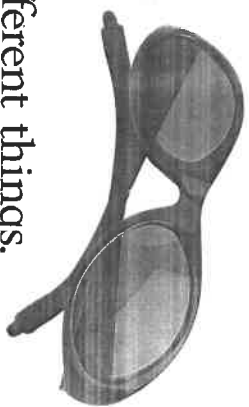


What is plastic?

Plastic is one of the most useful materials in the world. It is used to make

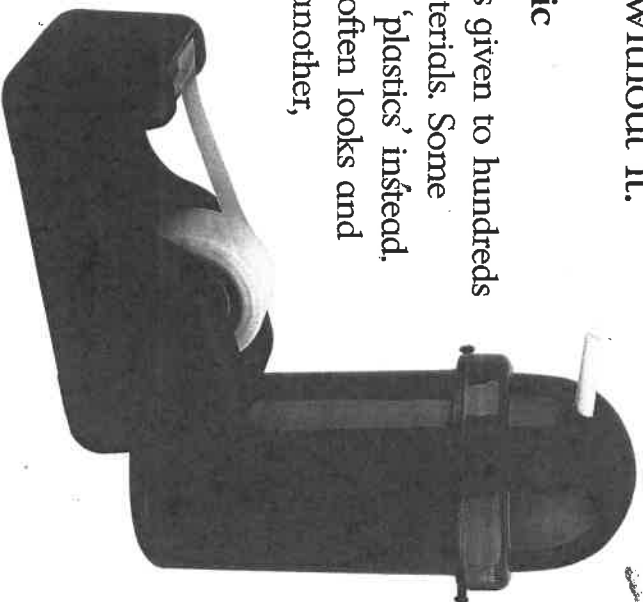


thousands of different things. Look around and you'll see plastic everywhere - in homes, cars, hospitals and schools. It is hard to imagine life without it.



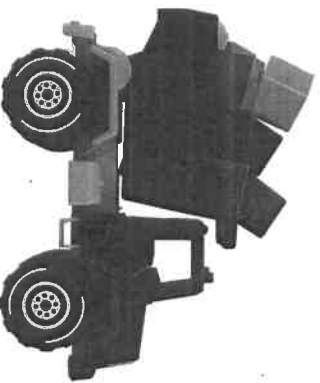
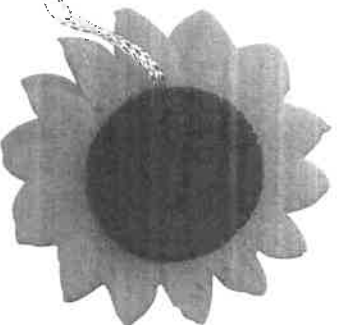
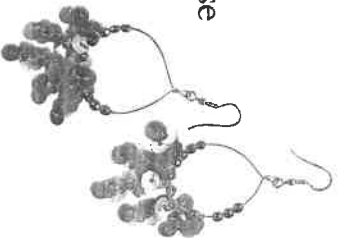
All sorts of plastic

The name 'plastic' is given to hundreds of very different materials. Some people use the word 'plastics' instead. One kind of plastic often looks and feels different from another, and may behave in different ways.



Made of plastic

All the things in these pictures are made of plastic. Can you name them all?



Material words
Which of these words describe plastic?

- cold
- thick
- shiny
- stretchy
- stiff
- solid
- heavy
- soft
- strong
- drill
- hard
- warm
- hard wearing
- spongy
- light
- crisp
- colourful
- rough
- thin
- smooth
- bendy
- springy
- slimy
- runny
- squashy

Fantastic fact

The word 'plastic' describes materials that can be bent or moulded into shape. Plasticine is one of these.



