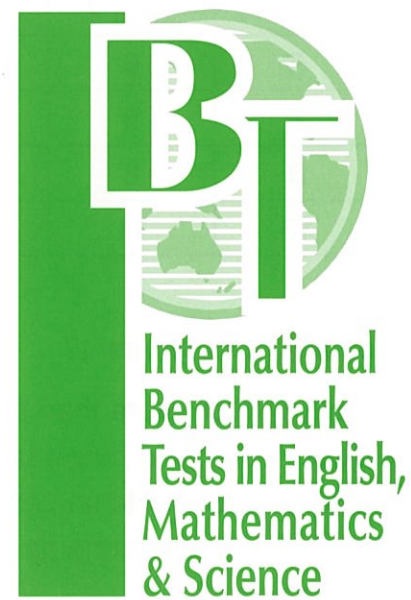


# Science



STUDENT NAME \_\_\_\_\_

NAME OF SCHOOL \_\_\_\_\_

### TEST INSTRUCTIONS

#### FILL IN YOUR DETAILS

Turn to your ANSWER SHEET and fill in your name, school, grade, section, today's date, your date of birth and gender.

#### ANSWERING QUESTIONS

Go to the SCIENCE ANSWER SHEET.

This test has **40 QUESTIONS**. Each question has four possible options.

Choose the **BEST** answer from the four options, **A, B, C** or **D**.

FILL in **ONE** circle on your answer sheet with a pencil.

If you make a mistake, erase the pencil mark and fill in a different circle.

You must colour the entire circle as shown below:

<p><b>Correct response</b></p> 	<p><b>Incorrect responses</b></p> 
	<p>Line    Very light pencil    Pen    Colored pencil</p>

Marks are NOT deducted for incorrect answers.

**ALL ANSWERS SHOULD BE MARKED ON YOUR ANSWER SHEET ONLY.**

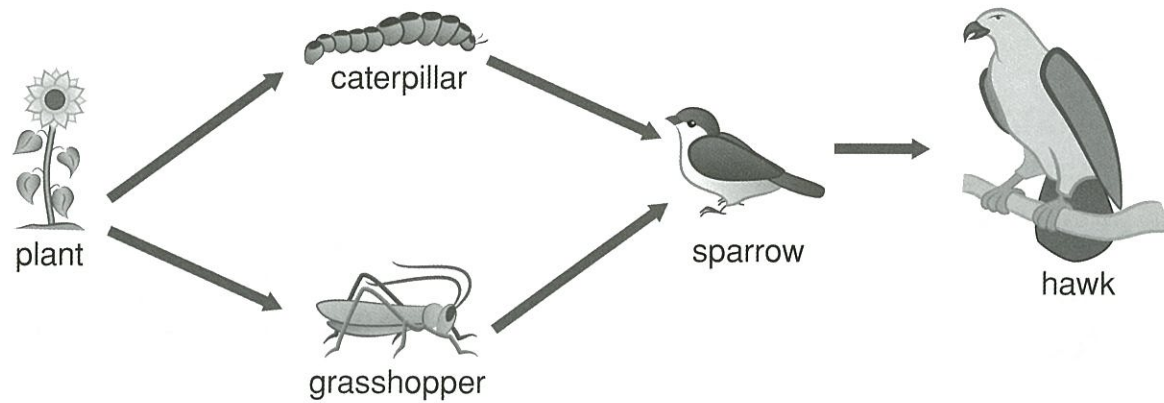
#### EQUIPMENT ALLOWED IN THIS TEST

You may use a 2B or B pencil for this test. You may NOT use a dictionary for this test.

#### TIME ALLOWED FOR TEST

The time allowed to complete this test is **60 minutes**.

The picture shows what each animal eats.



plant → caterpillar means the caterpillar eats the plant

1 What does the hawk eat?

- A** plants      **B** grasshoppers      **C** caterpillars      **D** sparrows

2 According to the picture, which animal eats more than one kind of food?

- A** hawk      **B** sparrow      **C** caterpillar      **D** grasshopper

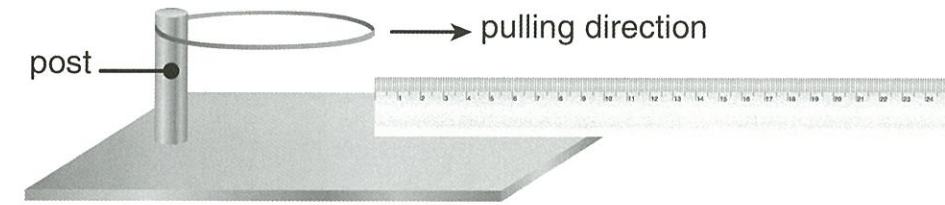
A tropical storm's category is determined by its wind speed.

