

### Investigate

Objects are made from different materials. Choose an object from your home. Draw a picture of it and label the different materials it is made from. Identify the properties these materials have, and why they were chosen to make the object. Have a look at this example, then try your own.



Materials: **Metal** - to conduct heat from the hob and allow food in the pan to heat up and cook  
**Plastic** - to insulate against the heat, so that you can hold the pan without getting burnt.

### Research

Scientists use chemical reactions to create useful new materials. Can you create a fact file about a scientist and the new material they made? You should research the scientist and their life, such as when and where they lived, and what they did. You should also find out about the new material, its properties and how it is useful. Here are some scientists you could research.



### Research

Research the following websites to create a poster/fact file about materials and their properties.




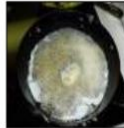


[www.bbc.co.uk/bitesize/topics/zcvx4wx](http://www.bbc.co.uk/bitesize/topics/zcvx4wx)

Information to include:

- What is dissolving?
- What is separation?
- What are irreversible changes?

### Practical Investigation: Melting and Freezing

Melting and freezing can cause materials to change. Some of these changes are reversible and some of them are not. Look at the materials below, and if you have them in your house, have a go at melting and freezing them. Record whether the changes are reversible or irreversible. You can label and write your observations as a poster. (YOU NEED AN ADULT TO HELP)

Material	Change	Changes caused by:
1) Orange juice 		What has changed _____ This change has been caused by _____ Is this change reversible? _____
2) Butter 		What has changed _____ This change has been caused by _____ Is this change reversible? _____
3) Chocolate 		What has changed _____ This change has been caused by _____ Is this change reversible? _____

Challenge: Choose 5 more materials to investigate.

## Properties and Changes of Material

Year 5 Science Takeaway Homework Menu



### Scientific Vocabulary:

- conduct, conductor, insulate, insulator, heat, gas, solid, liquid, evaporation, condensation, reversible, irreversible, change, material, property, magnetic, hard, transparent, flexible, permeable

### Takeaway homework guidelines

- It is up to you to choose what task to complete.
- Choose a task that is appropriate - but remember, the more you push yourself the more of a scientist you will become!