

SCIENCE

YEAR 4

LEVELS 2 - 5

Total:

Level:



Name

Class

1. The Skeleton

(a) This is a drawing of a human skeleton.

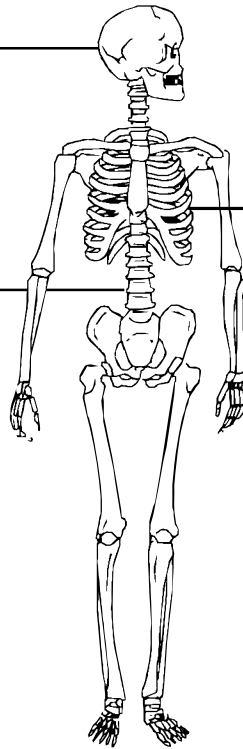
Name the parts of the skeleton.

Write **ONE** word in each box below.



1 mark

1 mark



1 mark

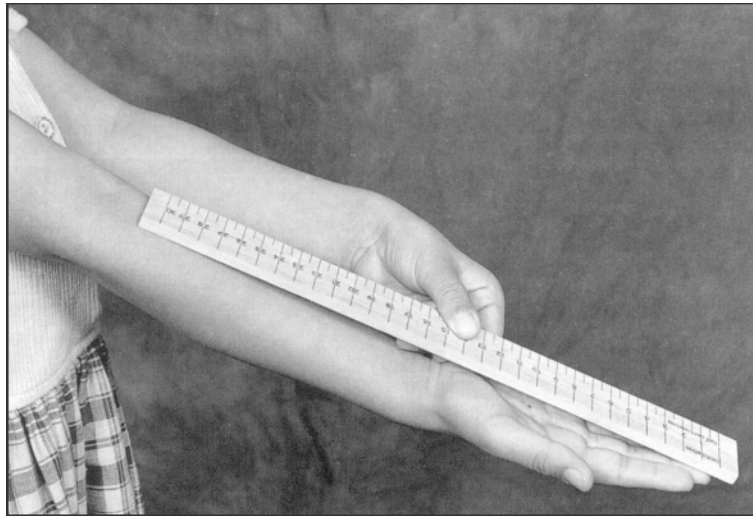
1 mark

(b) Describe **TWO** different ways that the skeleton is important to the human body.



(i)

(ii)



(c) The boxes below show the length of one person's hand at different stages of the life cycle.

Draw lines to match each length of hand to the correct stage of the life cycle.



5 cm

child

20 cm

adult

15 cm

baby

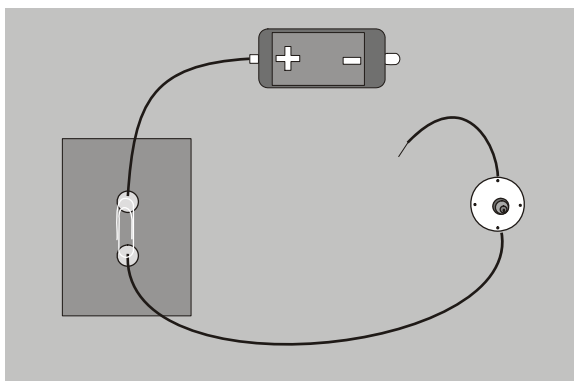
12 cm

teenager

1 mark

2. Electricity

- (a) Some children make this circuit to light a bulb.



The bulb is not lit.

Why is the bulb **not** lit?

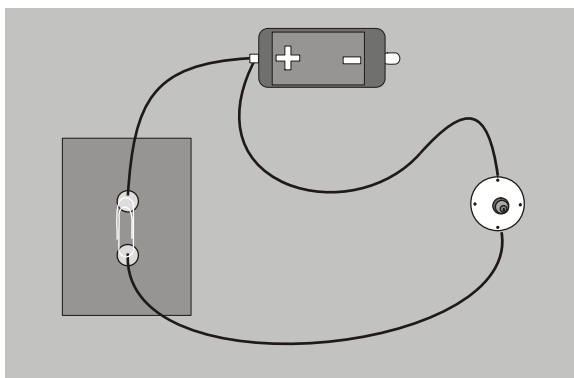


.....

.....

1 mark

- (b) The children make another circuit to light a bulb.



