

Science 9 Chemistry I

Name:
Date:
Block:

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), _____



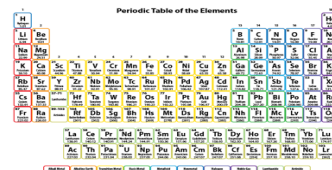
- _____ **mixture**: have _____ components that you can see
 - Example: _____



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: _____)



Properties of Matter

Matter can be described by

- **Physical properties:** characteristics that can be _____ or _____ without changing is chemical identity (examples: _____, _____)
- **Chemical 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
- Signs of a chemical change:
 - _____
 - Changes in _____
 - A _____ is formed
 - Release of _____ and _____
 - Change in _____