Category of tropical storm	Wind speed (km/hour)
1	119–153
2	154–177
3	178–209
4	210–249
5	250 and above

3 Which category of tropical storm is likely to cause the most damage?

- A** category 1      **B** category 2      **C** category 4      **D** category 5

John wants to find out how the thickness of a rubber band affects how much it stretches. He tests four different thicknesses of rubber bands of the same length. John stretches each until it breaks. He tested three rubber bands of each thickness.



John recorded the results in a table.

Rubber band thickness (mm)	Rubber band breaking length (cm)			
	Trial 1	Trial 2	Trial 3	Average
0.5	5	6	7	6
1.0	7	9	8	8
1.5	8	8	7	8
2.0	13	11	15	13

38 What is the best conclusion for John's experiment?

- A** Thicker rubber bands usually stretch more than thinner rubber bands.  
**B** Rubber band thickness does not tell you how much a band will stretch.  
**C** There is no pattern in the amount of stretching and thickness in rubber bands.  
**D** Two 0.5 mm thick rubber bands are as strong as one 2.0 mm thick rubber band.

39 Why did John conduct three trials for each type of rubber band?

- A** because the bands do not stretch properly the first time  
**B** proper experiments always have three trials  
**C** he only had enough rubber bands to conduct three trials  
**D** in case one of the rubber bands was unusually strong or weak

40 After the experiment, John noticed that the post had bent over. It bent in the direction he was pulling the rubber bands.

What effect would this have on his measurements?

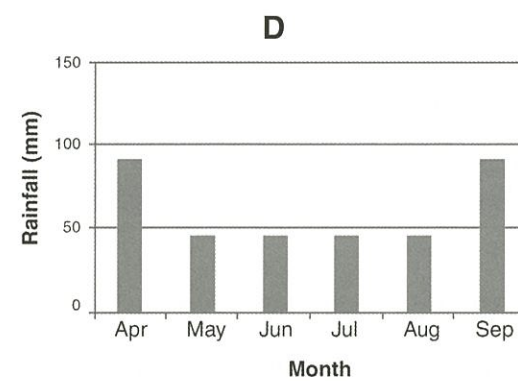
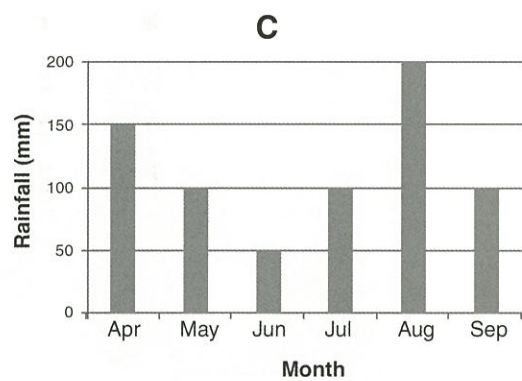
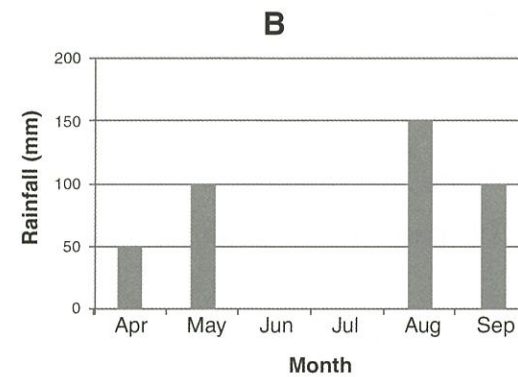
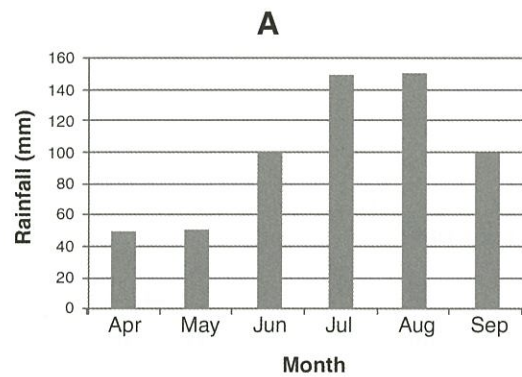
- A** It would have no effect on his breaking length measurements.  
**B** It would have affected the breaking lengths of the thicker rubber bands only.  
**C** The rubber bands would appear to have stretched less after the post bent.  
**D** The rubber bands would appear to have stretched more after the post bent.



35 What causes the size of Earth's tides to change throughout the year?

- A changes in the speed of the Earth's rotation
- B changes in water temperature as the seasons change
- C the position of the Moon and Sun
- D the positions of the other planets in the solar system

36 A region experienced a short drought. Which rainfall graph shows this drought?



37 A different region experienced a drought that lasted for more than two years. The drought caused many plants to die.

Which of these could happen when the plants die?

