

## What are mixtures and solutions?

### Mixtures

In a mixture, different materials are put together. The materials do not bond as they do in compounds. The different materials keep their own properties. For example, salt and pepper can be mixed together. The salt and pepper do not change their color or flavor.

After being combined, the materials in a mixture can be separated. This is because they have different properties. If sand and iron filings are mixed, a magnet can pull out the iron. Iron has the property of being magnetic, but sand does not.



### Solutions

If you mix dirt and water together, the dirt will slowly settle to the bottom. But if you add sugar to water, the sugar will dissolve completely. Sugar and water make a solution.

A solution is a type of mixture. In a solution, the materials spread out evenly. Particles do not settle at the bottom. The substance that dissolves is called the solute. The substance in which the solute dissolves is the solvent. In a solution of sugar and water, the solute is sugar and the solvent is water. Water is called a universal solvent because it can be a solvent in many different solutions.