
SCIENCE ITEMS

Guide to the Content and Layout of This Book

The *Science Items* book contains, in a ready-to-use form, the released TIMSS 1995 and TIMSS 2003 science assessment items that appeared in Book 5, *Science Concepts and Science Items*. Each item is presented on a separate page to facilitate printing.

The two books are designed to be used in tandem. The *Science Items* book is designed to facilitate the construction of sets of items tailored to the purpose of the user—most likely a classroom teacher. Users can select items for their own purpose based on their reading of the *Science Concepts and Science Items* book, print these and administer them to students. Student responses can be scored using the scoring instructions presented in the *Science Concepts and Science Items* book, and may be compared to the international benchmarks presented there.

This table shows the temperature and precipitation (rain or snow) in four different towns on the same day.

	Town A	Town B	Town C	Town D
Lowest Temperature	13°C	-9°C	22°C	-12°C
Highest Temperature	25°C	-1°C	30°C	-4°C
Precipitation (rain or snow)	0 cm	5 cm	2.5 cm	0 cm

Where did it snow?

- A. Town A
- B. Town B
- C. Town C
- D. Town D

Item Number: N1

The Moon produces no light, and yet it shines at night. Why is this?

- A. The Moon reflects the light from the Sun.
- B. The Moon rotates at a very high speed.
- C. The Moon is covered with a thin layer of ice.
- D. The Moon has many craters.

Item Number: O4

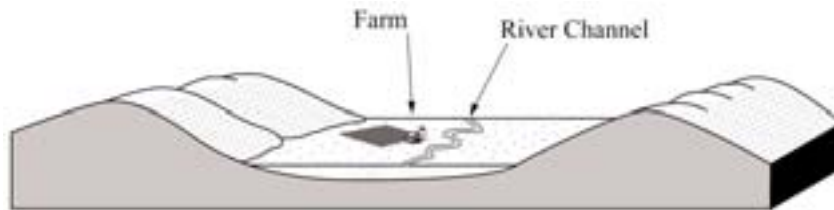
Sometimes mountains can still have snow on their tops when the snow on the lower parts of the mountains has melted. What makes this happen?

Item Number: O9

The Sun is bigger than the Moon, but they appear to be about the same size when you look at them from the Earth. Why is this?

Item Number: Y1

The diagram shows a river flowing through a wide plain.
The plain is covered with several layers of soil and sediment.

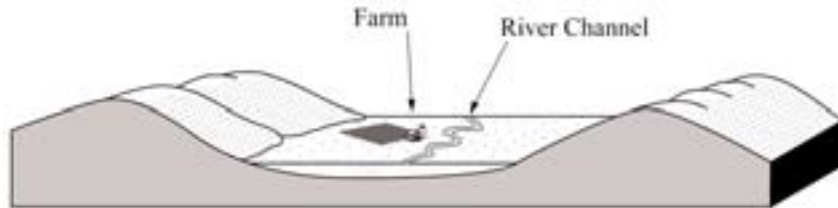


- a. Write down one reason why this plain is a good place for farming.

- b. Write down one reason why this plain is NOT a good place for farming.

Item Number: Z1A

The diagram shows a river flowing through a wide plain.
The plain is covered with several layers of soil and sediment.



- a. Write down one reason why this plain is a good place for farming.

- b. Write down one reason why this plain is NOT a good place for farming.

Item Number: Z1B

Which one of these refers only to living things?

- A. clouds, fire, rivers
- B. fire, rivers, trees
- C. rivers, birds, trees
- D. birds, trees, worms
- E. trees, worms, clouds

Item Number: N2

Your temperature is taken when you are NOT sick. Which temperature is CLOSEST to what the thermometer would show?

- A. 29°C
- B. 37°C
- C. 100°C
- D. 212°C

Item Number: N3

This is a drawing of a bird's foot.



Where would you be MOST likely to find such a bird?

- A. a forest
- B. a meadow
- C. a cornfield
- D. a desert
- E. a lake

Item Number: N5

A baby chick grows inside an egg for 21 days before it hatches.
Where does the baby chick get its food before it hatches?

- A. It is fed by the mother hen.
- B. It doesn't need any food.
- C. It makes its own food.
- D. It uses food stored in the egg.
- E. It eats the egg shell.

