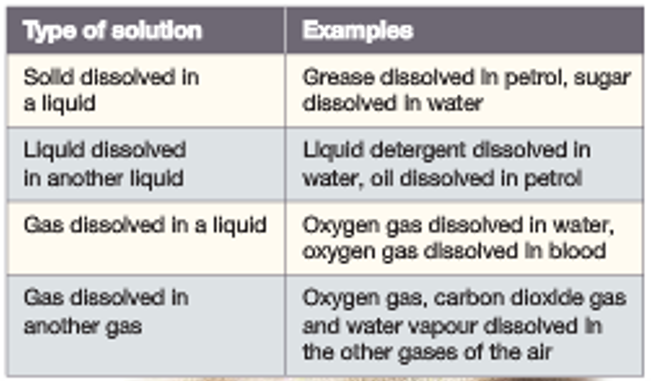
A mixture is a substance made up of two or more pure substances or pure chemicals that have been stirred together.

**Solutions Table 1: Types of solution**

* Soluble - A substance that dissolves in a liquid
* Insoluble - A substance that does not dissolve in a liquid

A solution is a mixture composed of one or more **soluble** substances  
dissolved in a liquide.g. Salt dissolved in water (Refer to Table 1))

Components of a solution:

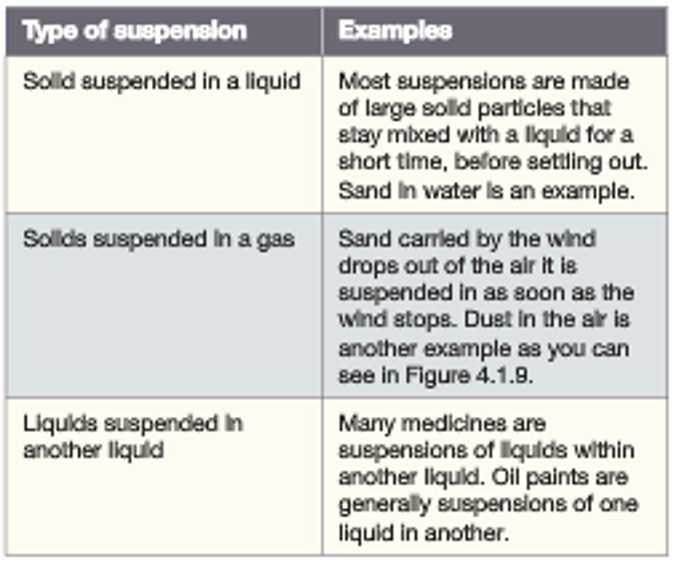
* Solute - The substance that dissolves e.g. salt
* Solvent - The substance that dissolves the solute e.g. water

**Problem:**If you dissolve 5 grams of sugar in   
10 mL of water, what is the concentration?

**Solution:**Concentration = mass = 5 = 0.5 g/L  
 volume 10

**Concentration** is a measure of the amount of solute dissolved   
in a known amount of solvent. It is measured in grams per litre (g/L)   
or grams per millilitre (g/mL)

* Concentrated - A large amount of solute in a small amount of solvent
* Dilute - A small amount of solute in a large amount of solvent
* Saturated- A solution that cannot dissolve any more solvent

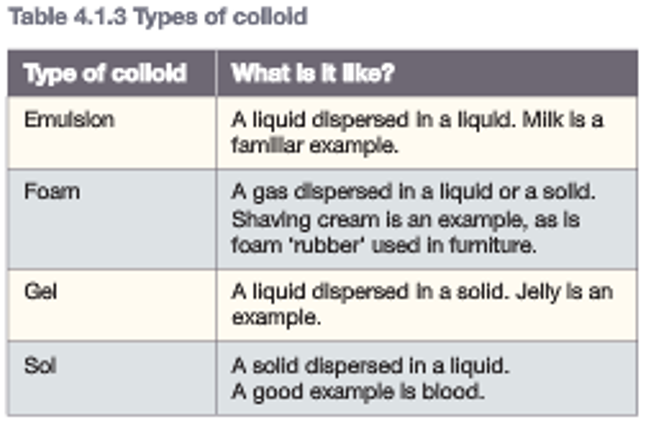
**Suspensions Table 2: Types of suspension**

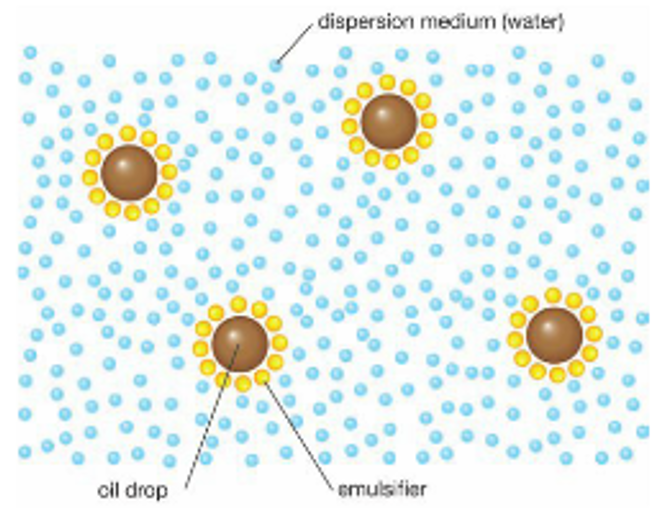
A suspension is a mixture composed of one or more **insoluble**   
substances and a liquid e.g. Sand and water (Refer Table 2)

**Colloids**

A colloid is a mixture made up of particles smaller than those found  
in a suspension but bigger than those of a solute in a solution.

Types of colloid are summarised in Table 3, below.

**Table 3: Types of colloid**

 **Emulsion Diagram:** The emulsifier spreads the oil droplets through the dispersion medium.

An **emulsifier** is a chemical that breaks up fats and oils into  
small droplets and disperses it through the liquid.   
(The diagram shows the emulsifiers surrounding oil droplets)

E.g. detergent, emulsifiers in milk