- A migration of animals
- B decrease in soil erosion
- C increase in biodiversity
- D increase in animal numbers

4 Which model shows the correct order and size of the first four planets from the Sun?

Order and size of the planets from the Sun

**A** Sun Mercury Mars Venus Earth

**B** Sun Mercury Venus Earth Mars

**C** Sun Venus Mercury Earth Mars

**D** Sun Mercury Venus Mars Earth

5 In what way is a man-made satellite used?

- A to connect people's mobile phones
- B to manage the tides in rivers and oceans
- C to block ultraviolet rays from reaching the Earth
- D to control the weather of different areas on the Earth

6 In which of the following changes has heat energy been added?

- A** gas to solid
- B** liquid to gas
- C** gas to liquid
- D** liquid to solid

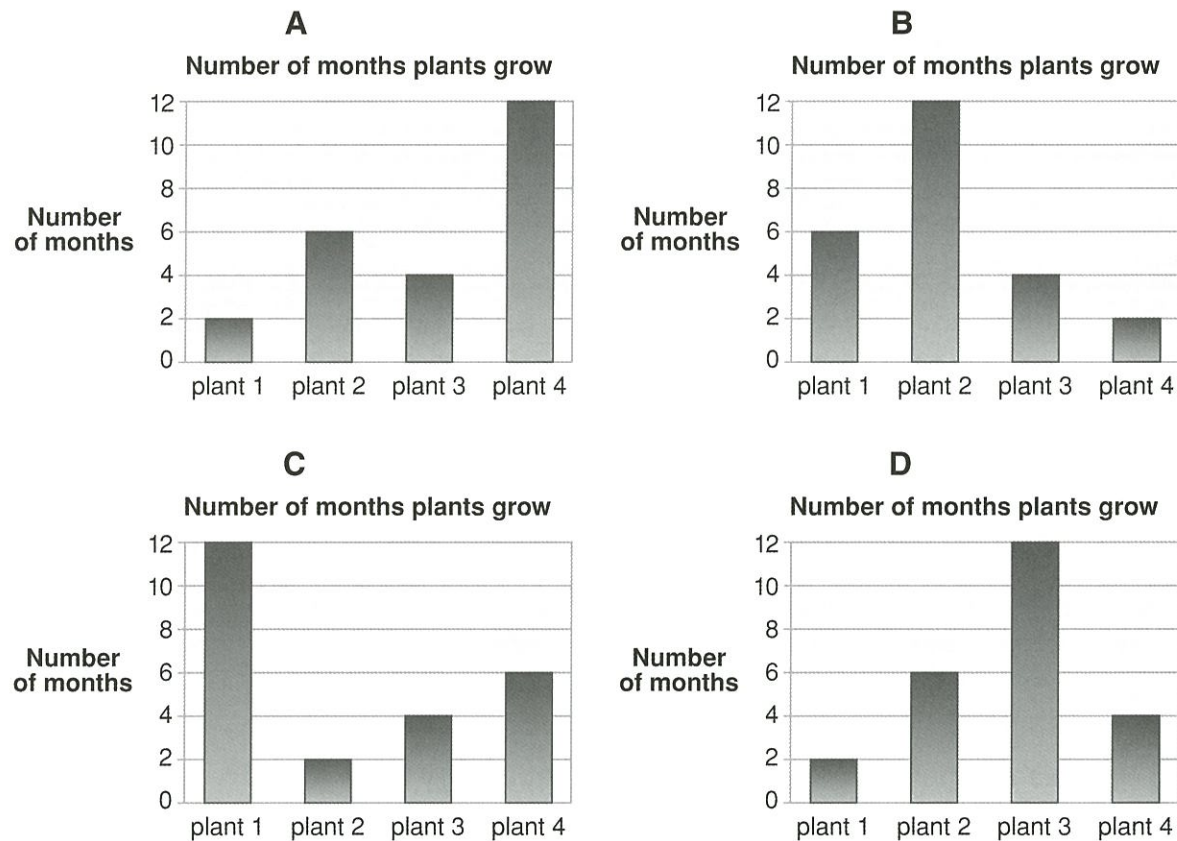
Growing season is the time of the year that plants increase their size most quickly. The table shows the growing season for different plants.

	Growing season	Length of growing season
plant 1	all year	12 months
plant 2	June to July	2 months
plant 3	August to November	4 months
plant 4	November to April	6 months

7 Which plant grows in May?

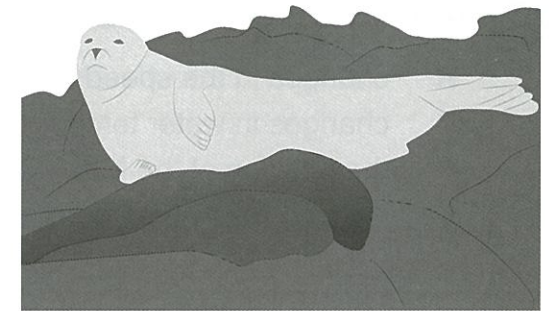
- A plant 1      B plant 2      C plant 3      D plant 4

8 Which graph correctly shows the number of growing months for each plant?



Weddell seals are found in the Antarctic. Antarctic sea water is very cold.

Weddell seals spend many hours each day swimming underwater to hunt for food.



