Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Types of Matter PPT Notes

ELEMENTS:

* **Element** – a \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that cannot be broken down
* 90 occur naturally; the rest are synthetic
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ through physical or chemical means
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + smallest whole part of an element
* represented by s\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_🡪 Hydrogen – H
* most are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, several are gases, **2 are liquids** (Bromine – \_\_\_\_\_\_and Mercury - \_\_\_\_)
* most are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PURE SUBSTANCE:

* **pure substance**
  + a type of matter with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_composition
* A pure substance can be either an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_or a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* **element**
  + all the atoms in a substance have the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_identity (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pure substance)

COMPOUNDS:

* composed of atoms joined \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; always in the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + smallest whole part of a compound
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + represents the atoms and ratios with symbols and subscripts Mg(OH)2 NaCl
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_are created by chemical means and separated by chemical means
* <http://studyjams.scholastic.com/studyjams/jams/science/matter/elements-and-compounds.htm>

MOLECULES & CRYSTALS

* Molecule – smallest particle of a compound that still has the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Example: water molecule
* Crystal – a rigid,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-like framework of many atoms bonded together.
  + Example: sodium chloride (salt)

MIXTURES:

* **Mixture** – a combination of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in any proportion.
* contain physical combinations of atoms or molecules of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ substances
* each part of a mixture \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ set of properties
* can be separated \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* compositions may vary

HETEROGENEOUS MIXTURE: “HETERO” = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* a mixture in which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ materials can be distinguished easily
* materials **\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** dissolve
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_on standing
* Examples:
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, salad dressing, chocolate chip ice cream, trail mix

HOMOGENEOUS MIXTURE: “HOMO” = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* contains two or more gaseous, liquid, or solid substances \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ throughout
* <https://www.brainpop.com/science/matterandchemistry/compoundsandmixtures/>
* **solution**
  + a homogeneous mixture of particles so \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_that they cannot be seen with a microscope and will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the bottom of their container
  + remain constantly and uniformly \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SOLUTION:

* **Solution** – a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mixture with tiny particles
* Example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Particles are too small to settle or be filtered out of the mixture

SUSPENSION:

* a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mixture with large particles containing a liquid in which visible particles settle
* Example:
  + Muddy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, salad dressing

COLLOID:

* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mixture with medium-sized particles.
* a type of mixture with particles that are larger than those in solutions but not heavy enough to settle out
* example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DETECTING COLLOIDS

* distinguish through its appearance
* you can tell for certain if a liquid is a colloid by passing a beam of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ through it
  + A light beam is invisible as it passes through a solution, but can be \_\_\_\_\_\_\_\_\_\_\_\_readily as it passes through a colloid. This occurs because the particles in the colloid are large enough to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_light, but those in the solution are not.
* called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_effect

SEPARATING MIXTURES:

* The parts of the mixtures \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ their identity and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Use physical properties to separate them.
* Example: density, size, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* <https://youtu.be/jWdu_RVy5_A>