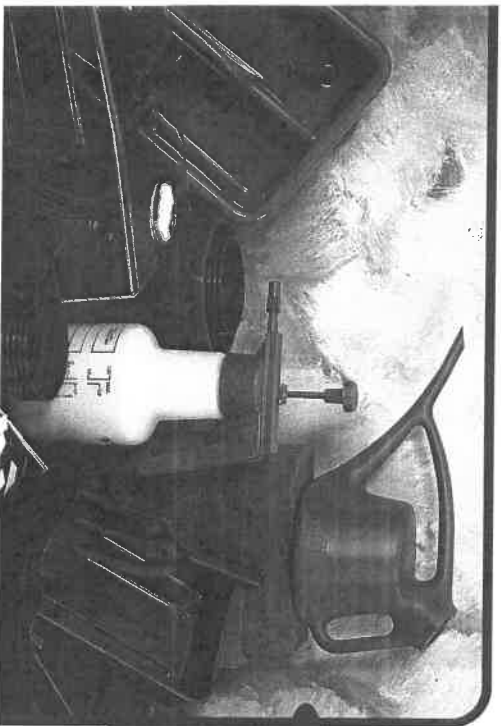
Plastic can be hard or soft

Plastics are not all the same. Some of them are hard and strong. Others are squashy and soft. We use these different kinds of plastic in very different ways.



Hard plastics

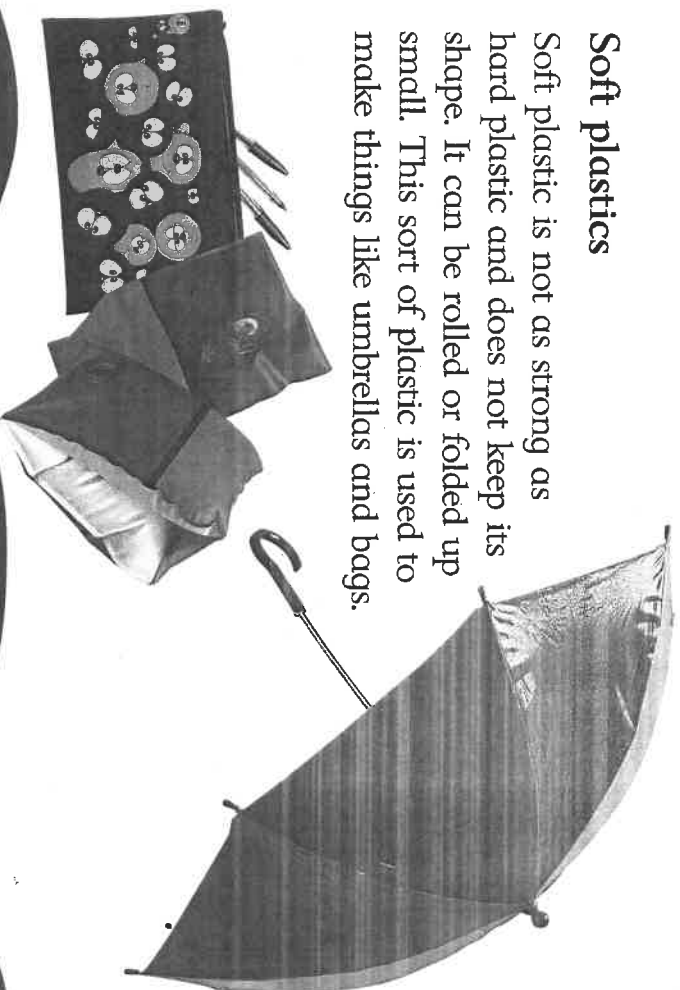
Hard plastic can be shaped to make things like tables and chairs, dustbins and flower pots. This sort of plastic is very sturdy and always keeps its shape.



Garden equipment is often made of plastic. This is because plastic is strong and easy to clean.

Soft plastics

Soft plastic is not as strong as hard plastic and does not keep its shape. It can be rolled or folded up small. This sort of plastic is used to make things like umbrellas and bags.



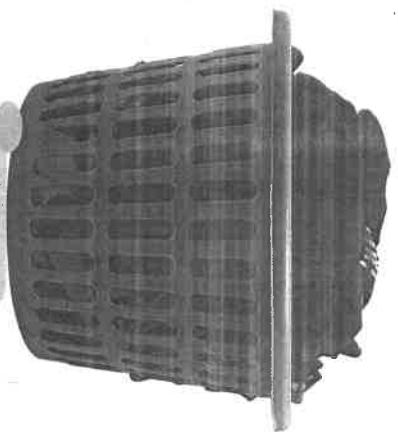
Try this

All the items in this picture are made of plastic. Some of them are hard. Others are soft. Can you put them in order from the hardest to the softest?



