

# 18

## What happens next?

### Reading instructions

1 Here's a device for the car. Is it for:

- making coffee on long trips?
- removing air pollution inside the car?
- doing something else? (what?)



What is it? Read the instructions and find out.

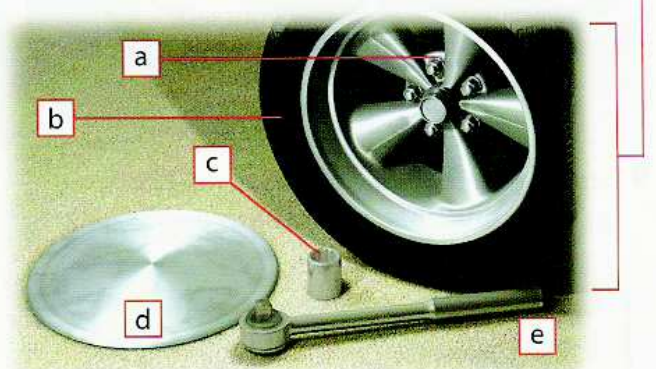
#### How to remove a flat tyre with the automatic jack

- 1 Start in the normal way by removing the hub cap.
- 2 Use a socket wrench to loosen the nuts. Turn them anti-clockwise\*.
- 3 Locate the car's cigarette lighter socket. Plug in the jack's cable and position the jack under the car.
- 4 This is the fun part. The jack's remote control is on the key ring. Press the 'up' button to raise the car.
- 5 Take off the nuts and remove the old wheel.

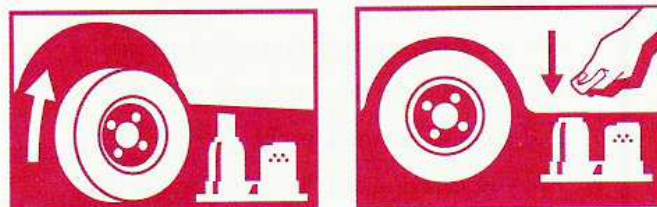
anti-clockwise **BrE** – counter-clockwise **AmE**

2 Match the words with the items in the picture.

hub cap	wrench	socket
nuts	wheel	tyre

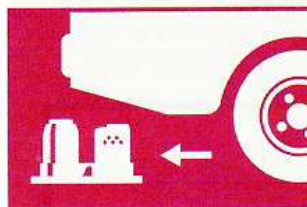


3 To put a new wheel on the car, you have to reverse the instructions. What do you do?



1

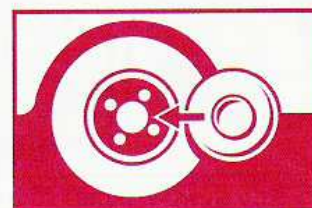
2



3



4



5

- 4 Complete the instructions with words from the list.

lower      put on      tighten  
down      disconnect      clockwise  
replace

### Instructions

- 1 ...Put on... the new wheel and ..... the nuts.
- 2 Press the '.....' button on the remote control and ..... the car.
- 3 Remove the jack and ..... the cable.
- 4 Use the wrench to ..... the nuts. Turn them .....
- 5 Put the hub cap on.

### Two-part verbs

Some verbs have two parts. For example, put on, take off.

We can usually separate the parts.

Put on the hub cap. or Put the hub cap on. or Put it on.

Take off the hub caps. or Take the hub caps off. or Take them off.

- 5 Separate the verbs.

Example

Take off the hub cap. → Take it off.

- |                             |   |       |
|-----------------------------|---|-------|
| 1 Plug in the cables.       | → | ..... |
| 2 Lift up the car.          | → | ..... |
| 3 Pick up the wrench.       | → | ..... |
| 4 Throw away the old tyres. | → | ..... |
| 5 Turn on the engine.       | → | ..... |
| 6 Fill up the tanks.        | → | ..... |
| 7 Write down the address.   | → | ..... |
| 8 Key in the code.          | → | ..... |
| 9 Tie up the boxes.         | → | ..... |
| 10 Shut down your computer. | → | ..... |

- 6 Here are some more written instructions. What are they for?

Shut your computer down and unplug it. Disconnect the cables. Open the case and locate the sockets for the new memory. Put a container under the sink to catch the water and use a wrench to loosen the nuts on the pipe. Position the memory chips over the sockets at a 45° angle. Next, remove the pipe and clear the blockage. Insert the chips by pressing down and forward. Wash it in hot water. Finally, reinstall the pipe and replace and tighten the nuts. Then close the case, reconnect the cables and reboot your computer. ■ ■ ■

- 7 Which instructions are for installing more computer memory? Which instructions are for unblocking a pipe? Underline the instructions for installing more memory.

### Explaining how

Do X to do Y

Use a wrench to loosen the nuts.

Do X by doing Y

Insert the chips by pressing down.

- 8 Make different instructions with these words.

Example

Press the 'up' button to raise the car.

Raise the car by pressing the 'up' button.

