**Intro to Matter Notes**

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| *Matter* | *Not matter* |
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Properties of Matter:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Matter is composed of extremely small particles called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + These particles are too \_\_\_\_\_\_\_\_\_\_\_\_\_ to be seen with a microscope.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - a basic substance that can't be simplified examples: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - the smallest amount of an element
* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is formed when two or more atoms join together chemically.
* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a molecule that contains at least two different elements.
  + All compounds are molecules but not all molecules are compounds. ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + When elements are combined to make a compound, the new substance has properties different from those of the original elements.
* All atoms of the same element have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (qualities or characteristics).
* Matter is made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* There are more than \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ elements that combine to make up all living and nonliving things.
* Elements are shown on a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Oxygen**

Protons: positive charge

Neutrons: neutral

Electrons: negative charge

Nucleus: where neutrons and protons are located

Most matter occurs in mixtures. A mixture is made from two or more substances (elements or compounds) that are in the same place but are NOT chemically combined.

*Checkpoint: Mixture, Element, or Compound?*

Iron \_\_\_\_\_\_\_\_ Chex Mix \_\_\_\_\_\_\_\_\_\_ Air \_\_\_\_\_\_\_\_\_ Salt \_\_\_\_\_\_\_ Water\_\_\_\_\_\_\_\_\_\_ Gold \_\_\_\_\_\_ Sugar \_\_\_\_\_\_\_\_

Mixtures differ from compounds in 2 ways:

1. The substances in a mixture keep their individual properties ( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
2. The parts of a mixture are not necessarily present in set ratios.

Homogeneous mixtures: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Examples: milk, yogurt, etc.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: homogenous mixtures; created when something is completely dissolved in water
* Examples: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Colloids are solutions. They can be described as a substance trapped inside another substance.
  + example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Heterogeneous mixtures: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Examples: fruit salad, vegetable soup, etc.

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| **Lab - Object** | **Heterogeneous or Homogenous (colloid or solution if applicable)** |
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