31 Which body feature helps the seal to survive the cold water?

- A flippers  
 B smooth, streamlined body  
 C thick layer of fat under the skin  
 D whiskers on both sides of the face

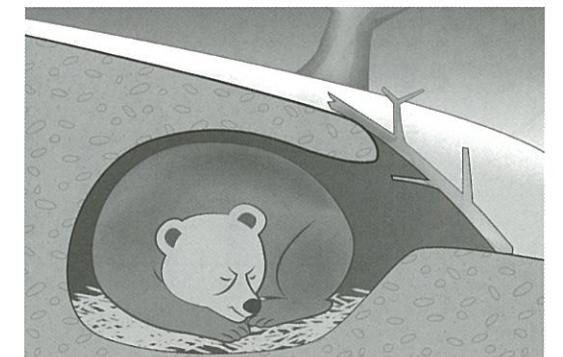
32 A seal is a mammal.

Which of these features would be found in a seal?

- A lungs      B scales      C gills      D feathers

Bears usually rest in a den for most of the winter.

They go into a very deep sleep, called hibernation, which slows down their body processes.



33 Why do bears hibernate in winter?

- A It is difficult to find enough food.  
 B They can get lost in the snow.  
 C They have no adaptations for cold weather.  
 D There is not enough light for them to see properly.

34 Female bears usually give birth in the den.

What would be the source of energy for the newly born cubs?

- A food stored in the den  
 B fat supplies under the cubs' skin  
 C warmth from the air in the den  
 D milk from the mother bear



A bowl of soup is cooling.



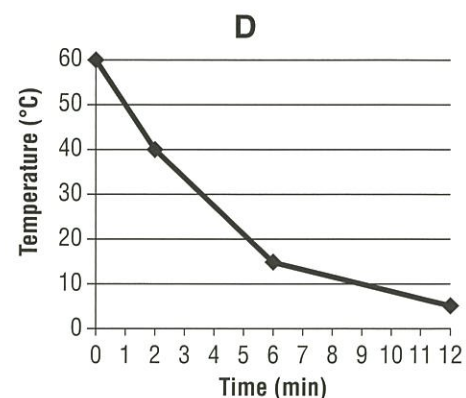
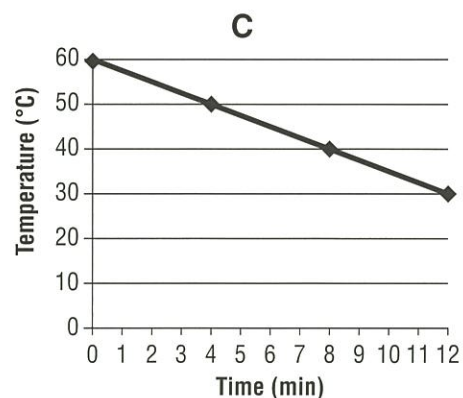
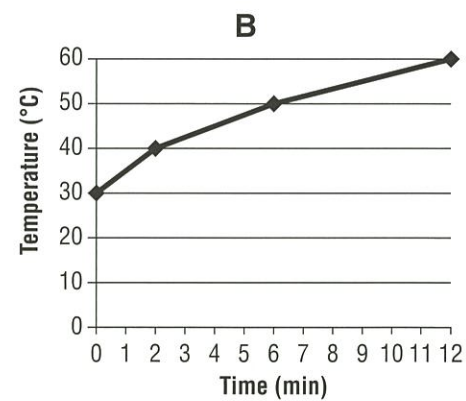
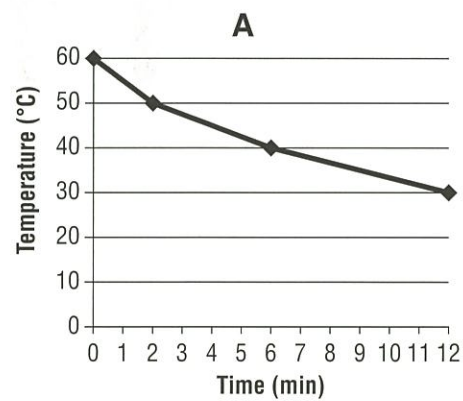
29 What is the temperature of the soup at this point?

- A 55 °C      B 60 °C      C 65 °C      D 80 °C

30 Another bowl of soup cools down from 60 °C. The time taken for the soup to drop each 10 °C is measured.

Temperature of soup (°C)	Time taken (minutes)
60	0
50	2
40	6
30	12

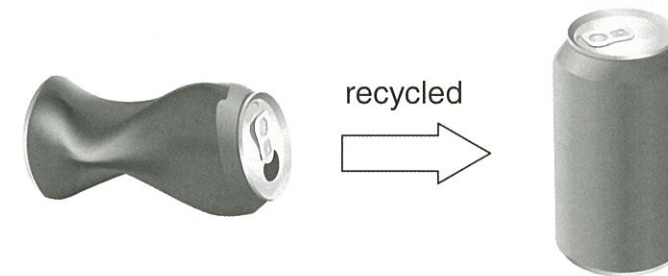
Which graph best shows the data in the table?



