_4^+ + OH^-$
      - Acid: _____
      - Base: _____
      - Conjugate Acid: _____
      - Conjugate Base: _____
- Describe the following as monoprotic or poylprotic:
  - HCl _____
  - H_2SO_4 _____
  - HBr _____
  - H_3PO_4 _____

What Are Acids and Bases?

- Acids and bases are special types of electrolytes.
  - Electrolytes are substances that _____ in water
- We have two different definitions of acids and bases:
  - Arrhenius Acids and Bases
    - _____ dissociate in water to produce an excess of _____
    - The dissociation reaction can be written following the form:
      - _____
    - _____ dissociate in water to produce an excess of _____
      - _____
  - Bronsted-Lowry Acids and Bases
    - _____acids are substances that act as proton _____
      - _____ acid is the substance that is produced after the Bronsted-Lowry accepts a proton.
    - _____ bases are substances that act as proton _____
      - _____ base is the substance that is produced after the Bronsted-Lowry acid donates a proton.
- Substances that can act as both an acid and a base are called _____.
- _____ acids – acids that contain and dissociate only one H^+
- _____ acids – acids that contain and dissociate multiple H^+