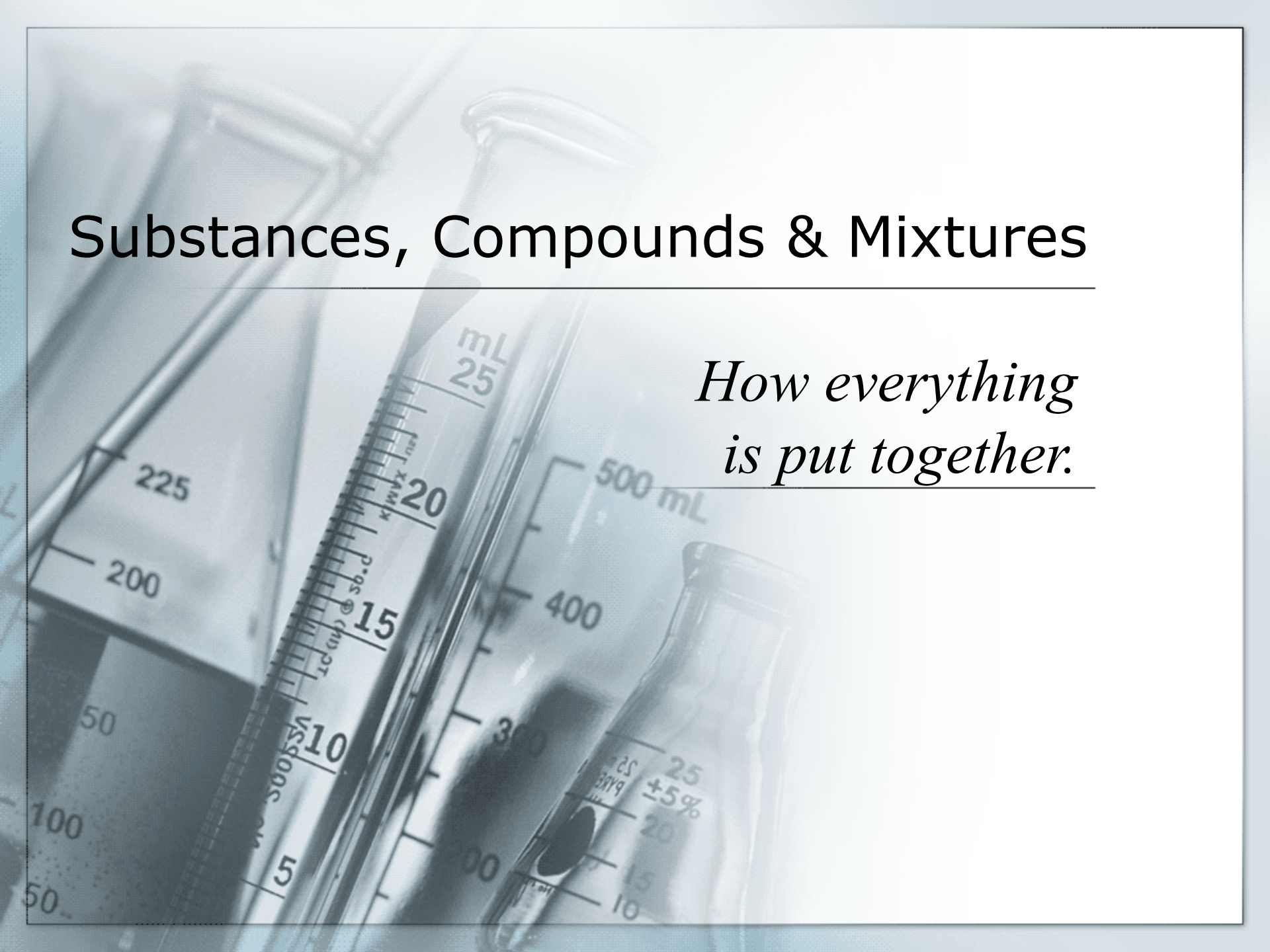
Substances, Compounds & Mixtures

How everything is put together.

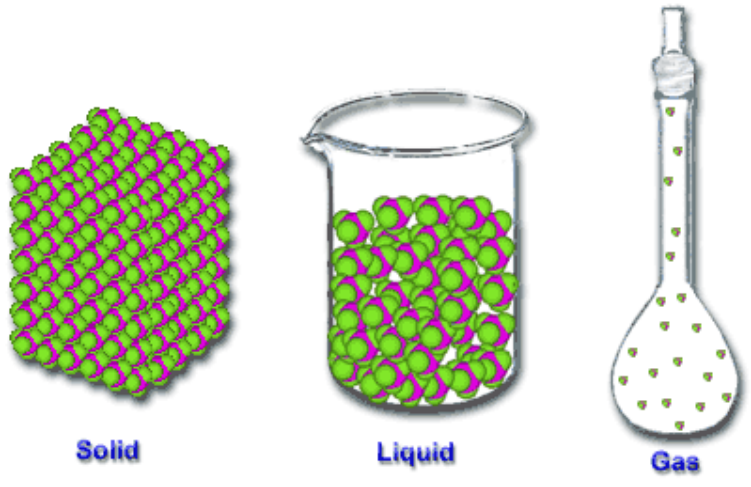


Substances

- Matter that has the same composition and properties throughout is called a **substance**.