The bulb is not lit.

Why is the bulb **not** lit?

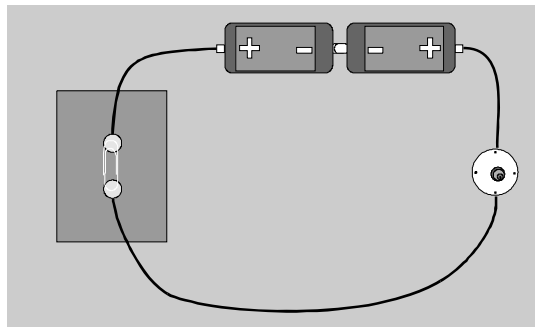


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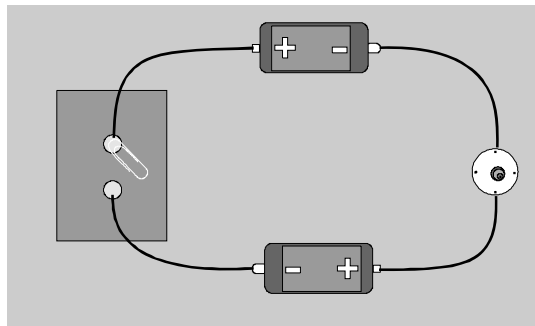
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1 mark

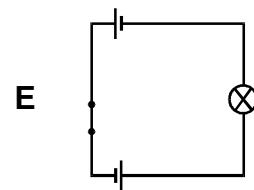
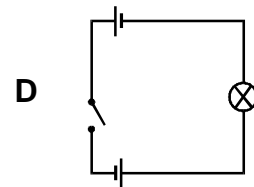
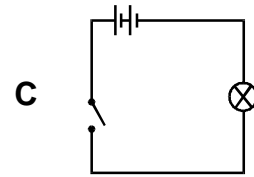
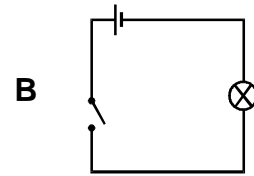
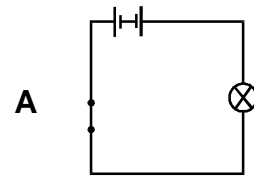
(c) Here are two photographs of circuits and five circuit diagrams.



circuit 1



circuit 2



1 mark

1 mark

Draw **ONE** line from **each** photograph to the matching circuit diagram.

(d) The bulb is not lit in circuit 2.

Why is the bulb **not** lit?



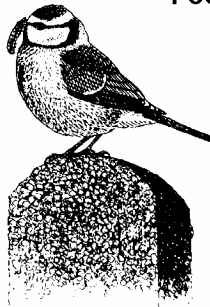
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1 mark

3. Food Chains

Food Chains



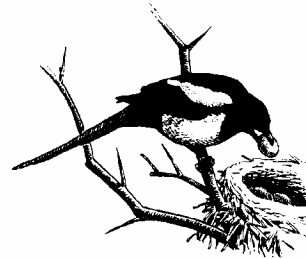
blue tits eat caterpillars



snails eat lettuce



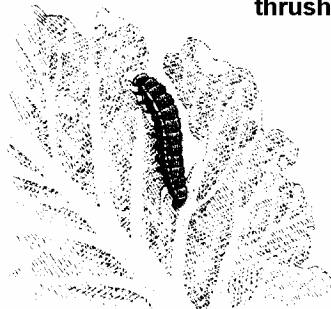
sparrowhawks eat hedge sparrows



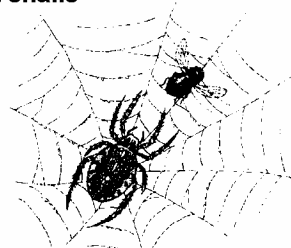
magpies eat hedge sparrows' eggs



thrushes eat snails



caterpillars eat cabbage



spiders eat flies

1 mark

- (a) Give **ONE** example of a consumer eating another consumer shown in the drawings.



.....

1 mark

- (b) Name **ONE** predator of the hedge sparrow shown in the drawings.




.....

1 mark

(c) Name **TWO** producers shown in the drawings.

