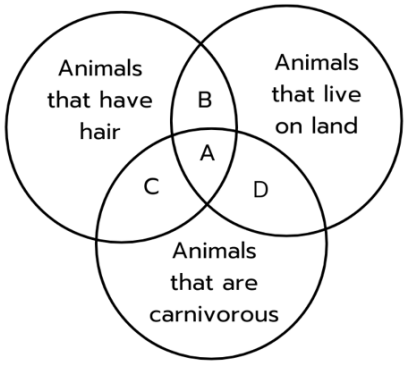
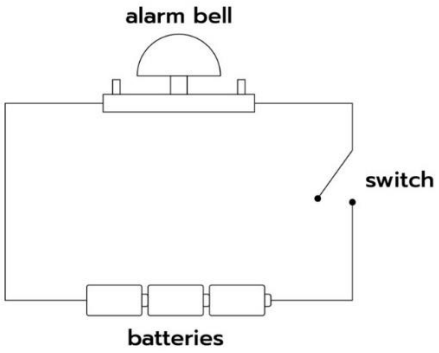
1. The characteristics of four animals, A, B, C and D, are shown below.



Which of the following animals can A, B, C and D be?

	A	B	C	D
1.	Lion	Horse	Dolphin	Vulture
2.	Rhinoceros	Rabbit	Whale	Penguin
3.	Hyena	Elephant	Shark	Crocodile
4.	Cat	Mouse	Tiger	Wolf

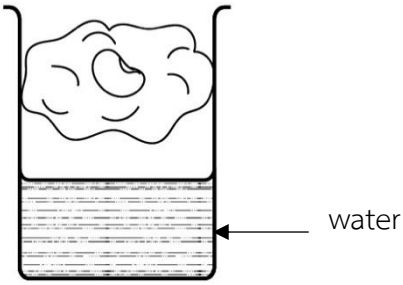
2. Look at the diagram below.



Which of the following conversions of energy takes place when the circuit is closed?

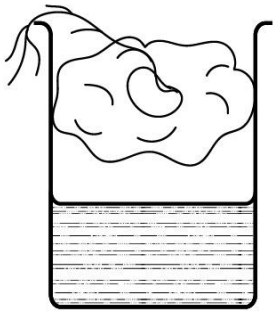
1. chemical potential energy ⟶ electrical energy
2. chemical potential energy ⟶ electrical energy ⟶ sound
3. electrical energy ⟶ chemical potential energy ⟶ sound ⟶ heat energy
4. electrical energy ⟶ sound energy

3. A seed is placed on some damp cotton wool into a clear glass container as seen in the diagram below.

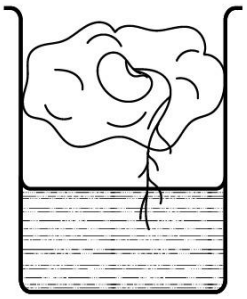


Which of the following is most likely to happen after five days?

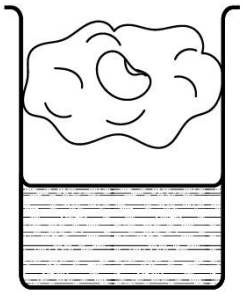
1.



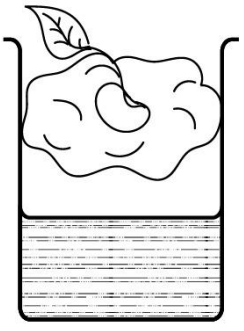
2.



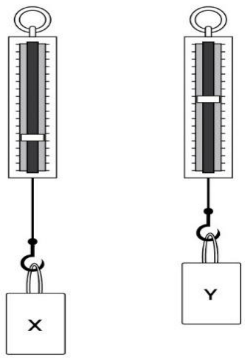
3.



4.



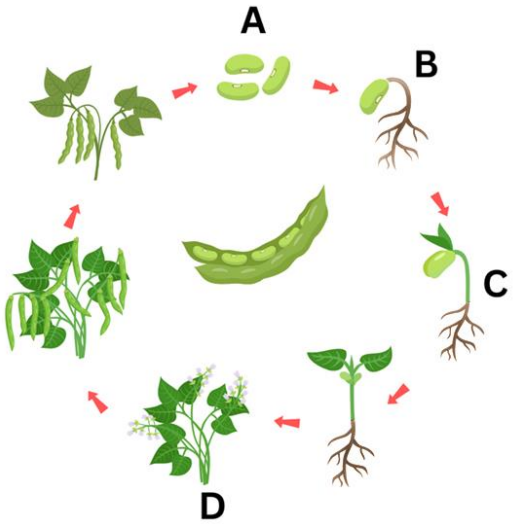
4. Kim used a spring balance to weigh objects X and Y. The diagrams below show what happened when the objects were weighed.



Which of the following statements explains why object X weighs more than object Y?

1. Object X has a greater mass than object Y.
2. The force of gravity on object X is greater than that on object Y.
3. The elastic force acting on object X is greater than that on object Y.
4. The Earth's magnetic force acting on object X is greater than that on object.

5. The diagram below shows a cycle of a flowering plant.



At which stage, A, B, C or D, will it start making its own food?

1. A
2. B
3. C
4. D

6. Darren covered the mouth of three identical bottles with three identical balloons. He then placed the bottles into three identical containers which were filled with the same amount of water but at different temperatures.

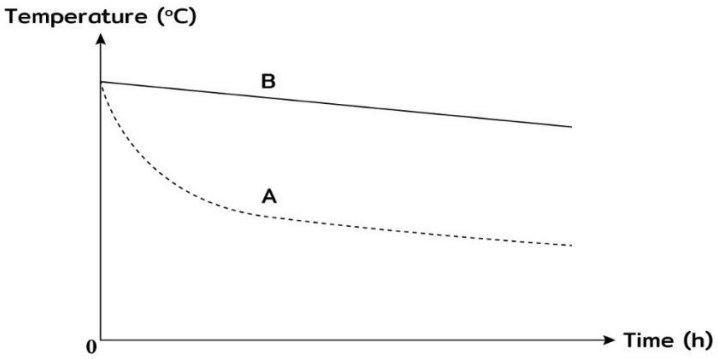
After two minutes, the size of the balloons was compared. The diagrams below show what Darren's experiment look like at the start of the experiment.



Which of the following ideas was Darren's experiment testing?

1. Air expands more than water.
2. Air contracts when it is cooled.
3. Air contracts more at a lower temperature.
4. Air expands more at a higher temperature.