Item Number: N6

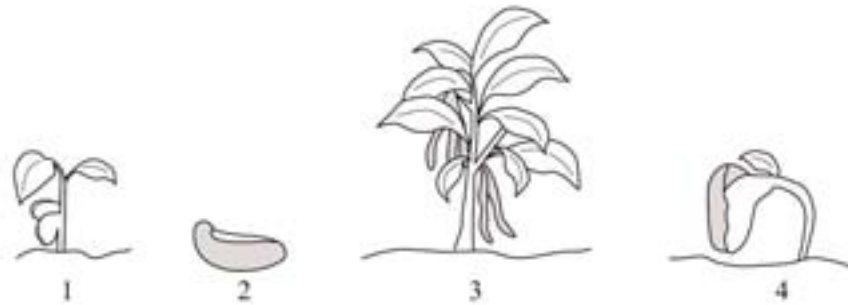
John kept some seeds on moist cotton in a dish. Mike put the same kind of seeds in a dish beside John's dish, and covered them with water. After two days, John's seeds sprouted, but Mike's did not.

Which is the most likely reason?

- A. Mike's seeds needed more air.
- B. Mike's seeds needed more light.
- C. Mike did not put the dish in a warm enough place.
- D. Mike should have used a different kind of seed.

Item Number: O2

The pictures show a bean plant at different stages of growth.
(The pictures are not drawn on the same scale.)



In what order do these stages take place?

- A. 2, 1, 3, 4
- B. 2, 4, 1, 3
- C. 3, 2, 1, 4
- D. 4, 2, 3, 1
- E. 4, 3, 2, 1

Item Number: O3

Which animal produces milk for its young?

A. Chicken

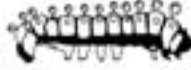
B. Frog

C. Monkey

D. Snake

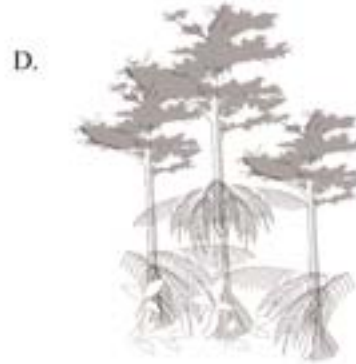
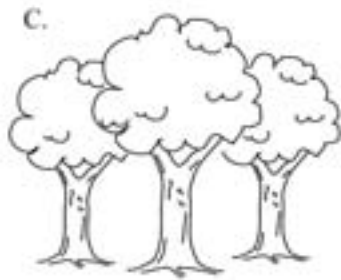
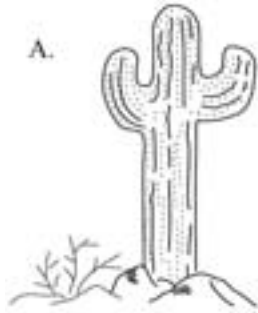
Item Number: O7

When this caterpillar becomes an adult, what will it look like?



Item Number: P1

Which picture shows plants commonly found in a desert?



Item Number: P2

Birds are different from insects in that birds have

A. wings

B. legs

C. eyes

D. eggs

E. feathers

Item Number: P8

Seeds develop from which part of a plant?

A. Flower

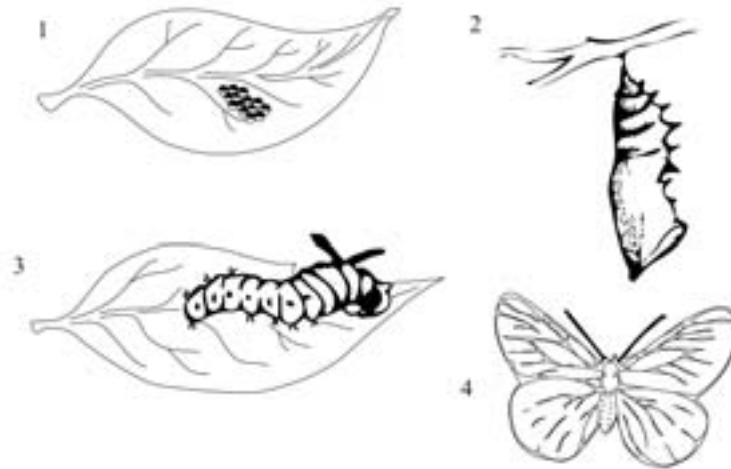
B. Leaf

C. Root

D. Stem

Item Number: P9

A butterfly sitting on a leaf laid some small eggs. The pictures show the changes that took place to the eggs.



