

Properties and Changes of Materials

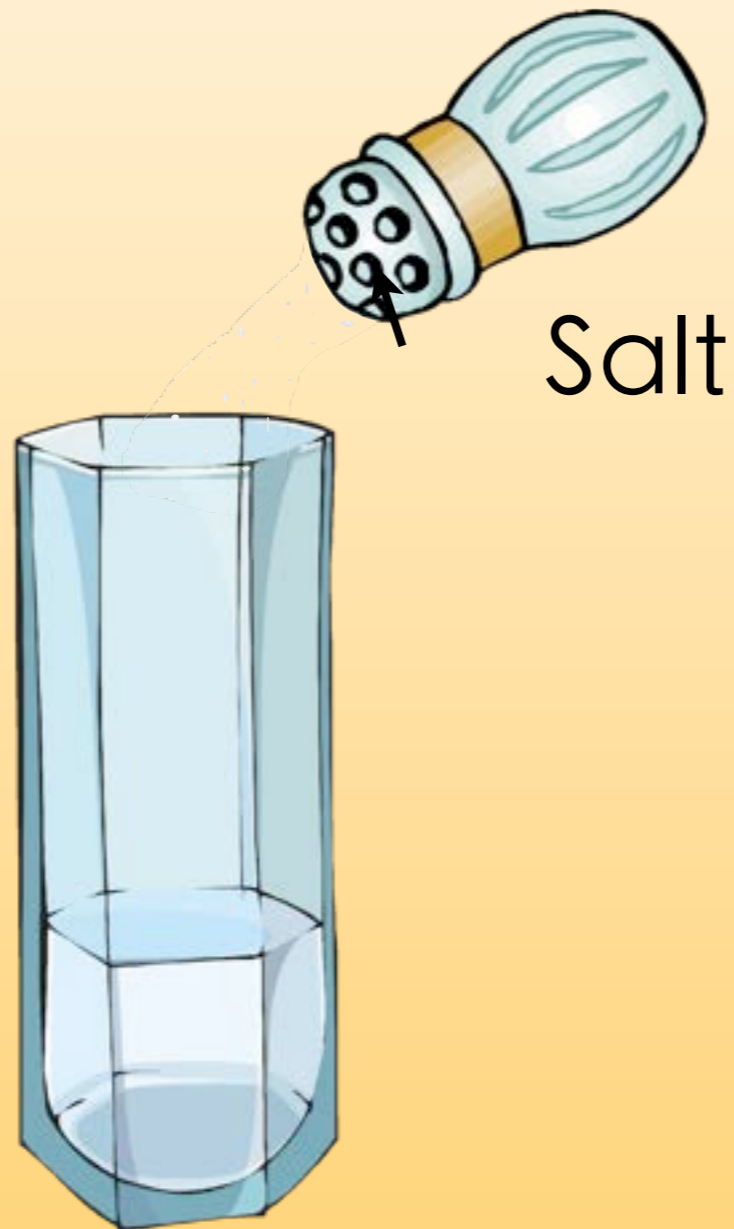
Learning objective:

To know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.



NEXT

What happens
to salt if you add it to
water?

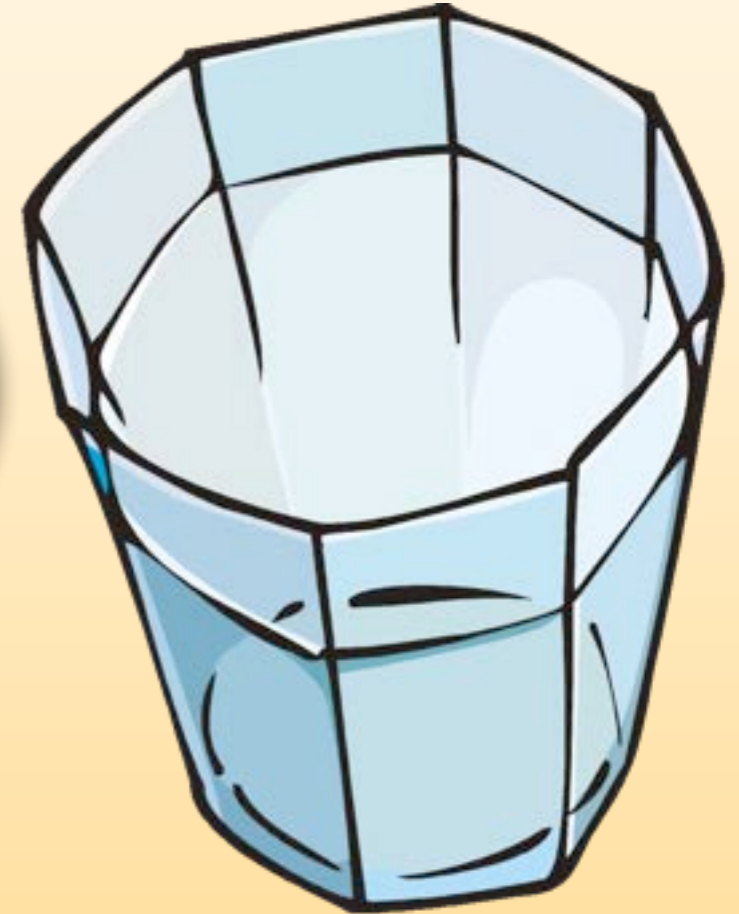


BACK

NEXT

Salt **dissolves** in water. This means that it breaks up into tiny particles and you can no longer see it in the water. Salt creates a **solution** when mixed with water.

Solutions are sometimes coloured, however, they are always transparent. You can see straight through a solution!



Can you think of some other solutions?

BACK

NEXT

When materials are mixed with water several different things can happen. Sometimes the material will dissolve, sometimes it will **react** to make a new material and sometimes it will just float or sink.

Have a look at these materials. Which would dissolve, which would react and which would float or sink when mixed with water?



sand



sugar



plaster of Paris

← BACK

NEXT →



The sand will sink in the water.



The sugar will dissolve in the water. This means that it breaks into tiny particles which you can no longer see but you know the sugar is still there because the water will taste sweet.



The plaster of Paris will react with the water and the mixture will turn hard. It will create a new material.

← BACK

NEXT →

Can you think of any other materials that would dissolve, react, float or sink in water?

Dissolve

React

Float/Sink



BACK

NEXT

Today we will be investigating what happens to different materials when they are mixed with water. How can we do this so that it is a fair test?

Discuss your ideas.



BACK

NEXT

Plenary



How many of the changes that occurred to the materials we mixed do you think we would be able to change back?

Could we get the salt back from the salt water solution?

Discuss your ideas.

← BACK

NEXT →

Soluble materials can be separated from the water through evaporation. The water evaporates, leaving the salt behind. Dissolving is a **reversible** change because you can separate both materials again to their original state.



All the water has evaporated from this ancient salt water lake in Utah, North America. Vast salt flats have been left behind.

BACK

NEXT