Plastic is light - but strong

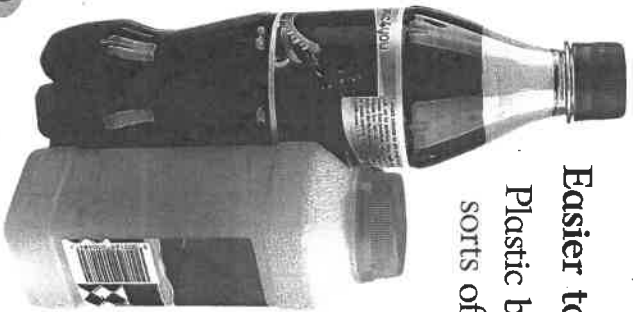
Plastic can be very strong. Many strong materials such as concrete or wood are heavy. But plastic isn't heavy; it is very light. This makes it especially useful.



A plastic basket is very light but it can hold a lot of washing.

Easier to carry

Plastic bottles and tubes are used to carry all sorts of goods - from milk and fruit juice, to paint and shampoo. Plastic bottles are lighter than glass. This makes them easier to carry and cheaper to transport.



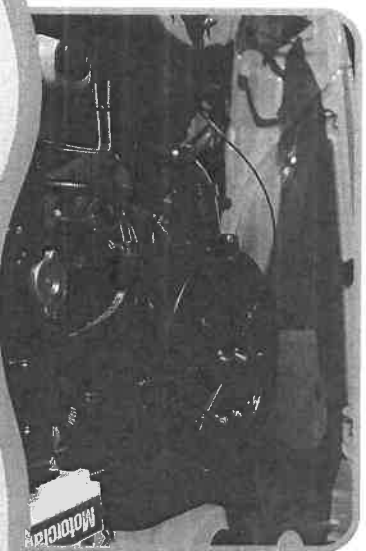
Plastic bottles are safer than glass. If you drop them, they will not break.

Lighter than before

Aeroplanes and cars were once made of heavy materials such as metal, leather and wood. Now many of the parts are made of plastic instead. As cars and planes are so much lighter, they need less **energy** to move. This means that they burn a lot less fuel.



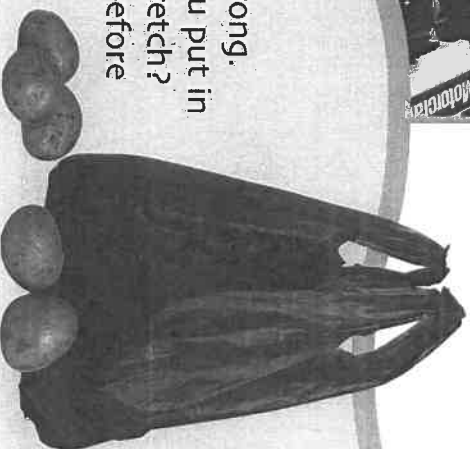
Inside a plane there are hundreds of different plastic parts.



Plastic parts are used all over a car - even under the bonnet!

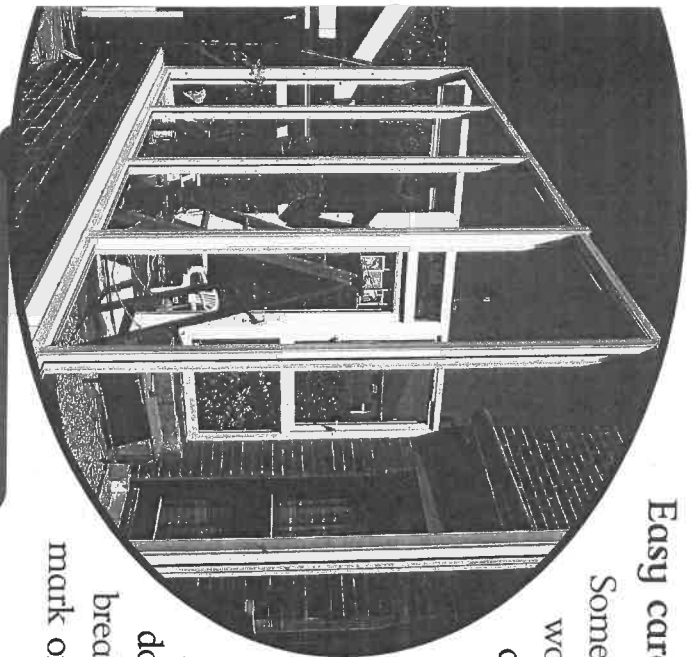
Try this

Plastic bags are light but strong. How many potatoes can you put in a bag before the handles stretch? How many can you put in before the handles break?



