

## States of Matter, Separating Techniques & Solutions

In this test you must type the correct word into each of the blank spaces or draw lines to connect the correct boxes together.

There are three common states of matter, known as; , and .

The particles are closest together in a **solid** and furthest apart in a **gas**.

If the particles are all the same then we say that the substance is an element.

If different particles get added to a pure liquid then there are four common techniques that can be used to try to separate the added particles from the original liquid.

Draw lines between the boxes below to link each process with its correct description.

<b>chromatography</b>	Using heat to separate two liquids by removing the particles of one liquid and leaving the particles of the other liquid in the original container.
<b>distillation</b>	Using heat to remove all of the liquid so that only the solid particles that had previously disappeared in the liquid remain in the container.
<b>evaporation</b>	Using a special sheet of paper that lets liquid particles go through but keeps back any solid particles that had not disappeared into the liquid.
<b>filtration</b>	Using a special sheet of paper that has dots of two or more different liquids on it and has one of its ends dipped into a different liquid.

Note: Separation techniques like the four listed above only work if the particles that have been mixed together have not created any chemical reaction with the liquid.

Some solids that are added to a liquid will disappear and leave a clear solution although there may be a

. Solids that can disappear into a liquid are in that liquid. The

solid that disappears is said to have been dissolved in the liquid. The liquid part of the solution

and the solid part that disappeared is the . If more of the

solid is added then some of it may stay in the bottom of the container. This happens because the liquid

has become **one** with the solid.