9 Which factors are likely to decide the growing season for a plant? Select the correct row.

	Temperature	Amount of water available
A	yes	no
B	no	yes
C	no	no
D	yes	yes

10 The used can in the picture was recycled to make a new can.



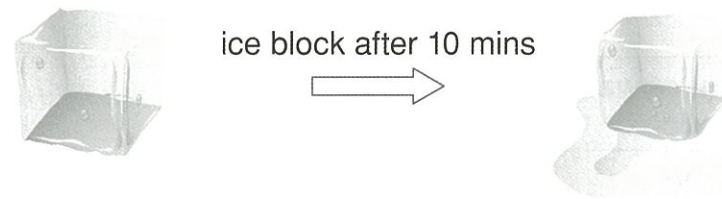
How does the can change state during recycling?

- A solid → liquid → gas  
 B solid → liquid → solid  
 C liquid → solid → liquid  
 D solid → gas → solid

11 Which of these foods is the root of a plant?

- A apple  
 B carrot  
 C orange  
 D lettuce

An ice block melts on a smooth, flat plastic table.



12 What property of a liquid does the picture show?

- A Liquids can flow.
- B Liquids have a fixed volume.
- C Liquids cannot be easily compressed.
- D Liquids change to solids upon cooling.

13 What happens to the particles of the ice block during melting?

- A The particles become larger.
- B The particles absorb heat energy.
- C The particles warm the surrounding air.
- D The particles move closer to each other.

14 After two days there was no water on the table.

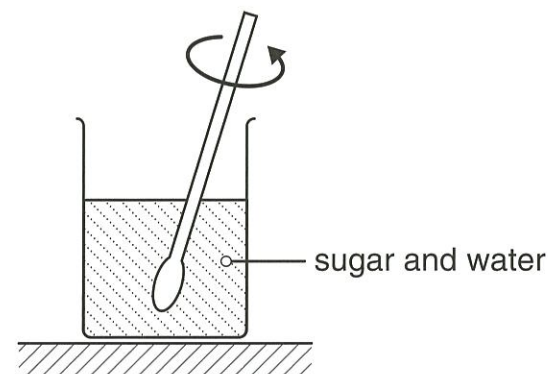
What most likely happened to the water?

- A The water turned into a solid.
- B The water evaporated into a gas.
- C The water changed into salt crystals.
- D The water was absorbed into the plastic table.

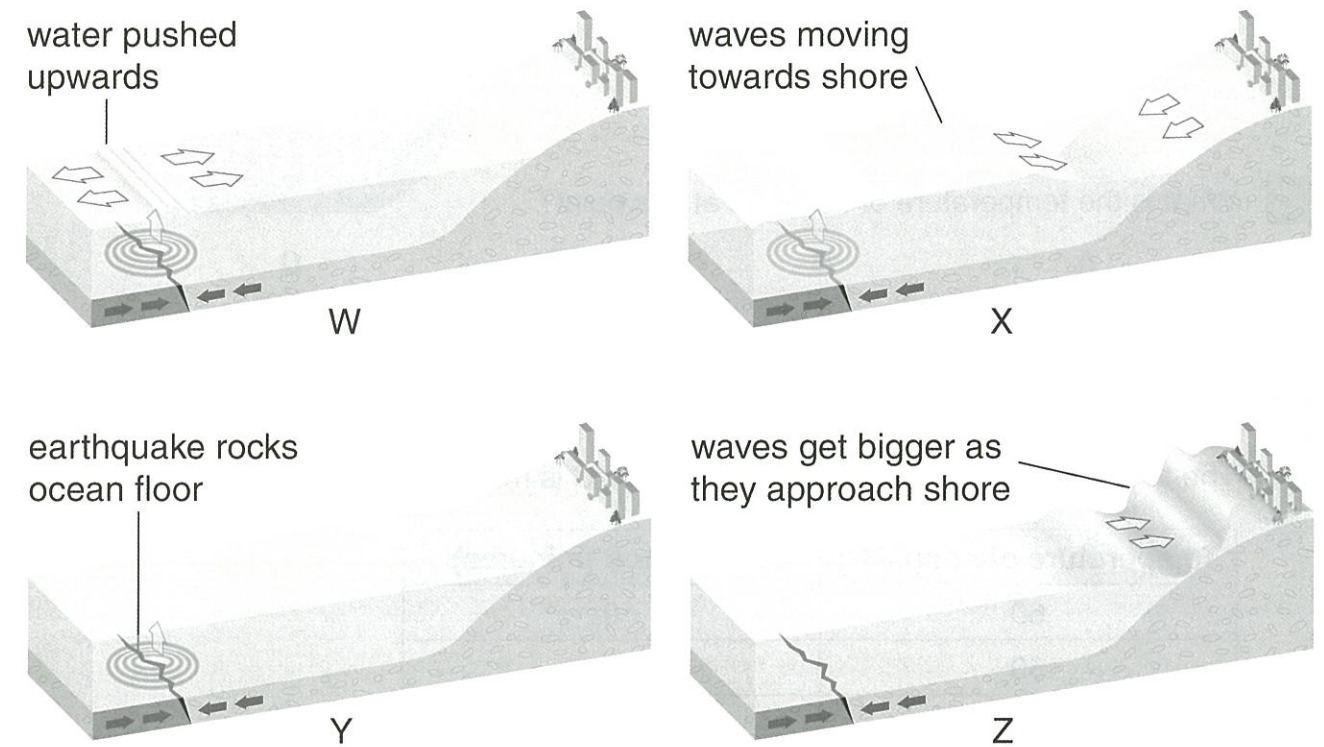
15 The beaker contains a mixture of sugar and water. The mixture has been stirred.