Plastic is clean and hard-wearing

Plastic is useful in the home. It is easy to care for, lasts a long time and comes in many different colours.



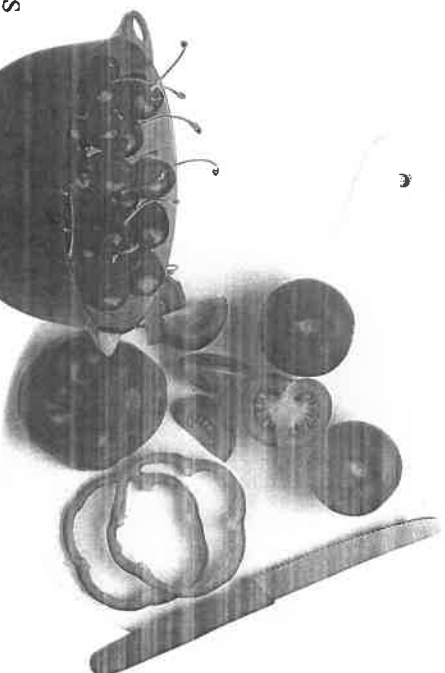
Easy care

Some materials such as wood or metal need a lot of care. They need polishing, painting, cleaning or oiling to keep them looking good. Plastic is much easier to look after. Plastic does not rust or break, and is hard to mark or scratch.

Plastic window frames last longer than wood and do not need to be painted.

Lots of wear

Think of all the household goods that are made of plastic - vacuum cleaners, kettles, worktops, cutting boards, food containers, floorings and kitchen tools. Some of these things are washed every day. They all take very hard wear.



False teeth are made of plastic. They are hard-wearing and easy to clean!



Plastic is waterproof

Plastic is a *waterproof* material. It does not let water or other liquids through. Plastic helps to keep things dry and is very useful out of doors.

Keeps out the weather

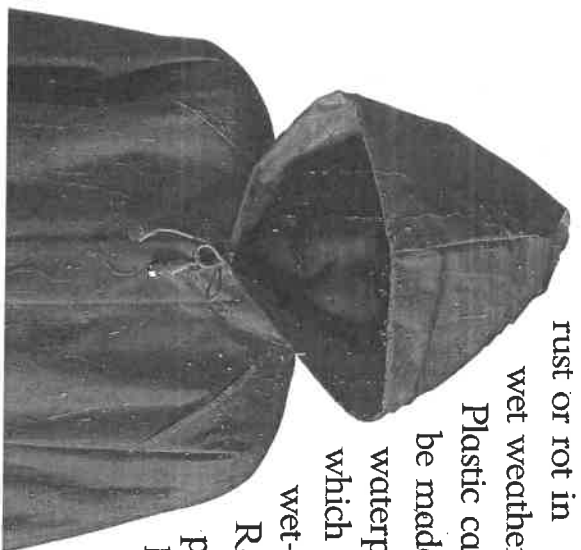
Plastic is useful for outdoor equipment such as climbing frames, wheelbarrows and pipes. It lasts for many years because it does not

rust or rot in wet weather.

Plastic can also be made into

waterproof cloth, which is great for wet-weather gear.

Rain runs off a plastic coat, which helps to keep you dry.