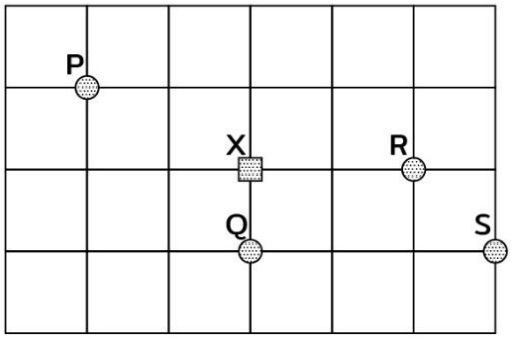
7. Two containers, A and B, have the same capacity but are made of different materials. They are filled with an equal amount of hot water. The time taken for the water in each container to cool down is shown in the graph below.



What can the material of each container be?

	Container A	Container B
1.	Glass	Aluminium
2.	Iron	Clay
3.	Plastic	Steel
4.	Rubber	Silver

8. There are four drops of wax (P, Q, R and S) of the same size at different locations on an aluminium grid board as show below.



The aluminium grid board is heated at X. Arrange the drops of wax in order, beginning with the drop of wax that will melt first.

1. Q, P, R, S
2. Q, R, P, S
3. R, Q, P, S
4. S, P, R, Q

9. Goodman has the following set-ups to investigate the factors that affect rate of evaporation.

set-ups	Material of container	Area of exposed surface/cm^2	Initial amount of water / ml	Temperature of water / °C
P	Glass	200	500	50
Q	Plastic	200	500	50
R	Glass	400	500	70
S	Plastic	400	250	90
T	Glass	200	500	70
U	Plastic	200	250	90

What can he investigate using the six set-ups?

A: If the temperature of water affects the rate of evaporation

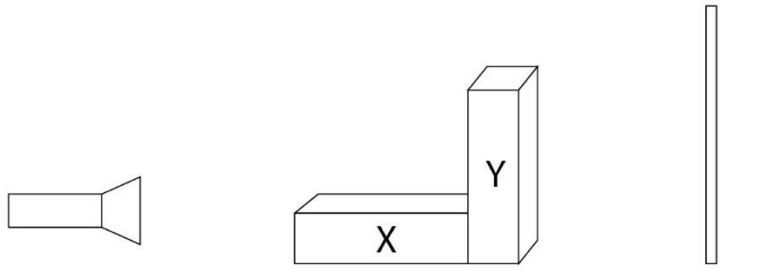
B: If the initial amount of water affects the rate of evaporation

C: If the material of the container affects the rate of evaporation

D: If the area of the exposed surface affects the rate of evaporation

1. A and C only
2. A and D only
3. A, C and D only
4. A, B, C and D

10. Two identical wooden blocks, labelled X and Y, are arranged in a line as seen in the diagram below.



Which of the following shadows would most likely be seen on the screen?

1.



2.



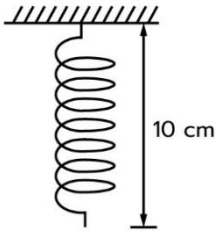
3.



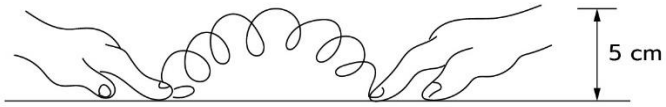
4.



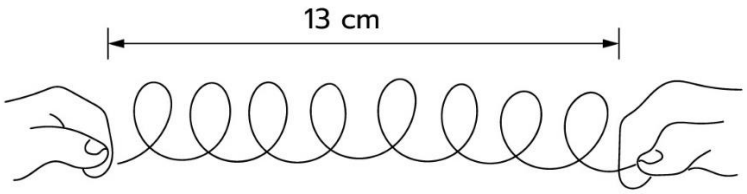
11. Austin measured an unstretched spring and recorded the original length as 10 cm.



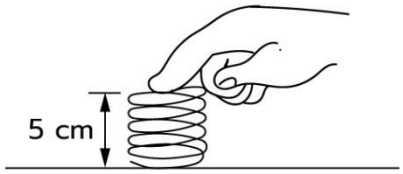
He used the spring to carry out a few experiments as shown below.



Experiment A



Experiment B

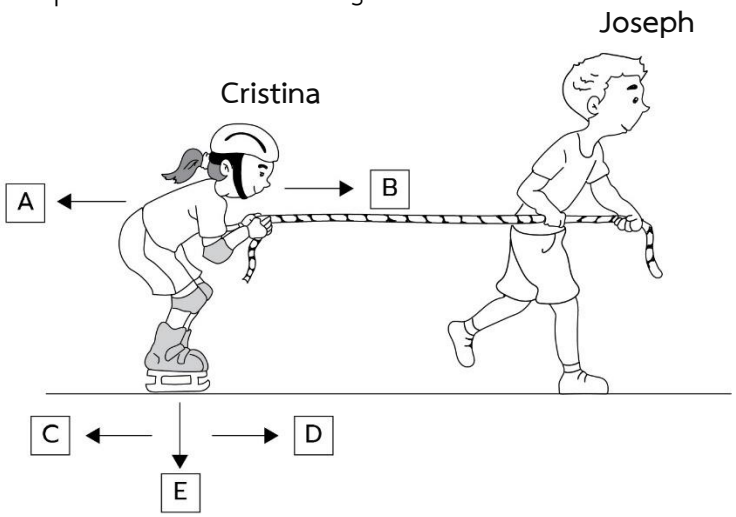


Experiment C

In which experiments(s) was/were both gravity and elastic force acting on the spring?

1. A only
2. C only
3. B and C only
4. A, B and C

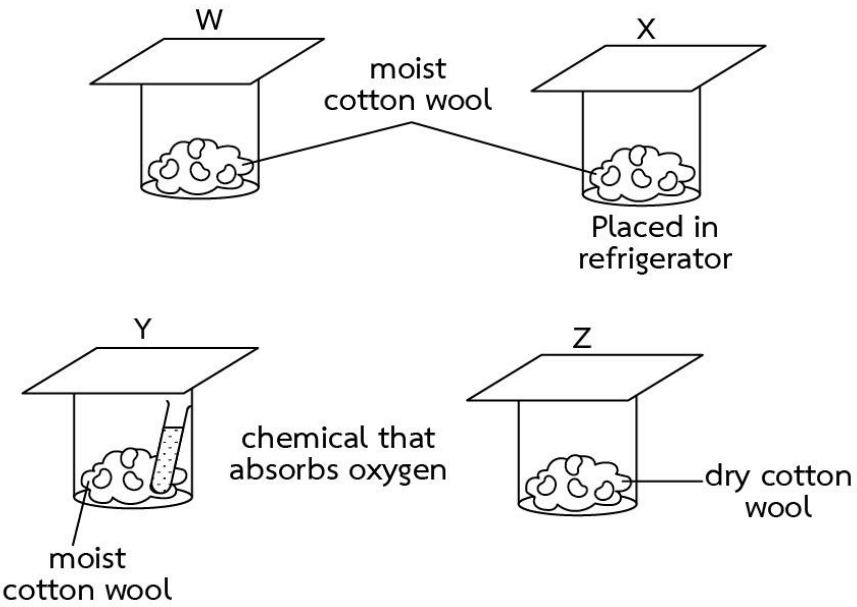
12. Cristina was trying out her new ice skates. Joseph helped her to move forward by pulling her with a rope. Arrows A, B, C, D and E shows the positions and directions of the six possible forces acting on Cristina.



