HNT Chapter 3—Matter and Change

Classifying Matter

States of Matter
- Solid

- Liquid

- Gas
  - Gas vs. Vapor
    - Gas
    - Example:
    - Vapor
    - Example:

Classification of Matter
- Substance
  - Element
    - Example:

  - Compound
    - Example
    - Formula of a compound

- Mixture
  - Homogeneous

  - Heterogeneous
Separated by
- Dissolving
- Distillation
- Filtration
- Chromatography
- Crystallization
- Evaporation
- Decant

Properties and Changes in Matter

Properties of Matter
- Physical property
  - Example:
    - Extensive property
    - Example:
      - Intensive property
      - Example:
- Chemical property
  - Example:

Changes in Matter
- Physical
  - Example:
- Chemical
  - Example:
    - Also known as
      - Chemical equation
        - Example: \( CH_4 + O_2 \rightarrow CO_2 + H_2O \)
        - Reactants
      - Products
  - Law of conservation of mass
- Signs a chemical reaction *may have* occurred
  1.
  2.
  3.
  4.
  5.