How can the sugar be recovered?

- A Pour the mixture through a sieve.
- B Heat the mixture until all the water evaporates.
- C Collect the water with a sponge.
- D Pour out the water to leave the sugar behind.



The pictures show four stages of how a tsunami is formed.



27 In what order should the pictures be shown to explain how a tsunami is formed?

- A W, X, Y, Z
- B Z, Y, X, W
- C Y, W, X, Z
- D X, W, Z, Y

28 Most tsunamis are caused by earthquakes.

What other event can cause a tsunami?

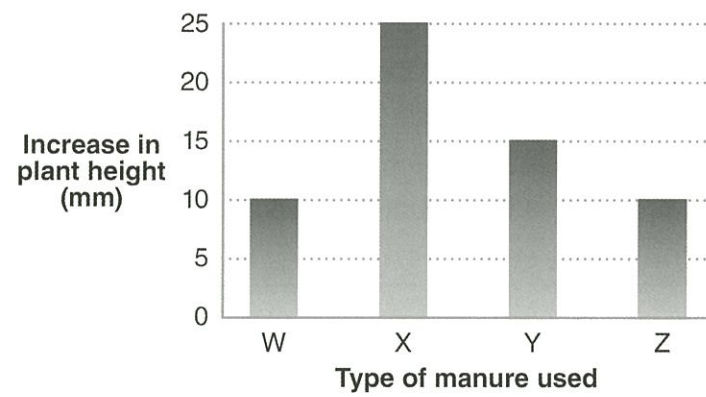
- A whirlpool
- B strong tides
- C tropical storm
- D underwater landslide



A gardener added equal amounts of different manures to four similar plants.

She watered the plants daily with equal amounts of water.

The graph shows her observations after one week.



24 Which two types of manure had the same effect on plant growth?

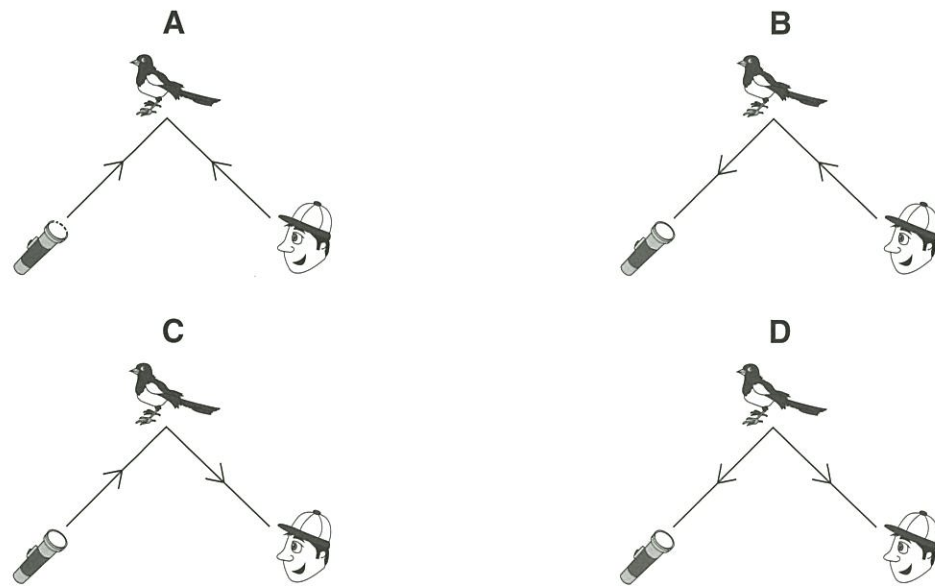
- A** W and X      **B** X and Y      **C** Y and Z      **D** W and Z

25 How can the gardener be sure that manure really does help the plants to grow?

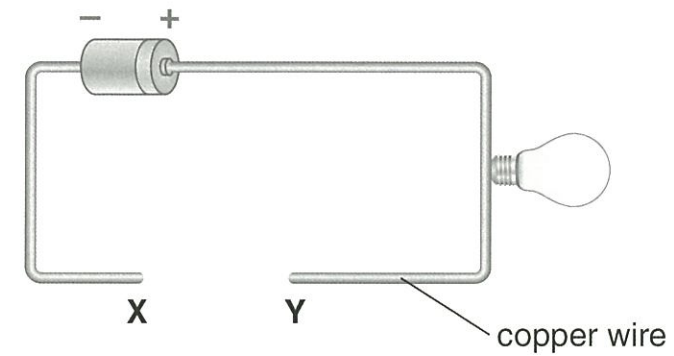
- A** Grow similar plants without manure.  
**B** Grow similar plants with a new type of manure.  
**C** Grow the four plants with only one type of manure.  
**D** Grow different plants with the four types of manure.