Keeps out the wet

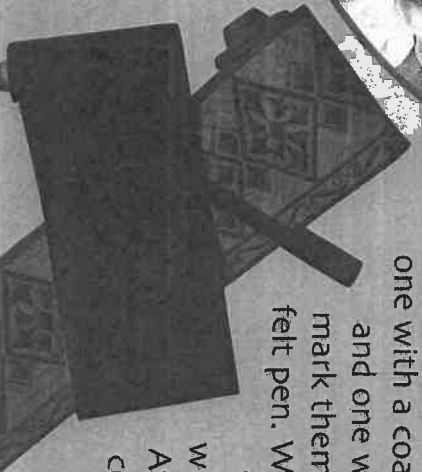
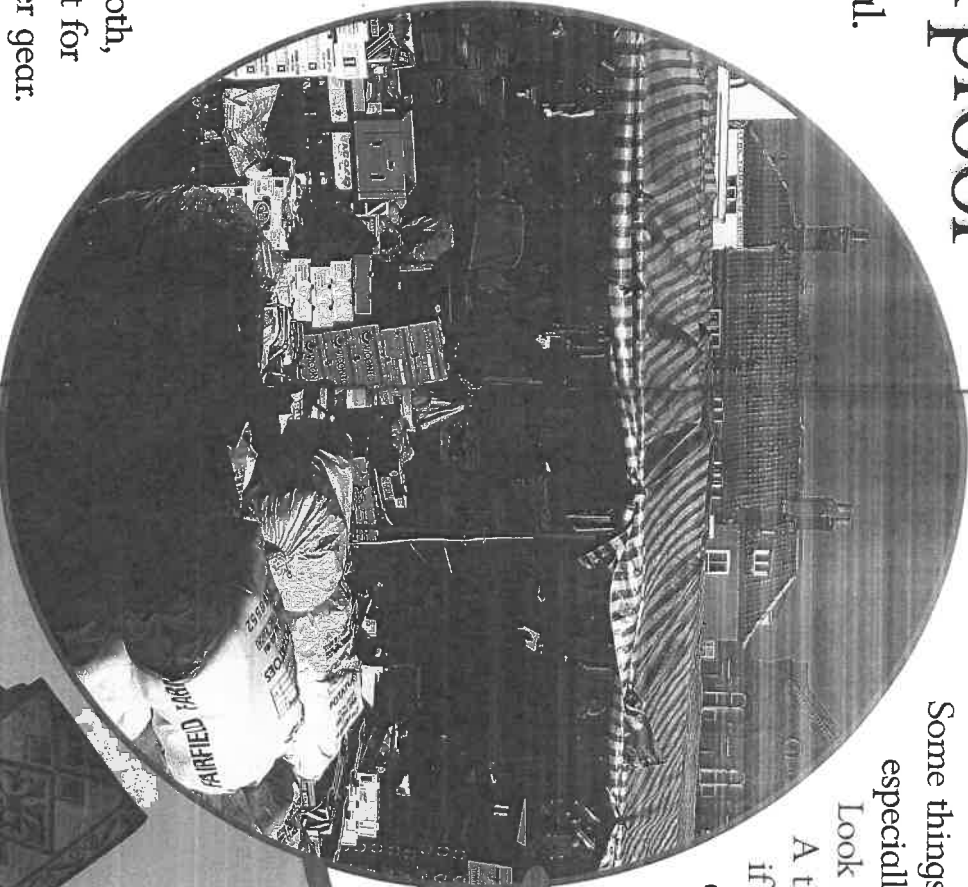
Some things spoil if they get wet, especially if they are made of paper. Look at the cover of this book.

A thin layer of plastic protects it if it gets wet or needs wiping clean. At markets, plastic sheets provide a 'roof' for stalls to protect goods and shoppers from the rain.

Goods spoil quickly in the rain. A plastic 'roof' helps to protect them.

Try this

Find two pieces of wallpaper – one with a coating of plastic and one without. Each day, mark them with a washable felt pen. When the ink is dry, wipe them clean with a damp cloth. After a week, compare the two. What do you find?



Plastic makes rubbish

Plastic goods are hard to throw away.

They do not rot and cannot be burned safely.