1 mark

 (i) (ii)

1 mark


(d) Animals are living things.

Which **THREE** things do **all** animals do?

1 mark

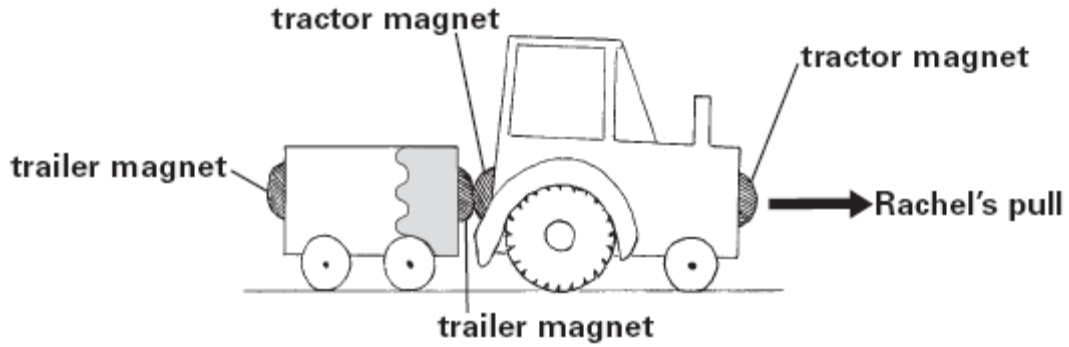
Tick **THREE** boxes.

1 mark

	lay eggs	<input type="checkbox"/>	grow	<input type="checkbox"/>	fly	<input type="checkbox"/>
	walk	<input type="checkbox"/>	swim	<input type="checkbox"/>	feed	<input type="checkbox"/>
	get rid of waste	<input type="checkbox"/>	see	<input type="checkbox"/>	talk	<input type="checkbox"/>

4. Tractor

- (a) Rachel has a toy tractor and trailer. Both have magnets at each end.



When Rachel pulls the trailer the tractor comes with it.

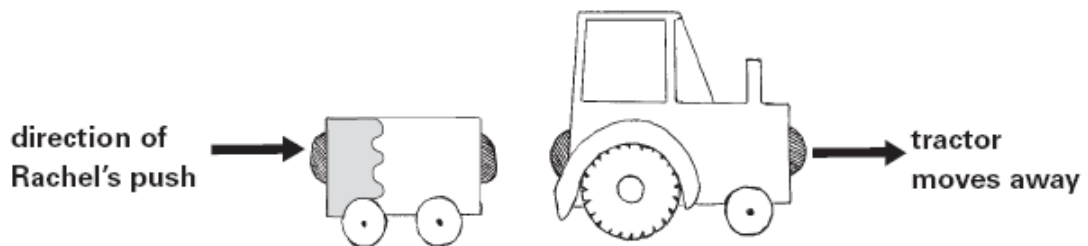
Explain why the magnets cause the trailer to move forward when Rachel pulls on the tractor.

1 mark



.....

- (b) Rachel turns her trailer around. She pushes the trailer towards the tractor. The tractor moves away without touching the trailer.



Explain why the magnets cause the tractor to move away when Rachel pushes the trailer towards it.

1 mark



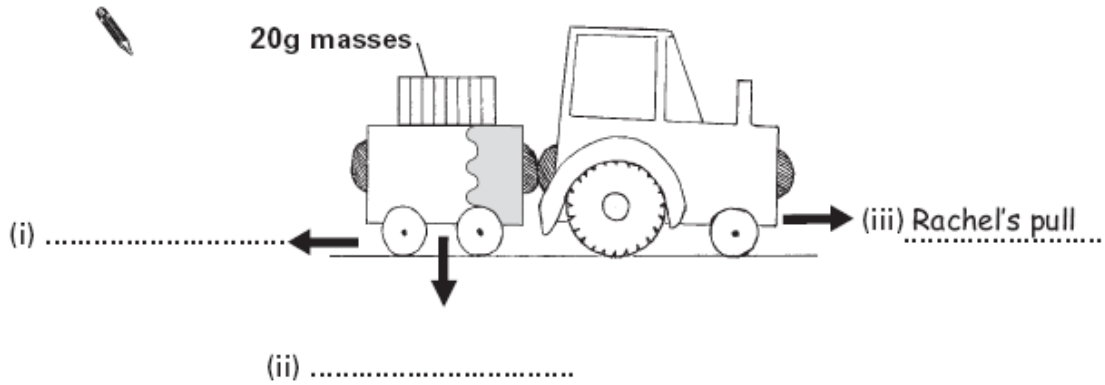
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- (c) Rachel puts some 20g masses in the trailer. She turns the trailer back around, so the tractor pulls the trailer again.