In what order did the changes take place?

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

Item Number: Q1

What is the BEST reason for including fruits and leafy vegetables in a healthy diet?

- A. They have a high water content.
- B. They are the best source of protein.
- C. They are rich in minerals and vitamins.
- D. They are the best source of carbohydrates.

Item Number: Q2

When an animal breathes faster and its heart beats faster, the animal is MOST likely

- A. cold
- B. frightened
- C. resting
- D. sleeping

Item Number: Q5

Which picture does NOT show an insect?

A.



Butterfly

B.



Grasshopper

C.



Spider

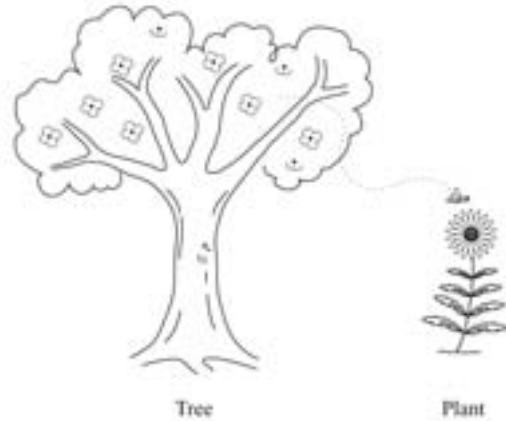
D.



Ant

Item Number: Q6

The picture shows how an insect can carry pollen from the flowers of a tree to the flowers of a small plant.



What will most likely happen?

- A. The offspring from the tree will look like the plant.
- B. The offspring from the plant will look like the tree.
- C. The offspring from the plant will look like the tree and the plant.
- D. Nothing will happen because no offspring will be produced.

Item Number: R3

What is the MOST important reason for people to use a sun-screen when they are outside in sunlight?

- A. It protects the skin against dangerous rays from the sun.
- B. It makes the skin more tanned.
- C. It makes the skin smooth.
- D. It makes the skin feel cooler.

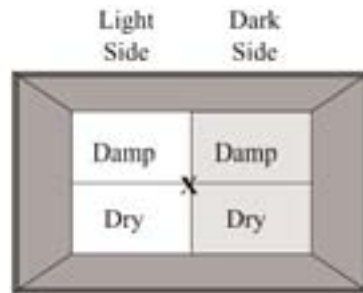
Item Number: R4

Which one of these groups contains only animals with a backbone (vertebrates)?

- A. Earthworm, snake, crayfish
- B. Spider, clam, dragonfly
- C. Crayfish, snake, horse
- D. Clam, fish, earthworm
- E. Horse, snake, fish

Item Number: R6

Here is a picture of the inside of a box. If you put a worm on the X on the bottom of the box, to which corner would you expect it to go?



- A. Damp and light
- B. Dry and light
- C. Damp and dark
- D. Dry and dark

Item Number: R7

Write down one thing your heart does that helps the other parts of your body.

Item Number: W2

Write down the reason why we get thirsty on a hot day and have to drink a lot.

Item Number: W3

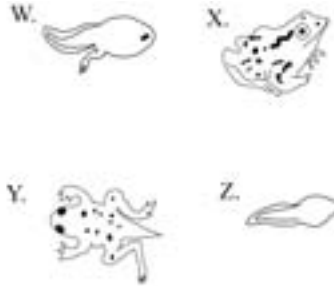
The human brain is inside the skull. Write down one advantage of the skull being thick and strong.

Item Number: W4

Write down one reason why animals could NOT live in a world without plants.

Item Number: X2

The pictures show different stages in a frog's growth.



Write the letters in the boxes to show the pictures in the order of the frog's growth.

Item Number: X4

This chart shows four groups of animals. In which group do fish belong?

	Land Animal	Water Animal
Does have bones	A	B
Does not have bones	C	D

Item Number: X5

Write down two changes that occur in children's bodies as they become adults.

Item Number: Y2A

Write down two changes that occur in children's bodies as they become adults.

