Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Homeroom:\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_ **2.6**

**Separating and Drawing Mixtures (SPI.9.4)**

|  |  |
| --- | --- |
| ***Key Point*** | ***Notes*** |
| **Separating Mixtures by Physical Means** | * Mixtures are PHYSICALLY *combined*, so they can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_ *separated*.
* Chemists separate mixtures by using differences in physical \_\_\_\_\_\_\_\_\_\_\_\_\_ of each part.

Separation by **density**:* Based off **differences in density**, you can **separate \_\_\_\_\_\_\_\_\_\_\_** from each other
* Example: Oil and water

Separation by **magnetism**:* Based on **differences is magnetism**, you can separate magnetic objects from \_\_\_\_\_\_\_\_\_\_\_\_\_ objects
* Ex: Rocks and Coins

Separation by **filtration**:* Filtration separates a \_\_\_\_\_\_\_\_ from a liquid by filtering out the liquid.
* Ex. sand and water mixture, spaghetti and water

Separation by **heating**:* Based on differences **in boiling points**, you can separate dissolved **solids from liquids**
* Ex: Boil salt water to allow the water to evaporate and you are left with salt
* The lab tool that is used to heat a substance is a \_\_\_\_ \_\_\_\_\_\_\_\_\_\_

Identify the technique you would use to separate the following mixtures:1. Remove rocks from an ocean water sample.
2. A solution of salt water.
3. A mixture of oil and water.
4. Isolate sugar from a sugar-water solution.
5. A mixture of paperclips and rice
 |
| **Drawing Elements** | * The particles shown here are all the same.
* Each particle is an atom and all the atoms are of the \_\_\_\_\_\_\_ kind.

 |
| **Drawing Compounds** | * Two or more \_\_\_\_\_\_\_\_\_\_\_\_ atoms are shown (because compounds are made of two or more different elements)
* The atoms are connected to show that there is a **chemical \_\_\_\_** between them

  |
| **Drawing Mixtures** | * Mixtures made up of \_\_\_\_\_ than one substance
* The substances are **physically combined** so the atoms are **\_\_\_** connected

 |
| **Drawing****Molecular Models** | 1. An element

2. A different element3. A mixture of these two elements4. A compound of these same two elements |
| **So What?!** | *Write a summary of what you learned today here and why it matters to you:* |

“**We Own This” (Guided Practice):**

*Write down notes from today’s Jury Duty.*