Label the arrows on the picture below to say what **forces** they show.

One force has been labelled for you.



1 mark

1 mark

- (d) Rachel can put masses weighing 160g in the trailer before it separates from the tractor. She does this experiment on thick carpet.

Rachel repeats her experiment on a new surface. This time, the trailer holds 240g before it separates from the tractor.

Tick ONE box to predict which surface Rachel tested.



grass

floorboards

gravel path

fluffy rug

1 mark

5. Toffee

- (a) Adrian and his dad are cooking toffee. The pictures below show they make the toffee.

1. Put a metal tray into a freezer for an hour.



2. Stir sugar into some cold water.



3. Heat the mixture until it turns golden brown.



4. Pour the mixture into the cold tray from the freezer.



What happens to the sugar when it is put into cold water and stirred?

1 mark



.....

- (b) What happens to some of the **water** when the mixture is heated?

1 mark



.....

(c) The mixture becomes **very** hot.

Tick ONE box to show what Adrian should measure to find out how hot the mixture is.



weight

temperature

volume

time

1 mark

(d) Adrian stirs the hot mixture with a wooden spoon. The handle of the wooden spoon stays cool.

Tick ONE box to explain why the handle of the wooden spoon stays cool.



Wood cannot get hot.

Wood is a poor conductor of heat.

Wood is a hard material.

Wood is a poor insulator of heat.

1 mark

(e) Adrian takes the tray out of the freezer. He pours the runny mixture into the metal tray. He leaves the tray on a table for ten minutes.

The mixture becomes solid.

Why does the runny mixture become solid?

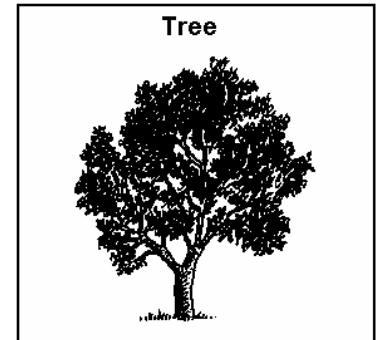
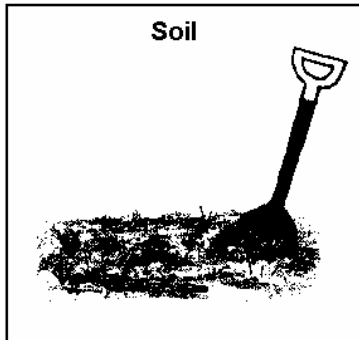
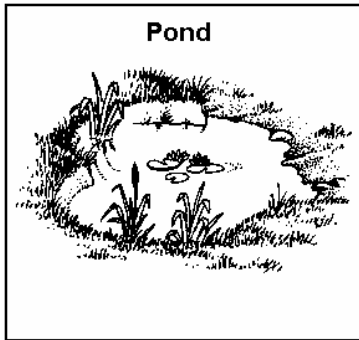
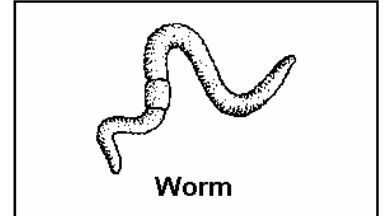
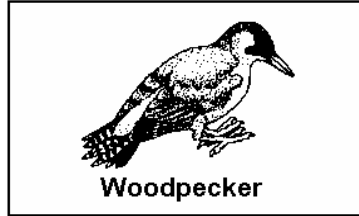
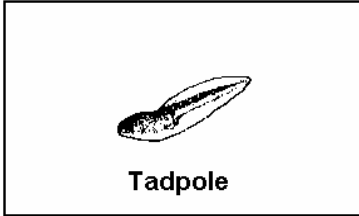


