

Properties of Matter

Chapter 1, Section 2

Homework

- Refer to page 9: Theories and laws are always being tested.
- Due tomorrow: Research a scientific theory that is no longer accepted, such as the fluid theory of electricity. Write a few paragraphs explaining why the theory was originally accepted, why it was later replaced, and what it was replaced by. You can use the discussion of the caloric theory on page 9 as a model.

Properties of Matter

- Physical Properties
- Chemical Properties

Physical Properties

- Readily observable characteristics of an object or thing
 - Observed or measured without altering the chemical composition of the object
 - Remain constant in pure substance

Examples

- Mass-Amount of matter in an object
- Volume- Amount of space matter takes
- Density- Amount of mass within a given area/volume
 - Wet Vs. Dry Sponge

Cont...

- States of Matter
 - Boiling Point-Liquid to Gas
 - Melting Point- Solid to Liquid
 - Points give into pressure
- What are some of your physical properties?

Physical properties affect my life?

- Think of an example of a physical property that has affected you today.
 - Discuss with your table

Chemical Properties

- Properties that result in the altering of a substance at a molecular level
 - More difficult to observe
 - Often the result of experimentation or accidentally

How do I know if it's a chemical change?

- Change in reactivity
- Change in physical characteristics
 - Smells, colors, texture
- Can result in change to:
 - Flammability, toxicity, chemical stability
- Example: Rust

Summary

- Physical Properties: Readily observable characteristics of an object or thing
 - Substance remains the same physically
- Chemical Properties: Properties that result in the altering of a substance at a molecular level
 - Substance is altered physically