

# 1-2 Matter and Change

## Section 1-2 Matter and Change

**Matter** – Anything that has mass and takes up space

**Atom** – smallest unit of matter

**Mass** – Amount of matter

**Element** – A pure substance made up of 1 type of atom

**Compound** – Pure substance made up of 2 or more elements

**Extensive Property** – Depends on amount of matter (Size, mass, shape)

**Intensive Property** – Does not change as amount of matter changes  
(Color, density, conductivity)

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**Chemical Property** – relates to ability of a substance to change or transform into a new substance (ex. Iron metal reacts with oxygen in the air to form rust)

**Chemical change** – Material changes to a new substance

**Reactant** → **Products**

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**Physical Property** – can be measured or observed without changing the identity of the substance (ex. Water freezes at 0°C or 32°F)

**Physical Change** – Substance changes its state but still remains the same substance

**States of Matter**

**Solid** – Definite shape and volume

**Liquid** – Definite volume

**Gas** – No definite shape or volume

**Other states** – plasma and supercritical fluid

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**Mixtures** – blend of two or more substances where each retains its identity and properties

**homogeneous** – uniform mixture (solution)

ex. Salt water

**heterogeneous** – non-uniform mixture

ex. Concrete

**Pure substance** – compound or element that is same throughout

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