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1 mark

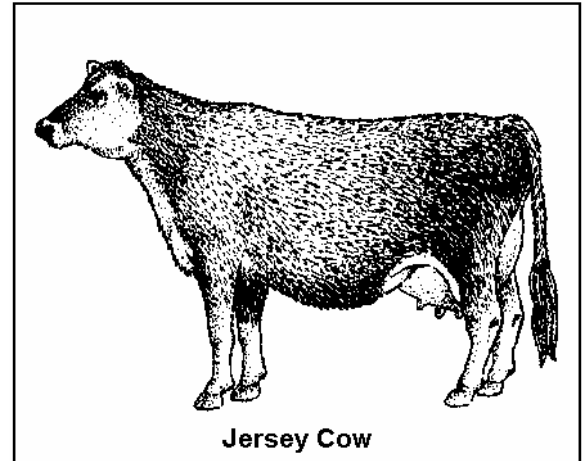
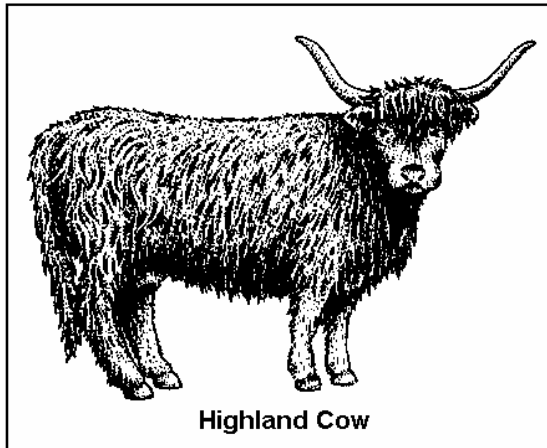
6. Animals in their environment

- (a) Draw **THREE** lines to match each of these animals to the environment in which it lives.



1 mark

(b) Highland cows look different from other types of cow.



Look at the pictures of the cows.

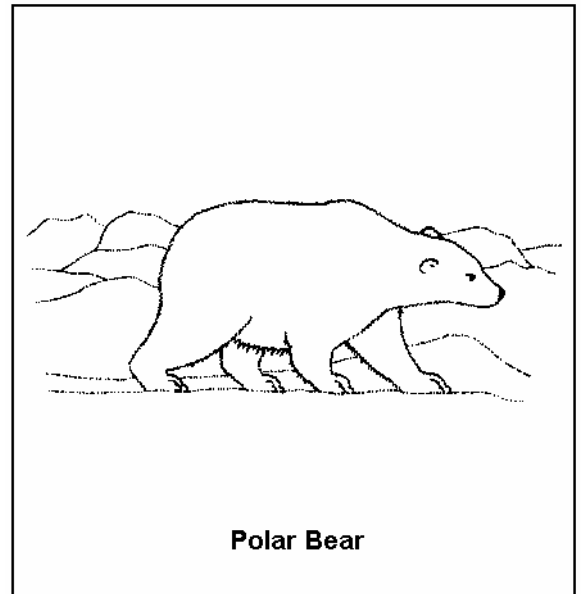
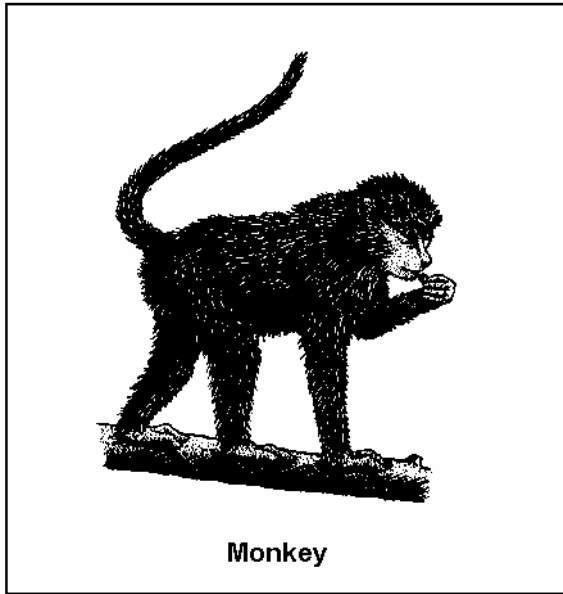
How are Highland cows better protected against cold weather than Jersey cows?