Which of the following correctly indicated the forces acting on Cristina when Joseph pulled her with a rope?

	Gravity	Frictional force as she moves along the floor
1.	A	C
2.	C	D
3.	E	D
4.	E	C

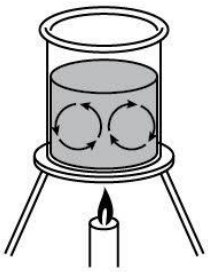
13. Tony sets up some experimental set-ups as shown below.



Tony wants to find out if water is required for germination of seeds. Which two set-ups should he use to carry out his experiment?

1. W and Y
2. W and Z
3. X and Y
4. Y and Z

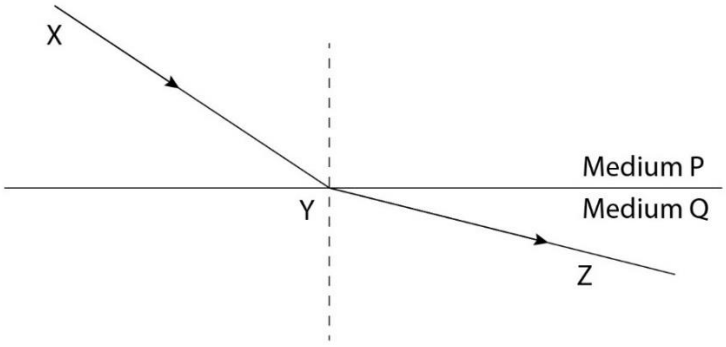
14. The diagram below represents a beaker of water being heated by a flame. The arrows represent heat transfer occurring in the beaker.



Which process is represented by the arrows in the diagram?

1. condensation
2. conduction
3. convection
4. radiation

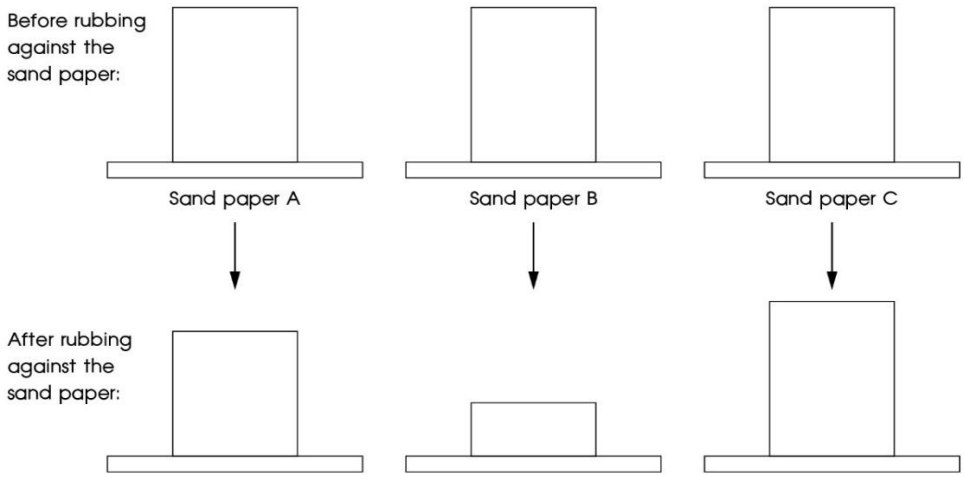
15. A ray of light XY travels from medium P into medium Q as shown below.



Which of the following statements is correct?

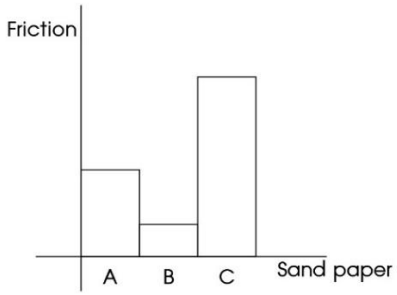
1. Medium P is less dense than medium Q and the ray YZ travels faster than XY.
2. Medium P is denser than medium Q and the ray YZ travels faster than XY.
3. Medium P is less dense than medium Q and the ray YZ travels slower than XY.
4. Medium P is denser than medium Q and the ray YZ travels slower than XY.

16. Three similar blocks of wood were rubbed in the same way and for the same number of times against three different sheets of sand paper. The following diagrams show the wood before and after they were rubbed against the sand paper.

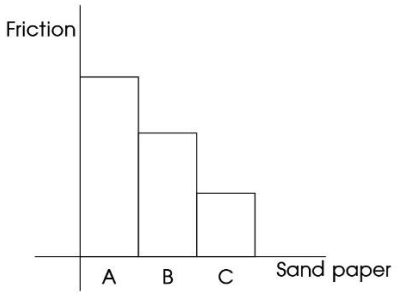


Which one of the following graphs represents the frictional force produced as the blocks of wood were rubbed against the pieces of sand paper?

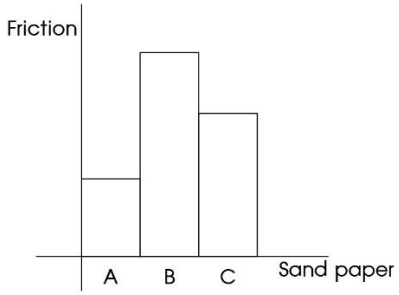
1.



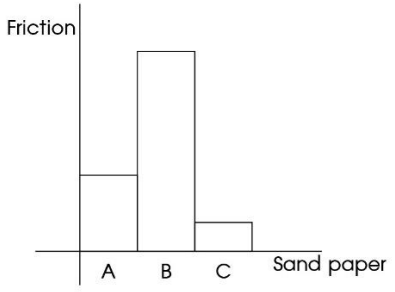
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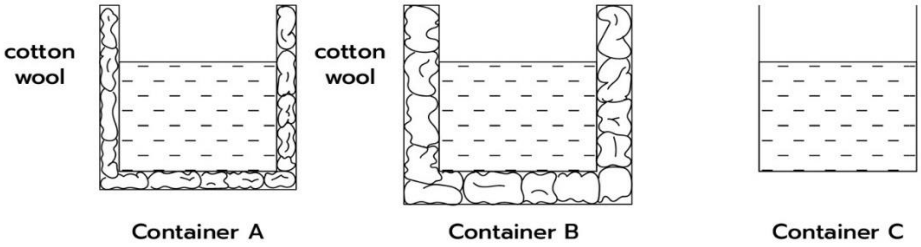
3.



