

## Unit 6D: Reversible and irreversible changes



# Learnanywhere

# Reversible and irreversible changes



Some useful words

<b>Reversible change</b>	a change that can go forwards or backwards, for example melting and freezing
<b>Irreversible</b>	a change that cannot go back, for example burning
<b>Soluble</b>	a material that dissolves
<b>Insoluble</b>	a material that doesn't dissolve

Mixing Materials

You are to mix the following materials with water and record your observations. The materials are:

Sand

Salt

Plaster of Paris

Flour

Powder paint

Baking powder

## Mixing Materials - support slide

Material	Soluble	Insoluble	Observations
Sand			
Flour			
Salt			
Powder paint			
Plaster of Paris			
Baking powder			

# Separating Insoluble Materials



Sand and water



Salt and water

How can we separate each?



Describe how you would separate the sand from the water. Then describe how you would separate the salt from the water

Now you can carry out the practical

### Separating Rock Salt - Extension

Rock salt is a mixture of small rocks and salt, it is often used on roads when it is icy to provide grip and to melt the ice.

Using your knowledge of dissolving, filtering and evaporating separate a sample of rock salt so you are left with a pile of rock and a pile of salt.

You will find the following apparatus useful: Funnel, filter paper, beakers, Bunsen burner or water heater.

**Salt dissolves in water**

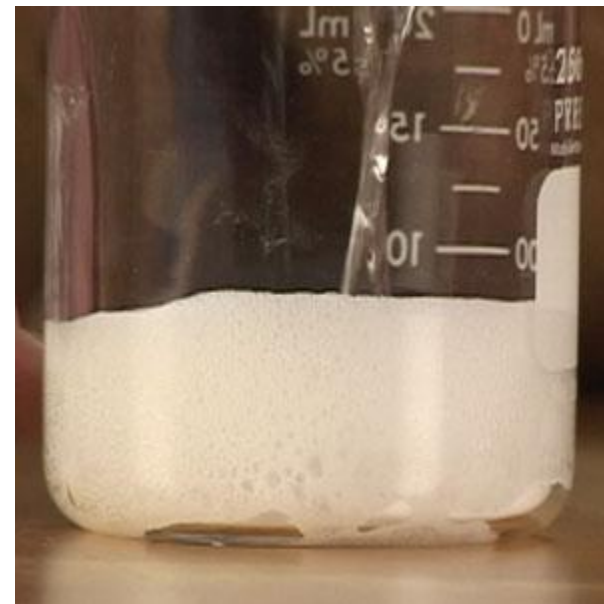
**Dissolved substances will pass through filter paper**

**Dissolved solids are left behind when water evaporate**

Irreversible changes



Cement



Vinegar & Bicarbonate of Soda

Describe what happens in each of the examples.  
Do you think these can be reversed?

These are difficult to reverse as new products have been made.



Heating Materials



Heating some materials causes them to change

Do you think they can be easily reversed?

Cooling Materials



Cooling some materials causes them to change  
Will the egg and the bread change when they cool?  
What happens to the water as it is cooled?  
What happens to the steam as it is cooled?  
Can the changes be easily reversed?



## Burning Materials



Do you think that the ash is the only material produced by burning the paper?

Gas is also produced.

What is the difference between heating an object and burning an object?

Do you think that when an object is burned the process can be reversed?

Can you think of other everyday examples of objects burning?

## Burning



**A material is burned the change is irreversible**

New materials are produced when materials are burned.

These are often hazardous.

Produce a poster warning people of the dangers of the fumes given off by burning materials in the home.

