Lesson 4 Mixtures

A_____ is a physical combination of substances.
You can separate a mixture _____
_____

Chex mix is an example of a mixture.
You can pick out all of the pretzels.
Some other mixtures:

_____
_____
_____

Mixtures can be heterogeneous meaning _____
_____.
Mixtures that have particles that _____
are called a **suspension**.

Examples of suspensions: Muddy Water

Orange Juice

Italian Salad Dressing

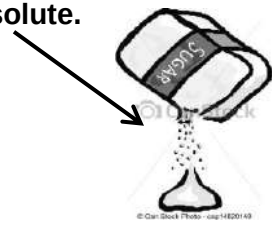
Mixtures that have _____
are called **colloids**.

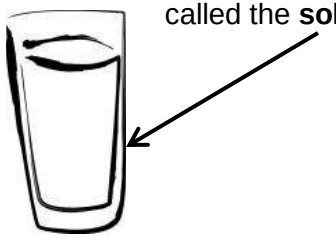
Examples of colloids: Smoke, mayonnaise, foam, milk

A **solution** is a mixture with parts that _____
_____(Sugar water)
This is a _____ mixture.

The smaller amount that is _____ _____ is called a **solute.**

The larger mount that _____ _____ in a solution is called the **solvent**





In sugar water, the sugar is the _____and the water is the _____.

Examples of solutions: Window cleaner, bleach, vinegar, tea, coffee, soda, salt water, sugar, water, lemonade, air, tap water.

Only so much of a solute can be dissolved into a solvent. Solubility is the _____ that can be dissolved in the solvent.

For many substances, like salt and sugar, _____ _____.

Which is the homogenous mixture.?
A or B?

Which is the heterogeneous mixture.?
A or B?

A. 

B 

Which is the solute? _____
_____

Which is the solvent?
_____

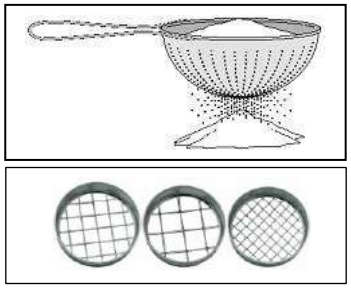
What is the product called?
_____

Methods to Separating Mixtures

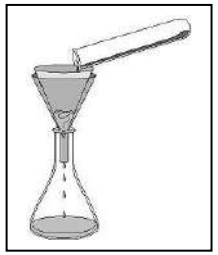
The parts of mixtures can be separated using **physical methods**, which will not change their properties or identities.

1) Magnetism

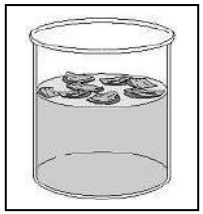
2) Sifting



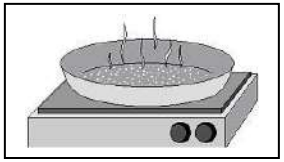
3) Filtration



4) Flotation

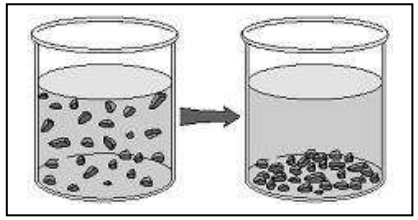


5) Evaporation

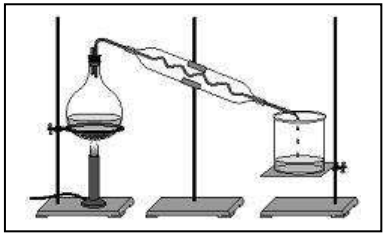


6) Pick out with tongs

7) Settling



8) Distillation



If we had a mixture of iron fillings, rocks, salt, sand, and wood chips, what would be the best way to separate them?

Read how each method can be used. Write each method you would use to separate the mixture above. Why would you use each method you have chosen.

Magnetism: A magnet separates iron from nonmagnetic materials.	*Sifting*: A sieve separates materials of different sizes.
Filtration: We can add water to dissolve the salt. Sand will not dissolve. A filter can separate the sand from the saltwater.	*Distillation:* Separates the parts of a mixture by vaporization and condensation.
Evaporation: Water evaporates from salt water, leaving the salt behind.	*Floatation*: Wood chips can float to the top of the water while rocks settle to the bottom.
Settling: Density causes parts of a mixture to settle to the bottom.	*Tongs:* Used to pick out larger pieces or items in mixtures.

_____

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