- |   |
|---|
| 1 press the 'up' button / raise the car           |
| 2 press the 'down' button / lower the car         |
| 3 unplug the cables / disconnect the computer     |
| 4 wash the pipe in hot water / clear the blockage |
| 5 tighten the nuts / fix the pipe in position     |
| 6 visit our website / get more information        |

# Experimenting

1 Match the two halves of these sentences.

- 1 If you heat a piece of metal,
- 2 If you cool a piece of metal,
- 3 If you heat water to 100°C,
- 4 If you lower the temperature of the water to 0°C,
- 5 If you heat ice,
- 6 If you pour some water in a bowl and place it in the hot sun,

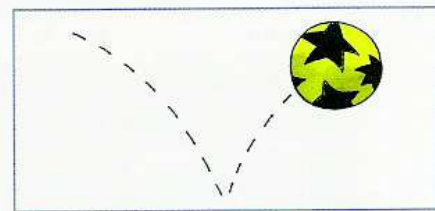
- 7 If you leave a piece of iron in water,
- 8 If you put sugar in hot tea and stir,
- 9 If you drop a rubber ball,
- 10 If you drop a glass ball,
- 11 If you pull the ends of a piece of rubber,
- 12 If you set fire to a piece of wood,
- 13 If you pump too much air into a balloon,
- 14 If you overload your computer,

Example

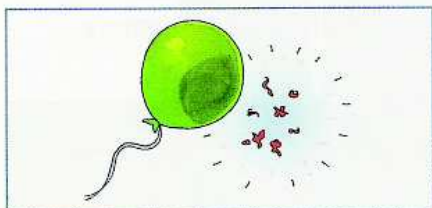
If you heat a piece of metal, it expands.



a it boils.



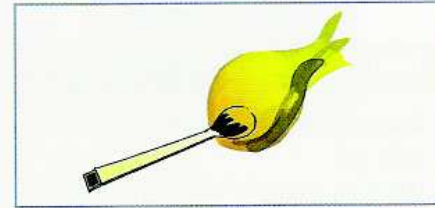
b it bounces.



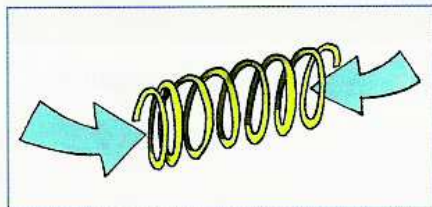
c it bursts.



d it breaks.



e it burns.



f it contracts.



g it crashes.



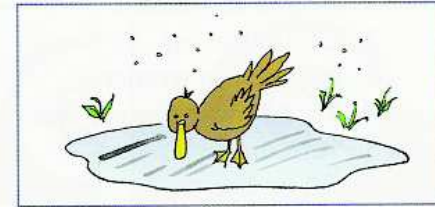
h it dissolves.



i it evaporates.



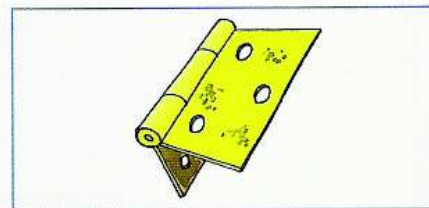
j it expands.



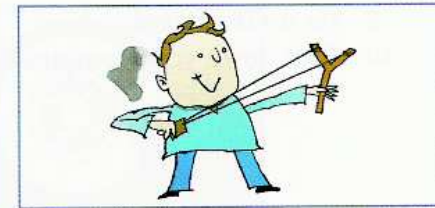
k it freezes.



l it melts.



m it rusts.



n it stretches.

- 2 Work with a partner. Test each other. Cover the second parts of the sentences a–m. Take turns to ask and answer questions.

Example

A What happens if you heat a piece of metal?

B It expands.

A What happens if you ...?

B It ...

- 3 Read some instructions for an experiment. Label the diagram with words from the list.

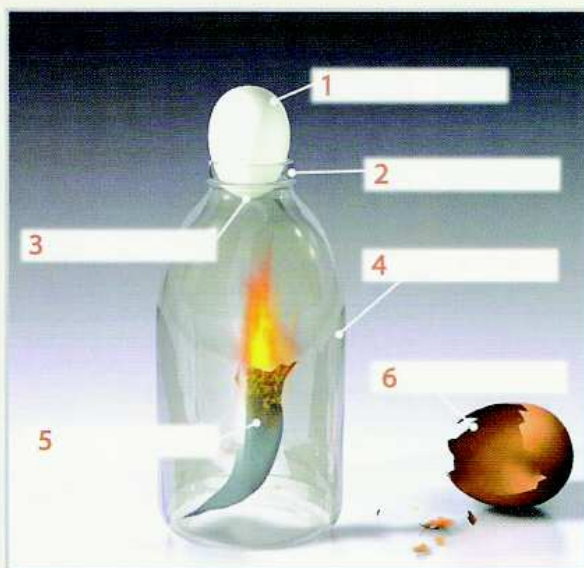
narrow end  
piece of paper

bottle  
shell

wide end  
rim

## What happens

if you place an egg on the rim of a bottle and put a burning piece of paper inside?



### Instructions for the experiment

- 1 Remove the shell from a hard-boiled egg.
- 2 Set fire to a piece of paper.
- 3 Place the burning paper inside the bottle.
- 4 Place the egg on the rim of the bottle, with the narrow end down and the wide end up.
- 5 Watch what happens.


- 4 What do you think happens?

- 5 Here is a description of what happens, but there are some mistakes. Find the mistakes and correct them.

Example

... the air ~~contracts~~ expands

'The burning paper heats the air inside the bottle. The air contracts and falls and some air gets out past the egg. The burning paper consumes all the oxygen inside the bottle and the fire goes out. Then the air inside the bottle cools down and expands. That raises the air pressure inside the bottle. And that means the air pressure inside the bottle is higher than the air pressure outside the bottle. That's why the egg falls into the bottle.'

- 6  Listen to the description and check your answers.

- 7 Work with some other students. Discuss these questions.

- 1 What happens if you fill the bottle with hot water, then pour the water out and quickly place the egg on the rim of the bottle?
- 2 What happens if you place the egg on the bottle and put the bottle in 2 cm of liquid nitrogen?
- 3 If the egg is in the bottle, how can you get it out?

Check your answers in file 27 on page 110.