Item Number: Y2B

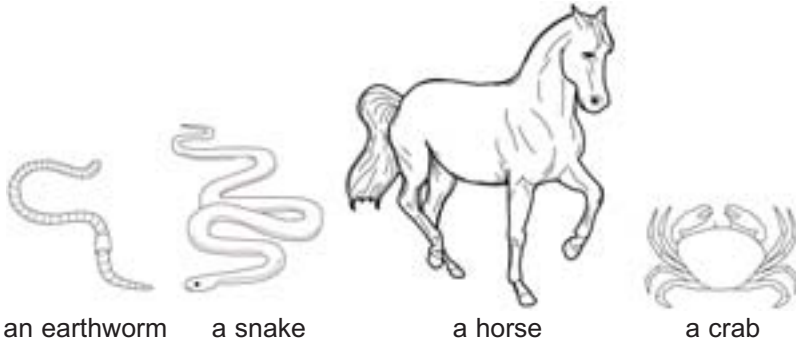
One way for animals to protect themselves is by escaping (running, flying, or swimming away). What are two other ways they protect themselves?

Item Number: Y3A

One way for animals to protect themselves is by escaping (running, flying, or swimming away). What are two other ways they protect themselves?

Item Number: Y3B

Use the pictures to answer the questions. (Use each animal once only.)



An animal that has a hard outside skeleton is

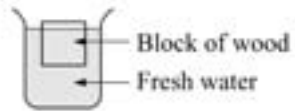
An animal without a backbone that has many segments to its body is

An animal that has hair and an inside skeleton is

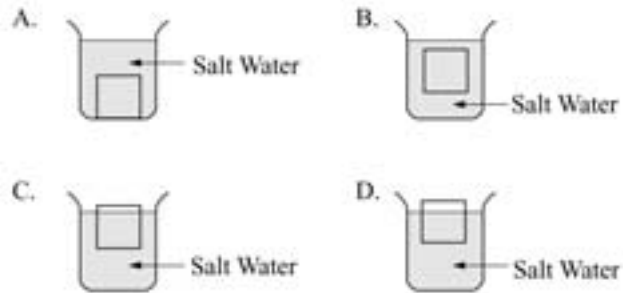
An animal that has a scaly skin and an inside skeleton is

Item Number: Z2

The picture shows a block of wood floating in fresh water.



If this block were placed in salt water from the ocean, which picture shows what would happen?



Item Number: N4

Keisha is pushing her bicycle up a hill. Where does Keisha get the energy to push her bicycle?



- A. From the food she has eaten
- B. From the exercise she did earlier
- C. From the ground she is walking on
- D. From the bicycle she is pushing

Item Number: N7

A powder made up of both white specks and black specks is likely to be

- A. a solution
- B. a pure compound
- C. a mixture
- D. an element

Item Number: N8

Which of the boxes X, Y, or Z has the LEAST mass?

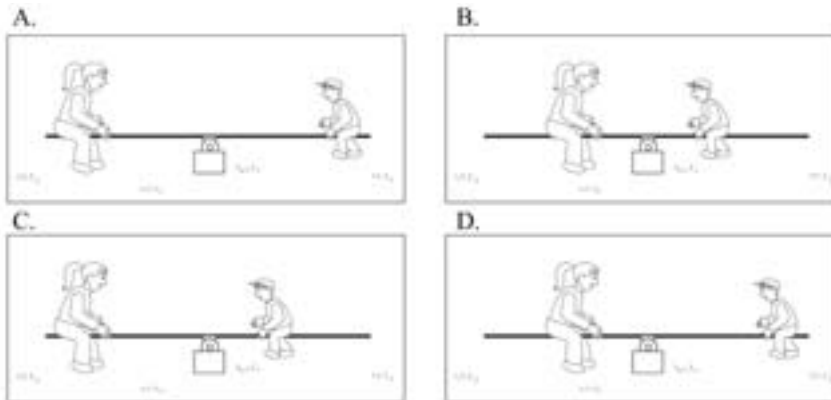


- A. X
- B. Y
- C. Z
- D. All three boxes have the same mass.

Item Number: N9

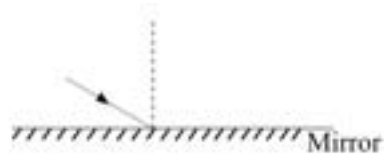
A girl wanted to play on a seesaw with her little brother.

Which picture shows the best way for the girl, who weighed 50 kg (kilograms), to balance her brother, who weighed 25 kg?

