Chemistry I

> 1. **Matter**
> 2. **Pure Substance vs. Mixture**
> 3. **Properties of Matter**

Matter

_____ : anything that has _____ and takes up _____
- Classification of matter
  - _____ _____ : made up of _____ _____ of particle; _____ ____ _____ by physical means
  - **Mixture**: made up of _____ ____ _____ pure substances; _____ _____ _____ by physical means

Matter is either a _____ _____ or a _____

Mixture

Mixtures can be classified as
- _____**mixtures** (solutions): mixed _____; cannot see their components
  - Example: _____ (nitrogen, oxygen, hydrogen), _____ (iron and other elements), _____

- _____ **mixture**: have _____ components that you can see
  - Example: _____ _____, _____

Pure Substance

Pure substances can be classified as
- **Elements**: made up of _____ _____ ____ _____; cannot be broken down into simpler substances (example: _____)

- **Compounds**: made up of _____ ____ _____ _____; can be broken down into simpler substances (example: _____ _____)

Matter can be described by
- _____ **properties**: characteristics that can be _____ or _____ without changing is chemical identity (examples: _____, _____)
- _____ **properties**: describe the ability of matter to _____ _____ _____ _____ to form different substances (examples: _____, lack of reactivity)

	Physical Properties		Chemical Properties
	The colour of the substance or material		How easily a substance bursts into flame
	The ability for metals to be hammered or rolled into a thin sheet		The tendency for a substance to undergo a chemical reaction
	The feel, appearance, or consistency of a surface or a substance.		
	A measure of a fluid's resistance to flow (i.e., low viscosity flows easily)		
	The ability to conduct/transmit heat, electricity, or sound		
	Solid, liquid, or gas		
	The temperature where a substance changes from solid to liquid		
	The temperature where a substance changes from liquid to gas		
	A description of how hard or soft a material is		
	The ability for a substance to be dissolved into a liquid		
	The ability of a material to have its shape changed without losing strength or breaking		

Physical Changes
- A change to _____ _____ of a substance.
- They are usually _____.
- E.g.: crushing a can, shredding paper, melting an ice cube

Chemical Changes
- A process in which one or more substances are altered into one or more _____ _____ _____ _____.
- A chemical reaction involving the _____ of atoms.
- Also known as a _____ _____.
- E.g.: cooking an egg, metal rusting, a fire burning