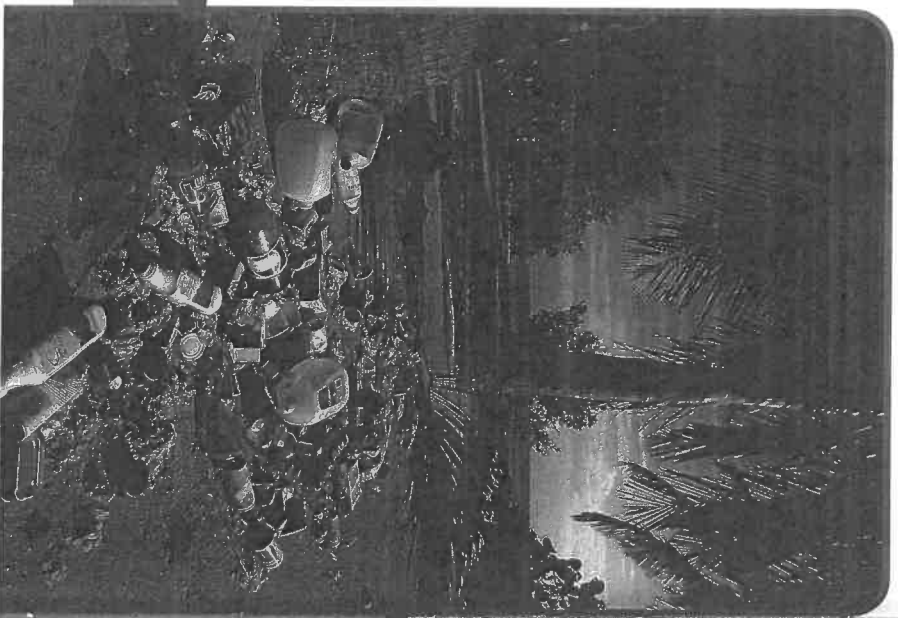
Getting rid of plastic is a serious problem.

It is one we have to try and solve.

Getting rid of plastic

It is hard to get rid of old plastic bottles and bags. Burying plastic waste does not work; it simply stays in the ground. Burning plastic is dangerous. When it burns, it produces *gases* that poison and *pollute* the air. Plastic rubbish is building up and causing problems for the *environment*.

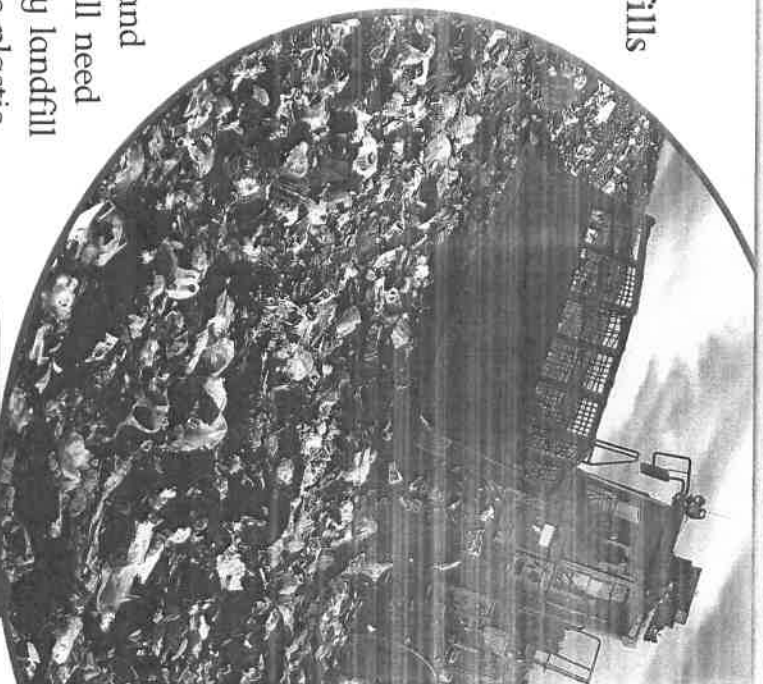
Plastic rubbish looks ugly on the ground and will not rot away.



Too many landfills

In most towns, rubbish is buried in *landfill sites*.

These ugly, smelly places produce harmful gases and attract rats and other pests. Plastic rubbish takes up a lot of space. As we throw away more and more plastic, we will need more and more ugly landfill sites. We need to use plastic carefully and cut down on plastic waste.



Landfill sites are one way of getting rid of rubbish, but they harm the environment.

Try this

Find a plastic cup and a paper cup and bury them under the ground. Remember to mark the spot. A few weeks later, dig up the cups and compare them. What do you notice?