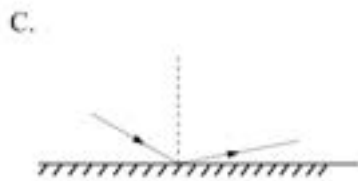
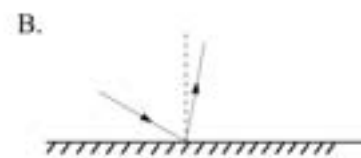
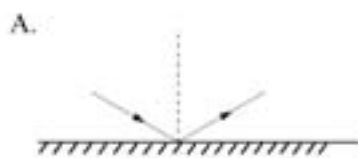


Item Number: O1

A beam of light strikes a mirror as shown.



Which picture best shows what the reflected light would look like?



Item Number: O5

In a box there is a mixture of iron filings and sand. Which is the easiest way to separate the iron filings from the sand?

- A. Pour water on the mixture
- B. Use a magnifying glass
- C. Use a magnet
- D. Heat the mixture

Item Number: O8

Which is NOT used as an energy source?

A. Flowing water

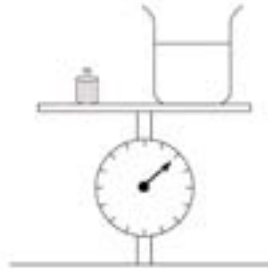
B. Iron ore

C. Sun

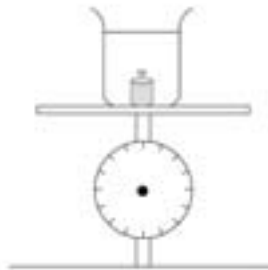
D. Oil

Item Number: P3

Elizabeth put a weight and a beaker of water on a scale, as shown in the first picture.



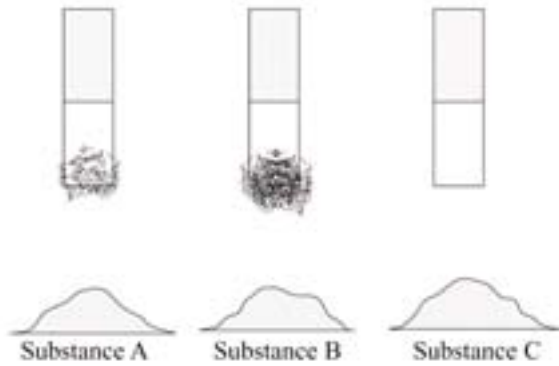
Then she moved the beaker and put the weight in it, as shown in the second picture.



What will the scale show now? Draw an arrow on the second picture to show your answer.

Item Number: P4

Each of the three magnets shown has been dipped into the substance below it. Which of the substances could be coffee?



- A. A only
- B. B only
- C. C only
- D. A and B only

Item Number: P5

Which travels fastest?

A. A train

B. An airplane

C. Sound

D. Light

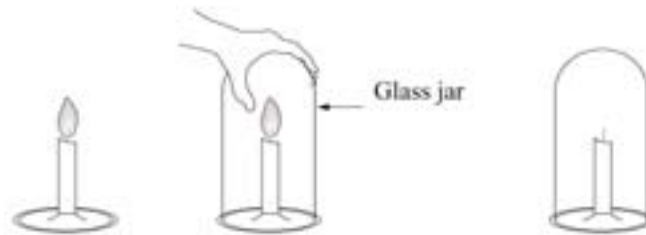
Item Number: P7

Some things were buried in wet ground. Several years later they were dug up. Which thing is MOST likely to have stayed the same?

- A. An egg shell
- B. A plastic cup
- C. A paper plate
- D. An orange peel

Item Number: Q3

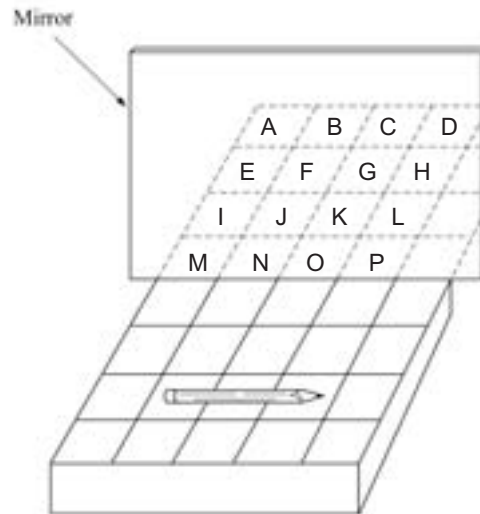
When a glass jar is placed over a lighted candle, the flame goes out.



Why does this happen?