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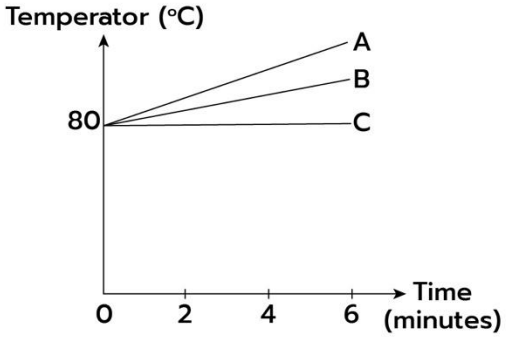


17. Alan had three identical containers. He covered container A with a thin layer cotton wool and container B with a thick layer of cotton wool. He did not cover container C with any cotton wool.

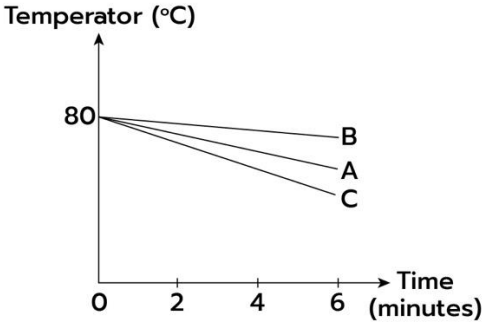


Alan poured the same amount of water at 80°C into the containers at the same time. The temperature of the water was measured every two minutes for six minutes. Based on Alan's observations, which of the graph is correct?

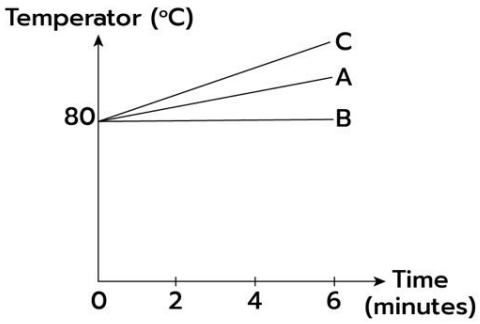
1.



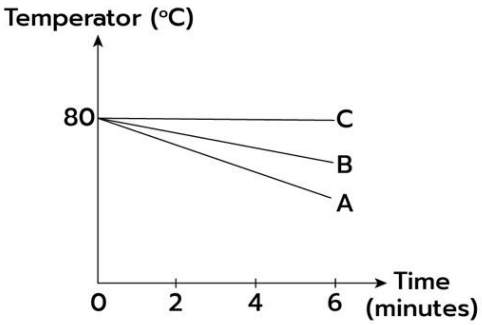
2.



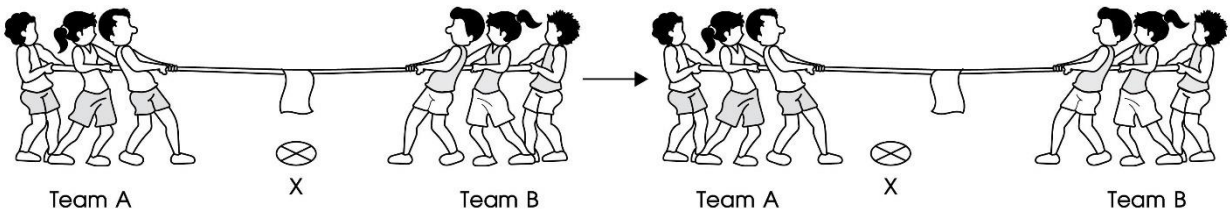
3.



4.



18. In a game of tug-of-war, a flag placed at the mid-point marked X moves towards team B.



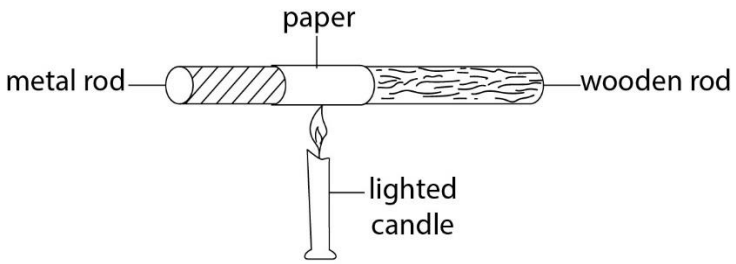
Which of the following is true?

1. The force of gravity exerted on team A is greater than on team B.
2. The force of gravity exerted on team A is weaker than on team B.
3. The pulling force exerted by team B is greater than the pulling force exerted by team A.
4. The pulling force exerted by team A is greater than the pulling force exerted by team B.

19. Emily was told that glass is brittle. However, when he tried to hammer a glass table top, the table top did not shatter. Why was this so?

1. The glass table top was tempered.
2. The glass table top was non-corrosive and strong.
3. Glass is actually a supercooled liquid so it will not shatter into pieces.
4. The glass table top was made of glass with a lower density than normal glass.

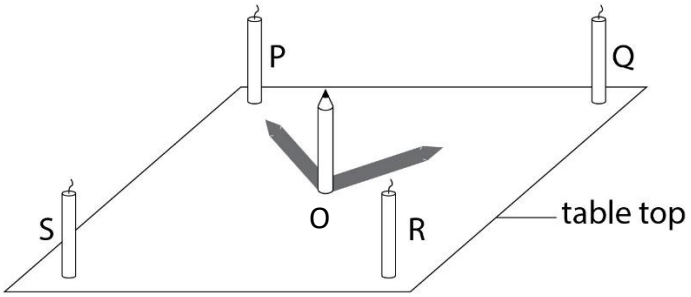
20. Alex wanted to find out which material is a better heat conductor. He did so by observing which part of a piece of paper will be more charred from the set-up as shown below.



Why was the experiment not a fair one?

1. Both rods were not of the same length.
2. The paper was wrapped around the two rods.
3. Both rods were not made of the same material.
4. The candle was not placed at the centre of the wrapped paper.

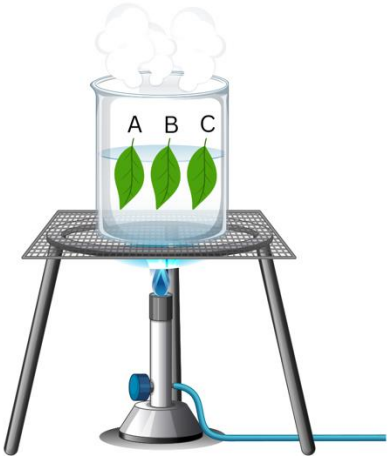
21. A pencil is placed at the center of a square table in a dark room.



Which of the candles have to be lighted for the shadows O pencil to be formed as shown in the diagram above?

