## Materials all around

You will need: a pencil; a clipboard. If you look around, you will see many different materials being used.

▲ Do three surveys. Look for things made of plastic, rock, metal, wood, fabric, paper, rubber and glass. Write their names in the table.



	Survey I	Survey 2	Survey 3
Materials	Things I can touch without leaving my seat	Things I can find around the classroom	Things I can see when standing in the playground
plastic			
rock			
metal		42	
wood			
fabric			
paper		4	
rubber			
glass			

- Which materials seem to be the most common?
- ▲ Which category of material was the most difficult to find?
- ▲ Make a collection of each type of material. Display and label your collections.



### Marvellous metals

You will need: wax crayons; pencils; paper.

A Collect as many of these metal objects as you can. Decide why metal was used to make each object. Could it have been made of any other material?

nail paperclip drinks can coin key aluminium dish silver necklace bell piece of wire I kg weight scissors spoon



Metal object	Why metal was used	What other material could be used?		
nail	It's strong and can be made sharp	none		
		5		

Make a list of all the things you have found out about metals. Metals can be moulded into detailed shapes and patterns.

▲ Use pencils and crayons to make rubbings of metal objects such as coins or keys. Use these to make a decorative collage.





#### Wonderful wood

You will need: a hand lens; pencils; wax crayons; paper.

▲ Make a collection of pieces of wood and objects made of wood. Use a hand lens to examine each one. Write down everything you notice about the appearance, pattern and texture of wood.

▲ You will find wood is used for all kinds of purposes. Can you find examples where wood is important in these situations?

in building houses in art and craft activities for kitchen equipment for sports equipment in your bedroom for a method of transport



Record your ideas in the table.

Situation	Where wood is used	Why wood is used
Building houses		
Kitchen equipment		
Art and craft activities		
Transport		
Sports equipment		
Bedroom		

▲ Wood and weather: look around and find out what happens to wood outside. Examine dead branches and old doors and window frames. Write down your observations. Do some sketches.

You will have found different patterns and textures in wood.

▲ Use pencils and crayons to make rubbings and create a decorative collage.



Name			
Maille			

## Useful plastic

You will need: a collection of plastic items; some of the same items in different materials; a pencil; paper.

There are about 30 different types of plastic in general use.

A Collect ten plastic items that you use every day.

Examine them carefully and tick their properties in this table.



Name of item	thin	firm	transparent	can be folded	light in weight	waterproof	breakable	long-lasting

Now find two items, one made of plastic and the other made of a different material, which both have the same use, like the examples below.

plastic and wooden clothes pegs plastic and metal spoons plastic and glass jugs ▲ Compare the two items, writing down the good points and bad points about each. Getting rid of plastic can be difficult. Rubbish is often buried.

▲ Bury some different types of plastic in the ground together with some pieces of paper and wood. Examine them every week and record what happens to them.

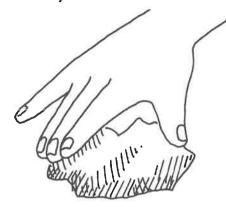




# **Collecting rocks**

You will need: labels and a hand-lens.

- ▲ Make a collection of rocks.
- I Look for pebbles and pieces of rock in the garden, at the seaside, by the roadside and in the country.



- 2 Wash your rocks and pebbles carefully and then dry them.
- **3** Label each one with the place and date on which you found it.



- 4 Look at each pebble carefully using a hand-lens.
- What colour is it?
- Is it rough or smooth to the touch?
- Does it appear to be made of grains?
- Is it made of crystals?
- ▲ Write your observations in the chart below. Use books to try to find the names of your rocks.



rock	colour	rough	smooth	grains	crystals

# **Comparing rocks**

You will need: a small collection of rocks; a hand-lens; a 2p coin and a nail.

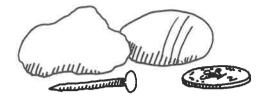
▲ Look carefully at each of your rocks.

▲ What does each one feel like?

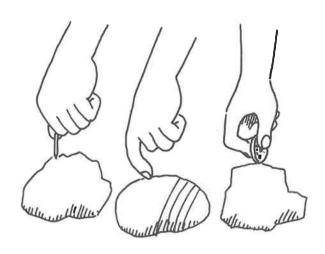
▲ What does each rock smell like?

▲ What does each rock look like when it is wet?

▲ How many words can you think of to describe each rock?



▲ Devise a test to find out which of your rocks is hardest and which is softest. You could use your fingernail, a 2p coin and a nail. Make a record of your results.



▲ Now arrange your rocks in order of hardness.

