Properties of Matter

1. Matter is anything that has mass and occupies space.

2. Three main forms of matter are

 A. Solids

 B. Liquids

 C. Gases

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| Solids | Liquids | Gases |
| * Definite shape
* Definite volume
* Particles close together, fixed
* Particles move very slowly
 | * Indefinite shape, definite volume
* Take the shape of container
* Particles are close together, but mobile
* Particles move slowly
 | * Indefinite shape
* Indefinite volume
* Take the shape and volume of container
* Particles are far apart
* Particles move
 |

3. Properties of matter are used to identify, describe, and classify matter.

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| Physical PropertiesIdentify, describe and classify matter without changing the substance into something else.  | Chemical PropertiesIdentify, describe and classify matter when substances are changed or interact with another substance to become something new. |
| Types of Physical Properties * + *Color*
	+ *Malleable*
	+ *Density*
	+ *Ductile*
	+ *Shape*
	+ *Solubility*
	+ *Boiling Point*
	+ *Weight*
	+ *Mass*
 | Types of Chemical Properties *Flammability: Able to burn –* *Corrosive: determinate, or erode -* *Rusting: Combining with oxygen to form rust**Explosive - reacts with water -* |
| Examples of Physical Changes & Reactions* chopping wood
* bending wire
* molding clay
* Change state of matter form solid to a liquid, or a liquid to a gas
 | Examples of Chemical Changes & Reactions* + Bubbles of Gas
	+ Heat given off
	+ Light given off
	+ Smell or odor
	+ A precipitate is formed from the solutions. (clumpy globs)
 |

4. Basic kinds of matter interact to form everything around us.

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| **Elements** | **Mixtures** | **Compounds** |
| Substances that cannot be broken down into other substances chemically or physically | Combination of two or more substances that can be separated into its different parts.  | Substances made of two or more elements combined chemicallyCompounds have properties different from those of the original elements |
| **Examples*** Sodium
* Oxygen
* Carbon
* Aluminum
 | **Examples*** Salad
* Paper clips and thumb tacks
* Sea Shells and Sand
* Sweet Tea
 | **Examples*** *water:*

 *H*ydrogen and Oxygen* *salt:*

 Sodium and Chlorine |