1. P and Q only
2. P and R only
3. Q and S only
4. R and S only

22. A teacher placed three different leaves into a container of hot water at the some time. She asked her student to observe whether more bubbles gather on the upper surface or the lower surface of the leaves.



Anna : The upper surface of leaf A has more bubbles.

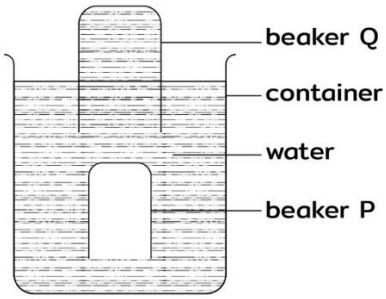
Bee : The lower surface of leaf B has more bubbles.

Ticha : The lower surface of leaf C has more bubbles.

Based on the pupils' observations, which of the following is an appropriate conclusion?

1. Stomata are found on both surfaces of the leaves.
2. Stomata are not found on the lower surfaces of the leaves.
3. Stomata are only found on the lower surfaces of the leaves.
4. Stomata are only found on the upper surfaces of the leaves.

23. Ken inverted beaker P and pushed it into a container of water. Next, he submerged beaker Q in the container and inverted it, raising it above beaker P as shown below.



After that, Ken turned the inverted beaker P back to the upright position slowly and carefully. What would she observe?

A. Beaker P would be occupied by water.

B. Both beakers would be occupied by air.

C. The water level in beaker Q would drop.

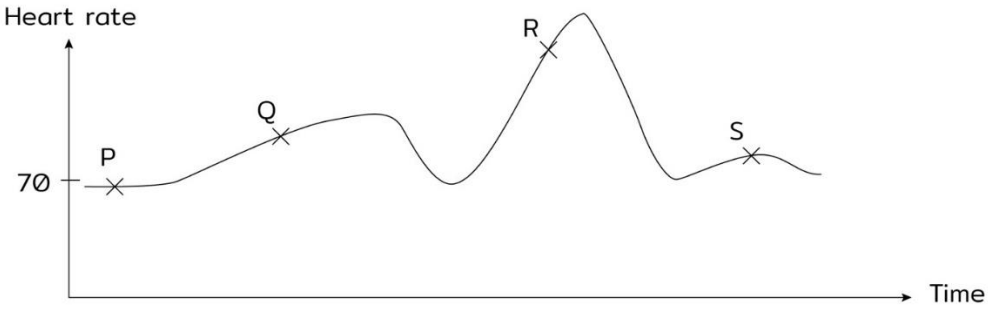
D. Air bubbles would be seen escaping from beaker Q.

E. Beaker P would be completely filled with water and beaker Q would be completely filled with air.

1. B only
2. A and C only
3. A and D only
4. A, D and E only

24. The heart rate of an adult who is resting is about 70 beats per minute.

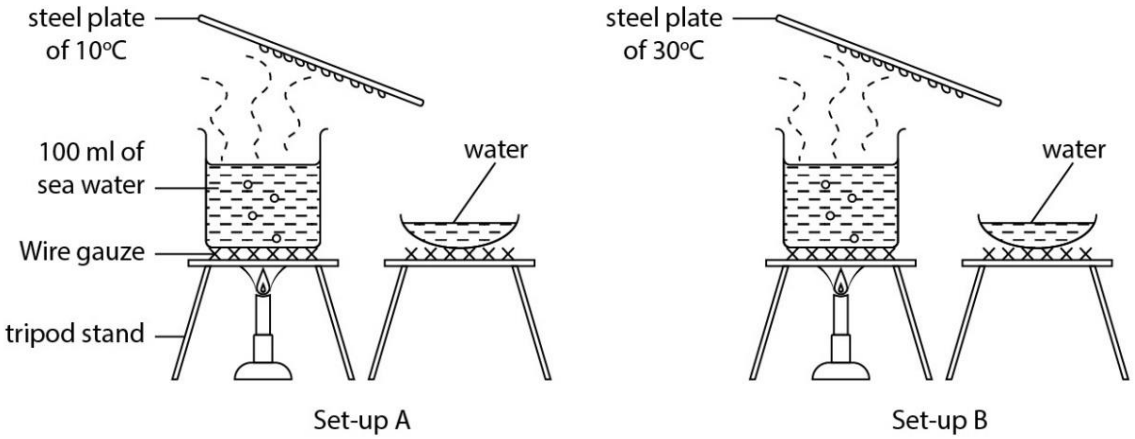
The graph below shows Mr. Adrian's heart rate over a period of time.



Which of the following show correctly Mr.Adrian's activities and his heart rate during this period of time?

	P	Q	R	S
1.	running	walking	sitting	sleeping
2.	sleeping	running	walking	sitting
3.	sleeping	walking	running	sitting
4.	walking	running	sleeping	sitting

25. Study the set-ups below carefully. Two identical beakers of sea water were heated at the same time for fifteen minutes. The amount of heat supplied in set-up A and set-up B was the same.



Set-up A Set-up B

Which of the following statements about the experiment is/are correct?

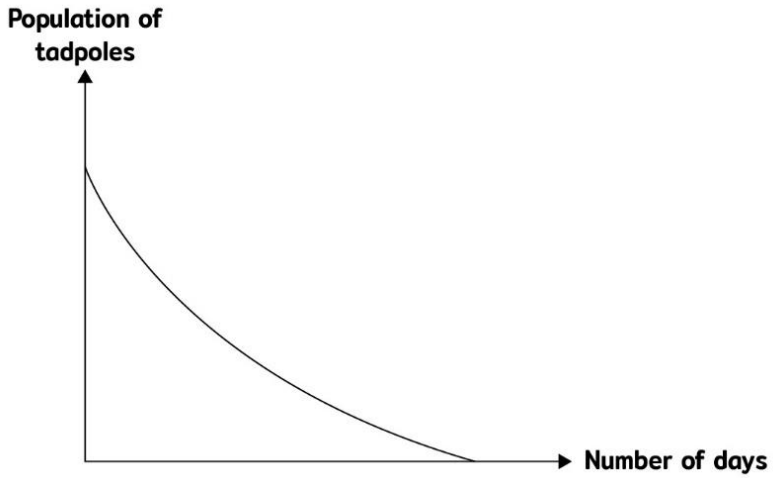
A. The volume of water collected in set-up B was less than the volume of water collected in set-up A after five minutes.

