**Matter And Chemistry**

*Scientific Principles*

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| **Matter** |
| *Matter is anything with mass and volume. It is made of atoms* |
| Solids, Liquids, and Gases are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Gases** |
| *Gases are matter. Gases have mass and volume.* |
| Gas molecules \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and take \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Changes in Matter** |
| *In a chemical change, the atoms that make up the original substance(s) are regrouped and these new substances have different properties from the original substance(s).* |
| **Physical Change**- a change in a substance that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ what the substance is; usually \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Evidence of Physical Changes**   * + Change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   + Change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   + Change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (solid🡪 liquid🡪 gas)   **Chemical Change**- a change in which a substance \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into a different substance; usually \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Evidence of Chemical Changes**   * + **F**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (formation of a gas)   + **A**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (strong change in smell)   + **R**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (atoms rearrange)   + **T**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (really cold or really hot)   + new **S**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(products are different than reactants)   + and **Fireworks** (Production of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and/or sound; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ changes) |
| **Properties of Matter** |
| *Substances have characteristic properties that define them.* |
| **Physical Properties**- can be observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the identity of the matter  **Examples of physical properties**   * + Color, state of matter, luster, viscosity, melting point, solubility\*, etc.   **Chemical Properties**- can only be observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the identity of the matter  **Examples of chemical properties**   * + Flammability, corrosiveness, reactivity \* depends on the substance |