26 Light from a torch falls on a bird. A person sees the bird.

Which picture shows the correct path of light?



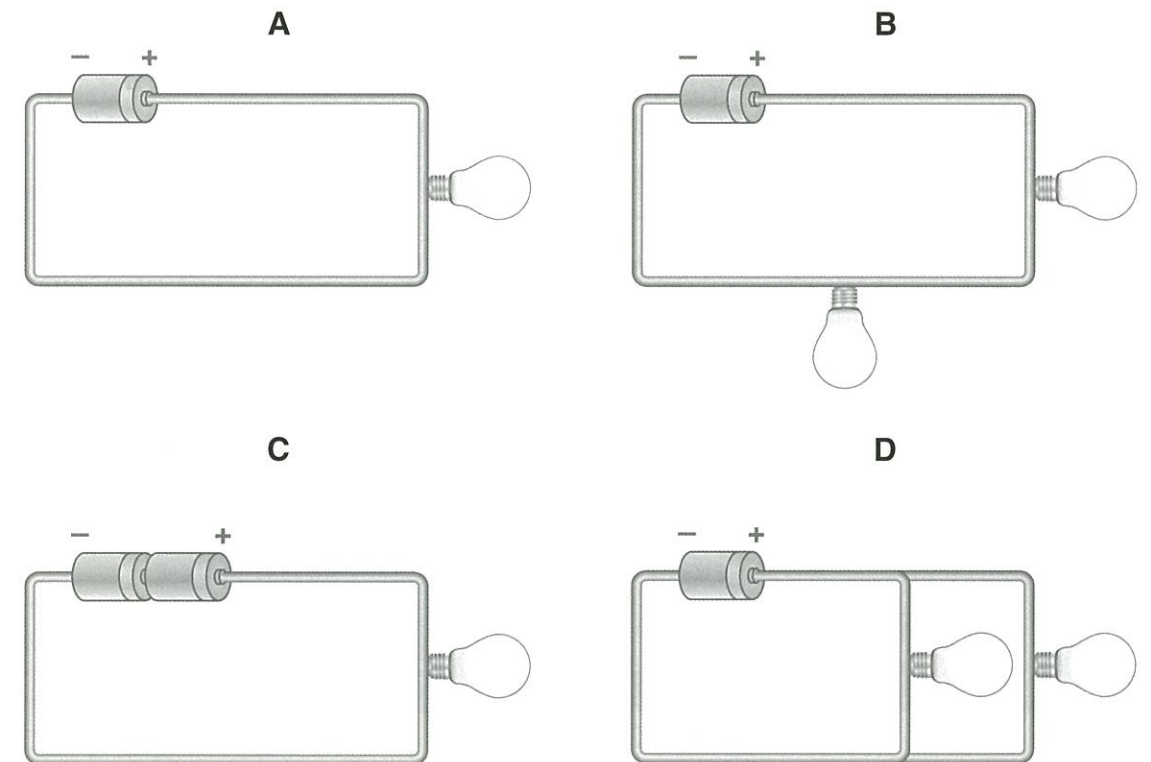
The picture shows an electric circuit.



16 Which material could connect points X and Y to make the bulb glow?

- A** iron      **B** rubber      **C** plastic      **D** wood

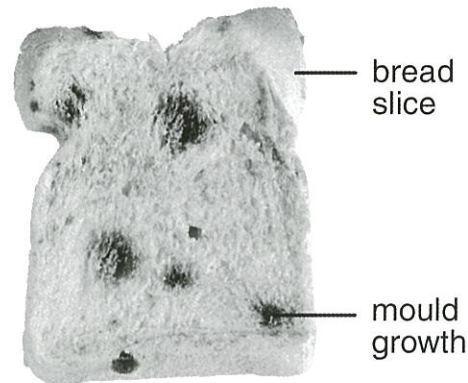
17 In which of these circuits will the bulb(s) glow **brightest**?





Two slices of bread were toasted to dry them out. Two slices were left untoasted. The four slices of bread were each put in a sealed bag and kept under different conditions. The table shows the findings after two days.