B. Both the steel plates gained heat from the water vapour and this affected the rate of condensation.

C. The sea water that was left in each beaker was saltier at the end of the experiment.

1. A only
2. A and C only
3. B and C only
4. A, B and C

26. Study the graph below.

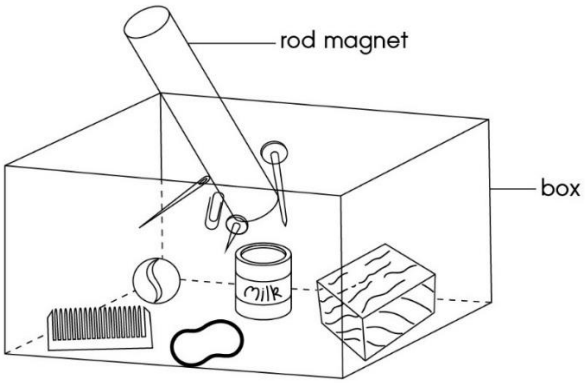


What are the likely reasons for the change in the population of tadpoles in the pond?

A. Many of the tadpoles have changed into frogs.
B. There was a period of dry weather.
C. There was an abundance of algae in the pond.
D. The number of predators increased.

1. A and C only
2. B and C only
3. A, B and D only
4. A, B, C and D

27. A rod magnet was placed among a pile of objects in a box. The diagram below shows the observation when the magnet was taken out from the box.



The same objects clung to the magnet when the experiment was repeated thrice.

A. Not all objects in the box are magnetic.

B. Objects that clung to the magnet are magnetic objects.

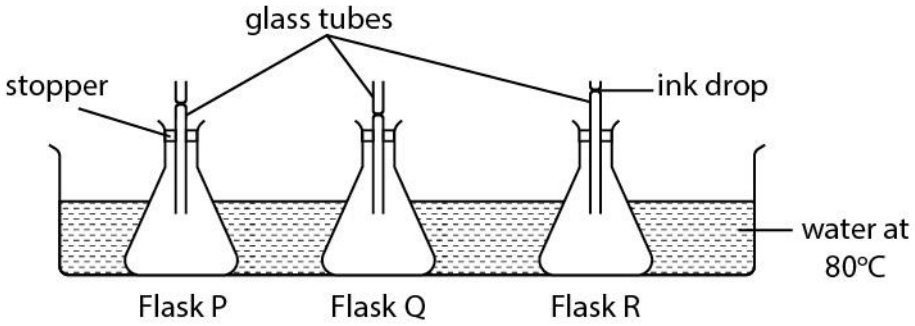
C. A magnet always comes to rest in a North-South direction.

D. Objects that did not cling to the magnet are made of non-metals.

What can you conclude from the experiment?

1. A only
2. B only
3. A and B only
4. A, B and D only

28. An experiment was conducted with three flasks P, Q and R. Each flask contained a different type of gas. At the beginning of the experiment, the ink drops in all three glass tubes were at the same level. However, when the flasks were placed in a basin of water at 80°C, each ink drop rose to a different level as shown below.

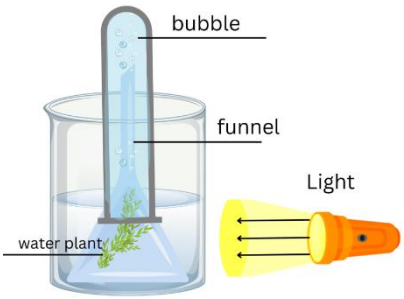


What can we conclude from the experiment?

A. The gases in flasks Q and R expand by the same amount.
B. The gas in flask P expands less than the gas in flask Q.
C. The gas in flask Q expands less than the gas in flask R.
D. The gas in flask R expands more than the gas in flask P.

1. C only
2. B and D only
3. C and D only
4. A, C and D only

29. Lucas shone a strong light source at a water plant. He placed the set-up in a dark room.



Lucas added 5 g of baking soda into water and counted the number of bubbles produced in half an hour. Baking soda is a substance that produces carbon dioxide when mixed with water. He repeated the experiment with different amounts of baking soda added into the water. He then recorded his findings in the table below.

Amount of baking soda added (g)	Number of bubbles produced in half an hour
0	10
5	18
10	30
15	45

When Lucas tested the gas collected with a glowing splint, the splint burns brightly. Which of the following conclusions could Lucas arrive at?

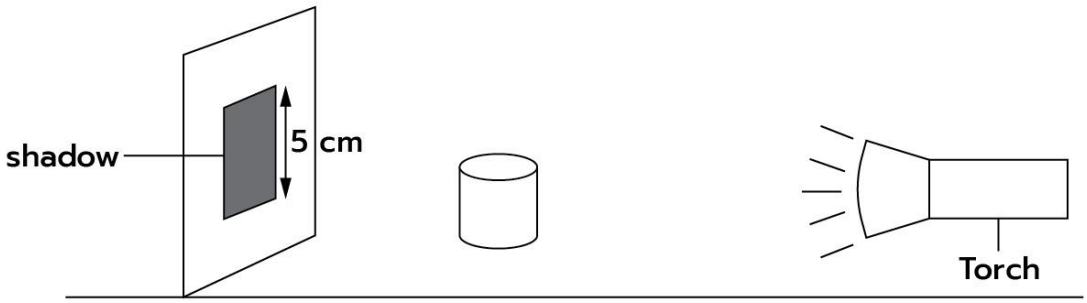
A. Water plants produce oxygen in the presence of light.

B. The amount of baking soda affects the rate of photosynthesis.

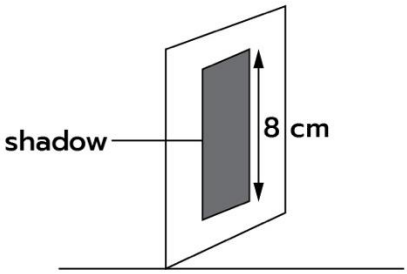
C. The greater the amount of carbon dioxide, the faster the rate of photosynthesis.

1. A only
2. A and B only
3. B and C only
4. A, B and C

30. Candy arranged three things, a screen, an object and a light source, as shown in the diagram below. A shadow of the object was cast on the screen when the light source was turned on. She then measured the height of the shadow cast on the screen.



Candy then made a change in the position of one of the things and the height of the shadow was measured again.



Which of the following may be the change Candy made in order to obtain a shadow of 8 cm?

A. The object was moved nearer to the screen.
B. The light source was moved nearer to the object.
C. The object was moved further away from the screen.
D. The light source was moved further away from the object.

1. A and B only
2. A and D only
3. B and C only
4. C and D only

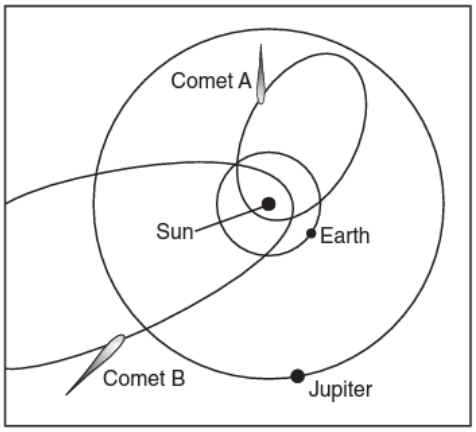
31. Erice used three identical plastic bags in on experiment to find out the conditions in which plastic bags would break down the fastest. The plastic bags were labelled as A, B and C. The table below shows the place in which the plastic bags were kept during the experiment.