.....

1 mark

(c) These animals live in different environments.



Complete the table below to describe **ONE** feature of a Polar Bear.
Say how the feature helps the Polar Bear to live in its environment.

Animal	Lives in...	One feature that helps the animal to live in its environment	How the feature helps
Monkey	rainforest	<i>it has a tail</i>	<i>to help it balance</i>
Polar Bear	the Arctic	 <i>it has</i> <i>.....</i>	<i>.....</i> <i>.....</i>

1 mark

7. Human body

- (a) Meena makes this list to show the functions of different parts of the body.

Functions of different parts of the body:	
1.	takes in food
2.	pumps blood
3.	takes in oxygen
4.	holds the body upright
5.	controls the body

- (i) Which number on Meena's list gives the main function of the brain?



.....

1 mark

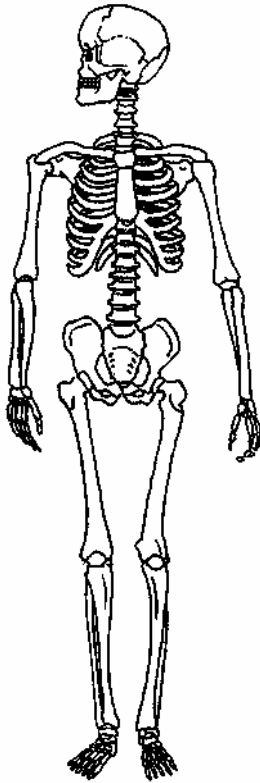
- (ii) Which number on Meena's list gives the main function of the heart?



.....

1 mark

(b) Some of our bones help to protect our organs.



Name the set of bones that helps to protect the heart and lungs.



.....

(c) Meena reads in a book that the human heart beats about 4300 times an hour at resting rate.

Meena says: 'I want to check this information, but I cannot measure my heartbeat for an hour.'

How can Meena find out **quickly** if her heart beats about 4300 times an hour?



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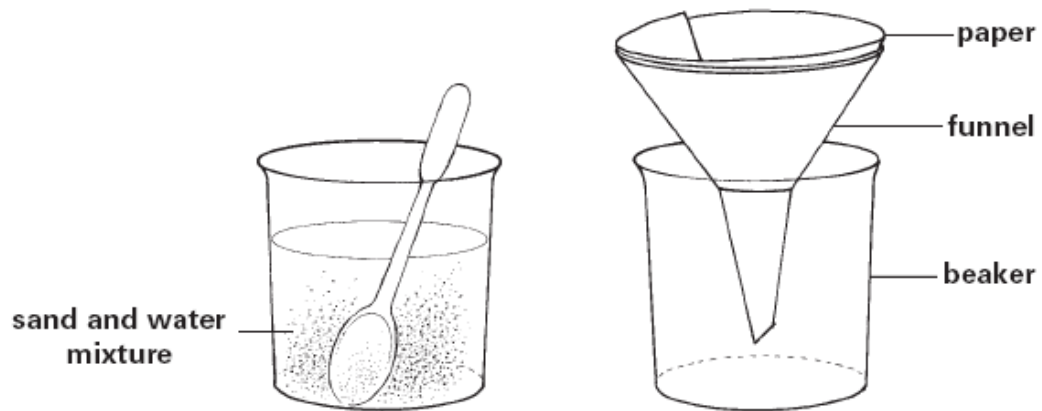
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1 mark

1 mark

8. Separating Materials

- (a) Hannah mixes sand and water together. The mixture can be separated using the equipment below.



What name is given to this method of separating?

1 mark



.....

- (b) Explain why sand can be separated from water using this method.

1 mark



.....

.....

(c) Hannah wants to separate some different mixtures.



sugar and water





flour and rice



steel nails and brass screws

Complete the table below to show how Hannah could separate each mixture quickly.

Mixture	Method of separating	How is the mixture separated?
sugar and water	evaporation	The water evaporates. The sugar is left in the dish.
flour and rice		The flour The rice
steel nails and brass screws		The steel nails The brass screws

1 mark

1 mark

1 mark

1 mark