⑩ When different elements combine, other substances are formed.

Substances

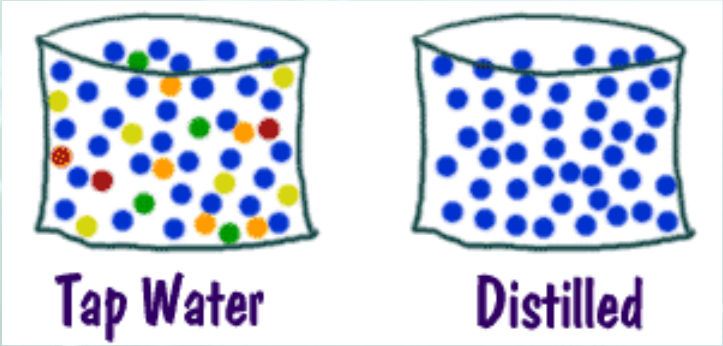


Picture from
http://www.ilpi.com/msds/ref/gifs/statesofmatter.gif

- Contains only one particle
- Can exist in 3 states of matter
- Can be elements or compounds

Mixtures

- A mixture is a combination of two or more substances where there is **no** chemical combination or reaction.



A mixture is a combination of two or more substances where there is **no** chemical combination or reaction.

Mixtures combine physically in no specific proportions. They just mix.

Solids, liquids and gases can be combined to create a mixture.

Mixture Types

- **MIXTURES MAY BE HOMOGENEOUS OR HETEROGENEOUS**

Homogeneous Mixtures

- **Homogeneous Mixtures:**
- The prefix: "homo"- indicates the same
- Have the same uniform appearance and composition throughout

Solutions

- **SOLUTIONS**

are homogeneous mixtures

What is a solution?

- A solution is a mixture of two or more substances.
- At least two substances must be mixed in order to have a solution

A solution has two parts

- The substance in the smallest amount and the one that **DISSOLVES** is called the **SOLUTE**

The substance in the larger amount is called the **SOLVENT** - it does the dissolving

IN most common instances water is the solvent

Examples of solutions

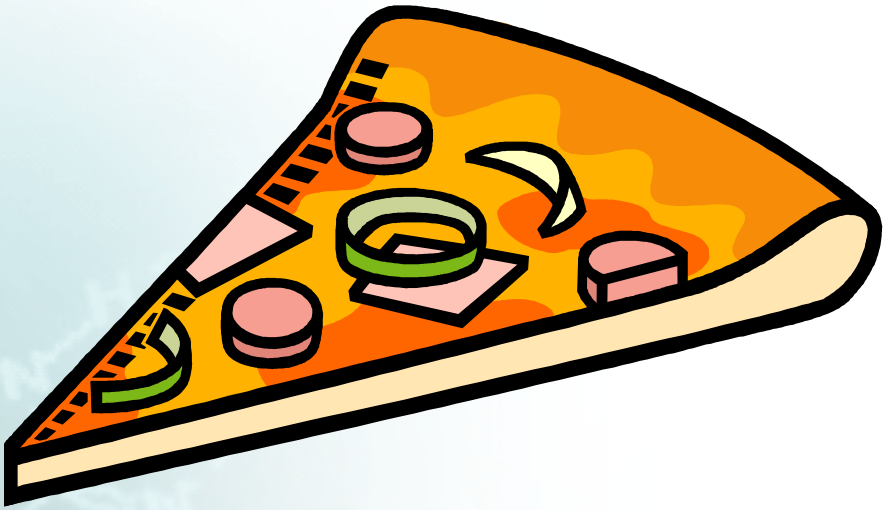
- Salt water
- Clean Air
- Vinegar

Heterogeneous Mixtures:

- The prefix: "hetero"- indicates difference
- A heterogeneous mixture consists of visibly different substances or phases
- Two or more parts can be seen

Examples:

- Pizza
- Sandwich
- Chex Mix



Suspensions

- A **SUSPENSION** is a heterogeneous mixture of large particles
- These particles are visible and will settle out on standing
- Examples of suspensions are: fine sand or silt in water or Italian salad dressing