Plastic bag	Place
A	Kept outside the house exposed to sunlight
B	Kept inside the house away from direct sunlight
C	Kept inside a box in complete darkness inside the house

What variable did Erice change in this experiment?

1. The strength of the plastic bags.
2. The amount of light the plastics bags were exposed to
3. The number of plastic bags kept under the various conditions
4. The time the plastic bags were kept under the various conditions

32. The diagram below shows four objects and their orbits around the Sun, as seen from space.



Which statement is true about all of the objects shown in the diagram?

1. They produce their own light.
2. They belong to our solar system.
3. They are composed mostly of gases.
4. They are the same distance from the Sun.

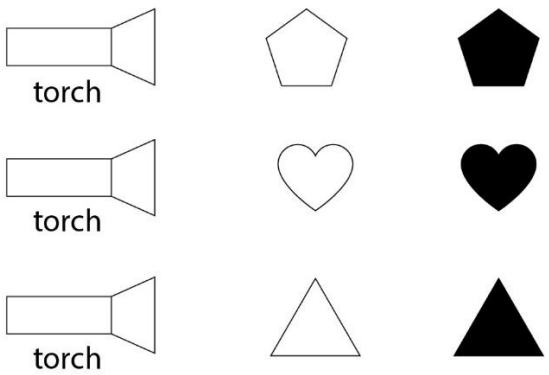
33. The table below shows how the number of iron beads attracted by on electromagnet changes when the number of batteries used to produce the electromagnet increases.

Number of batteries	Number of iron beads attracted
1	1
2	3
3	5
4	7
5	9

If the same pattern of change takes place, the least number of batteries needed for the electromagnet to attract 13 iron beads is _____ batteries

1. 6 batteries
2. 7 batteries
3. 8 batteries
4. 9 batteries

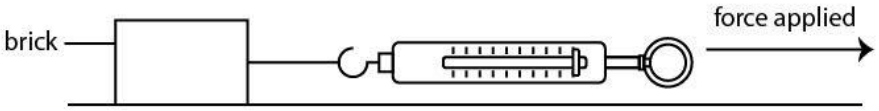
34. A source of light is cast on different objects as seen in the diagram below.



Based on your observations, which of the following stat is true?

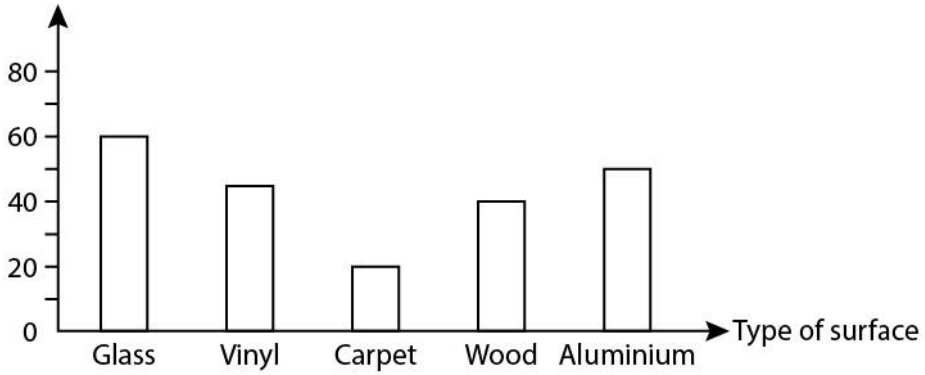
1. The shape of a shadow is similar to the object.
2. A patch of light is seen on a screen when light is cast on the object.
3. A shadow is formed when an object allows light to pass through.
4. A shadow is formed when an object far from the light source.

35. Kirin used an instrument called a force meter to apply an equal force of 10 N to pull a brick over different surfaces. He then measured the distance moved by the brick over each surface.



The graph below shows the results of the experiment.

Distance moved by brick (cm)

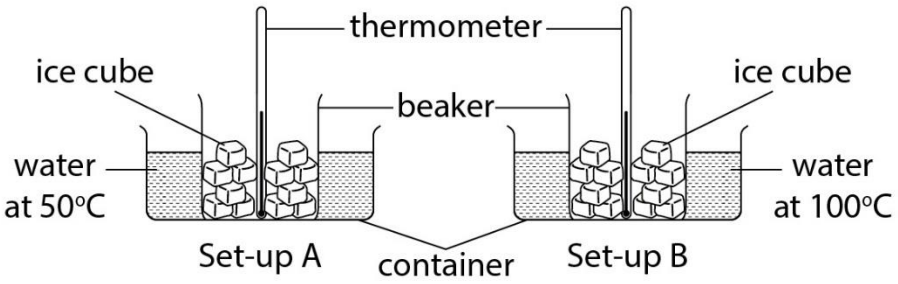


Which of Kirin's conclusions about the experiment are correct?

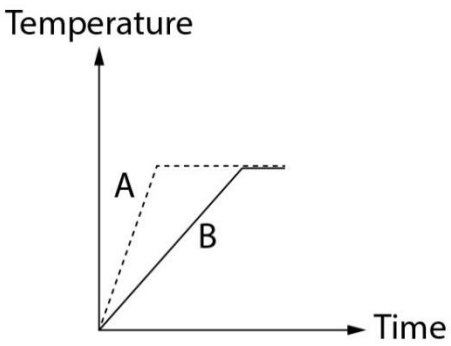
A. The friction between the carpet surface and the brick is the greatest.
B. The wood surface is rougher than the vinyl surface.
C. The friction between the glass surface and the brick is the least.
D. The greater the distance moved by the brick, the rougher the surface.

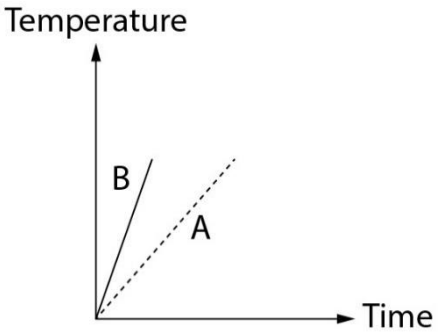
1. A and B only
2. A and C only
3. A, B and C only
4. B, C and D only

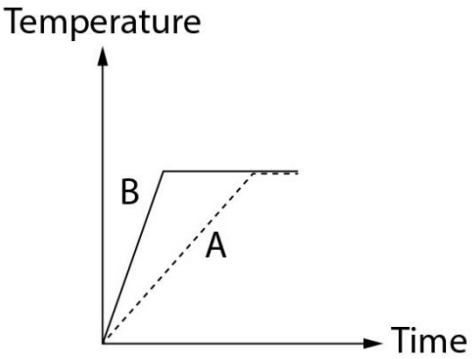
36. The beakers in set-ups A and B contain the same number of identical ice cubes. The beakers are then placed in containers of water at different temperatures as shown below.