Bread slice	Type of bread	Temperature	Mould on bread after two days
1	untoasted	5 °C	no
2	untoasted	25 °C	yes
3	toasted	5 °C	no
4	toasted	25 °C	no



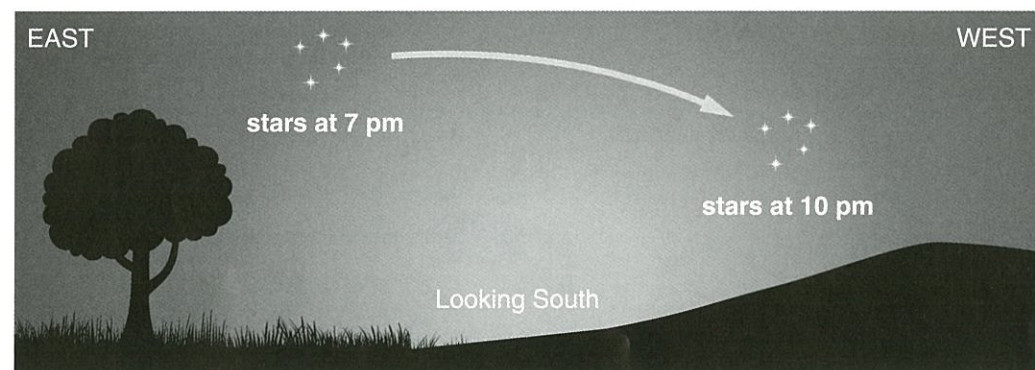
18 Which conditions helped the bread mould grow?

- A** warm and moist      **B** warm and dry      **C** cold and moist      **D** cold and dry

19 How can you find out which temperature best helps bread mould grow?

- A** Perform the same experiment many times.  
**B** Perform the same experiment at a constant temperature.  
**C** Perform the same experiment using only untoasted bread.  
**D** Perform the same experiment at a range of different temperatures.

Jane looked at the sky at 7 pm and saw a group of stars. Three hours later, she saw that the stars were in a different position.



20 Why did the stars change position?

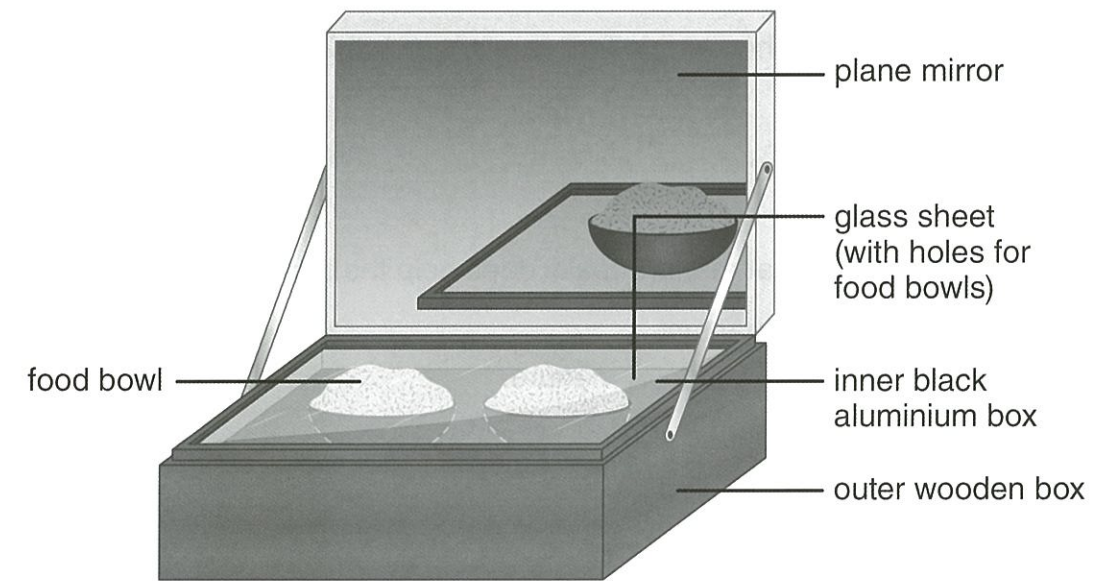
- A** The stars are in constant motion.  
**B** The Earth had rotated from West to East.  
**C** The stars had rotated from East to West.  
**D** The stars were attracted by the Moon's gravity.

21 Why can we see planets and stars?

- A** They both produce their own light.  
**B** They both reflect light from the Sun.  
**C** Light from the Earth allows us to see the planets and stars.  
**D** The stars make their own light and the planets reflect light.

A solar cooker uses the sun's heat to cook food.

Bowls of food are placed in a wooden box, and a sheet of glass is placed over the food.



A solar cooker

22 What reflects the sunlight into the wooden box?

- A** food bowls      **B** glass sheet      **C** plane mirror      **D** outer wooden box

23 Why is the inside of the box painted black?

- A** Black surfaces reflect most light energy.  
**B** Black paint stops insects from eating the food.  
**C** Black surfaces are good absorbers of heat energy.  
**D** Black paint prevents corrosion in metal boxes.