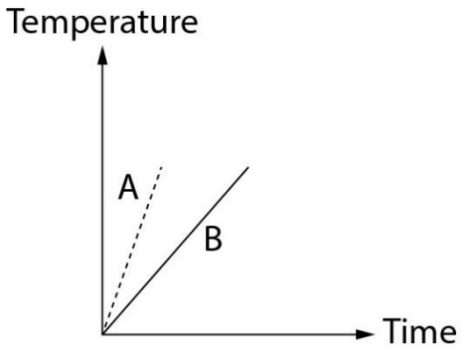


Which of the following shows the correct temperature changes in the beakers over a period of two hours?

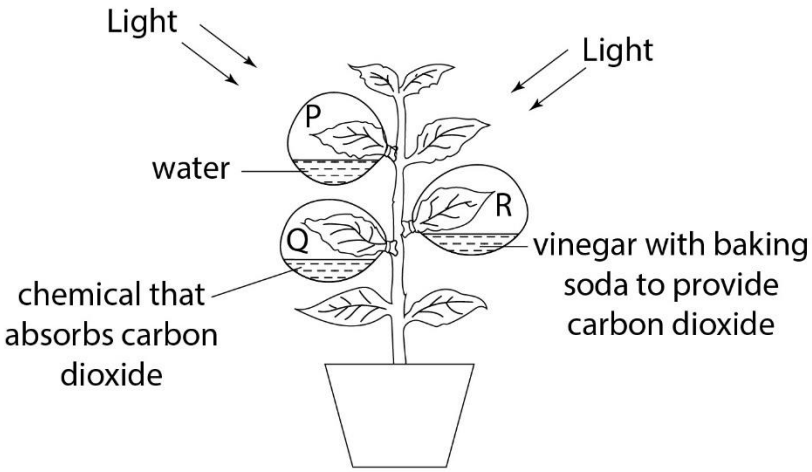
1.


2.


3.


4.


37. Hann left a pot of plant in a dark cupboard for two days. After that, he put the same pot of plant under the sun in the garden and wrapped leaves P, Q and R with clear plastic bags as shown in the diagram below.



After three days, Hann removed leaves P, Q and R. He conducted an iodine test on the three leaves. Which one of the following sets of results would he most likely obtain?

	Results of iodine test		
	Leaf P	**Leaf Q**	**Leaf R**
1.	Iodine remained brown	Iodine turned dark blue.	Iodine remained brown.
2.	Iodine remained brown.	Iodine turned dark blue.	Iodine remained brown
3.	Iodine turned dark blue.	Iodine remained brown	Iodine remained brown.
4.	Iodine turned dark blue.	Iodine remained brown.	Iodine turned dark blue.

38. Chann wants to investigate the factors that affect the rate of evaporation of water. He prepares three set-ups P, Q and R as shown in the table below.

Factor	Set - up		
	P	Q	R
Temperature of water (°C)	60	60	60
Wind speed (km/hr)	10	20	10
Exposed surface area of container (cm^2)	200	200	100
Volume of water (cm^3)	500	500	500

Which of the following experimental aims.

A. To determine whether the wind speed affects the rate of evaporation of water

B. To determine whether the volume of water affects the rate of evaporation of water

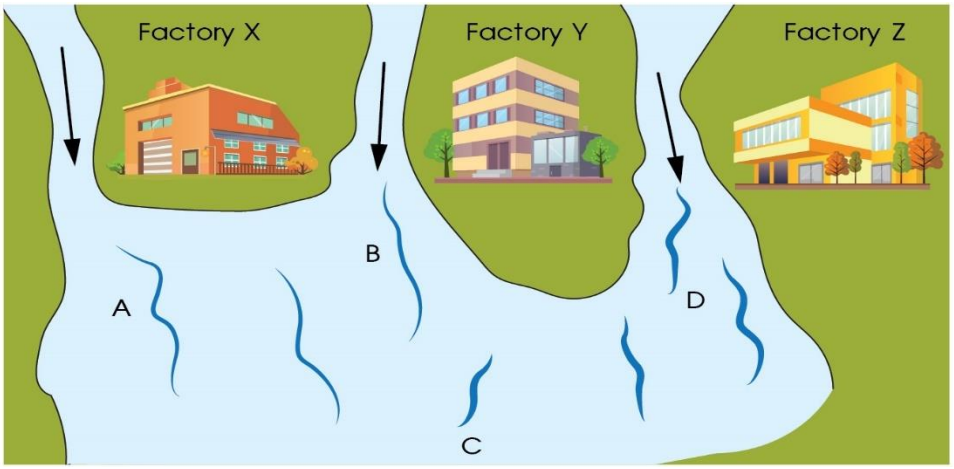
C. To determine whether the temperature of the water affects the rate of evaporation of water

D. To determine whether the amount of exposed surface area affects the rate of evaporation of water

Will he able to find out from his set-ups?

1. A and B only
2. A and D only
3. B and C only
4. B and D only

39. There were three factories, Factory X, Y and Z, near Sara's house. Factories X, Y and Z produced chemicals X, Y and Z respectively. Sara took some samples of water and tested them for the chemicals they contained.



Sample	Chemical X	Chemical Y	Chemical Z
P	✗	✓	✓
Q	✓	✓	✗
R	✓	✓	✓
S	✓	✗	✗

Which of the following correctly identifies where samples P, Q, R and S were collected?

	Sample P was Collected at	Sample Q was collected at	Sample R was collected at	Sample S was collected at
1.	B	D	C	A
2.	D	B	C	A
3.	D	B	A	C
4.	A	B	D	C

40. Which of the following statements correctly describe most leaves?



A. They take in water from the air and produce food.

B. They take in oxygen and produce carbon dioxide at night.

C. They take in carbon dioxide and produce oxygen during photosynthesis.

D. They trap light energy to combine carbon dioxide and water into food and oxygen.

E. They have a green pigment called chlorophyll that gives them their green colour.

1. A and B only
2. C and D only
3. B, C, D and E only
4. A, B, C, D and E

คำตอบวิชาวิทยาศาสตร์ ชั้นประถมศึกษาปีที่ 5

ข้อ	คำตอบ	ข้อ	คำตอบ
1	1	21	4
2	2	22	1
3	2	23	2
4	1	24	3
5	3	25	4
6	4	26	3
7	2	27	3
8	2	28	3
9	3	29	4
10	1	30	3
11	4	31	2
12	4	32	2
13	2	33	2
14	3	34	4
15	2	35	3
16	4	36	3
17	2	37	4
18	3	38	2
19	1	39	2
20	1	40	3