Item Number: Q4

The picture shows a pencil that is lying on a shelf in front of a mirror. Draw a picture of the pencil as you would see it in the mirror. Use the patterns of lines on the shelf to help you.



Item Number: Q8

Ken put a thermometer in a glass filled with hot water. Why does the liquid inside the thermometer rise?

- A. Gravity pushes it up.
- B. Air bubbles are released.
- C. Heat from the water makes it expand.
- D. Air pressure above the water pulls it up.

Item Number: Q9

A watering can is almost filled with water as shown.



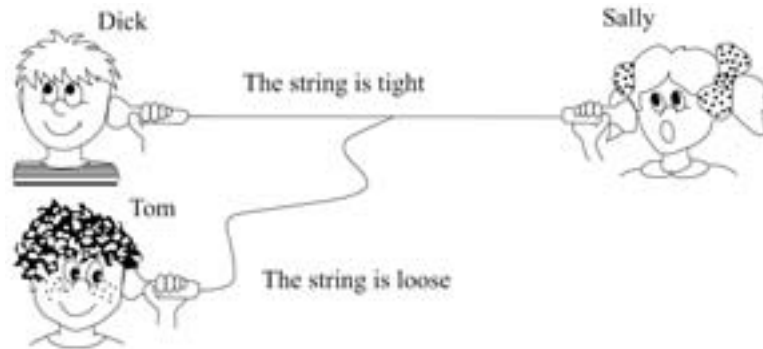
The watering can is tipped so that the water just begins to drip through the spout.

Draw a line to show where the surface of the water in the can is now.



Item Number: R1

The picture shows Dick and his friends playing with a string-telephone. Sally is speaking. Dick and Tom are trying to listen. Which of them can hear her speak?



- A. Both of them can hear equally clearly.
- B. Neither of them can hear.
- C. Only Tom can hear clearly.
- D. Only Dick can hear clearly.
- E. Both of them hear equally faintly.

Item Number: R5

Which makes its own light?

- A. A mirror
- B. A candle flame
- C. A diamond ring
- D. A magnifying lens

Item Number: R8

One advantage of solar energy is that it

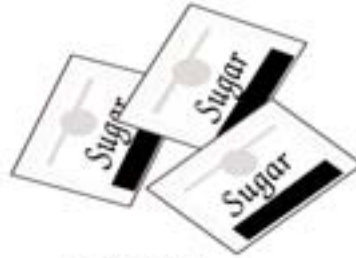
- A. does not pollute
- B. is not renewable
- C. is efficient in any climate
- D. is available at all times

Item Number: R9

The picture shows two forms of sugar — solid cubes and packets of loose crystals. One cube has the same mass of sugar as one packet.



Sugar Cubes



Loose Sugar

Which of the two forms of sugar will dissolve faster in water? _____

Give a reason for your answer.

Item Number: W1

Anna and Uri had identical bowls of soup, both at the same temperature. Anna put a cover on her bowl.



Anna's soup



Uri's soup

Whose soup do you think would stay hot longer?

Give a reason for your answer.

Item Number: X1

The weights of three blocks were compared.



Which one of the three blocks weighs the most?
(A, B, or C): _____

Explain your answer.

Item Number: Z3

Write down one example of how computers help people do their work.

Item Number: O6

To find out whether seeds grow better in the light or dark, you could put some seeds on pieces of damp paper and

- A. keep them in a warm, dark place
- B. keep one group in a light place and another in a dark place
- C. keep them in a warm, light place
- D. put them in a light or dark place that is cool

Item Number: P6

Four children can feel and smell an object inside a bag, but they cannot see it. Which of the following is NOT an observation about the object?

- A. "It is flat at one end and round at the other."
- B. "It smells like peppermint."
- C. "It has a bump on it."
- D. "I hope it is candy."

Item Number: Q7

Some children were trying to find out which of three light bulbs was brightest. Which one of these gives the best START toward finding the answer?

- A. "One bulb looks brightest to me, so I already know the answer."
- B. "All the bulbs look bright to me, so there cannot be an answer."
- C. "It would help if we had a way to measure the brightness of a light bulb."
- D. "We can take a vote and each person will vote for the bulb he or she thinks is the brightest."

Item Number: R2

Write down two different things that people can do to help reduce air pollution.

Item Number: W5A

Write down two different things that people can do to help reduce air pollution.

Item Number: W5B

Write as completely as possible why large oil spills in rivers and seas are harmful to the environment.

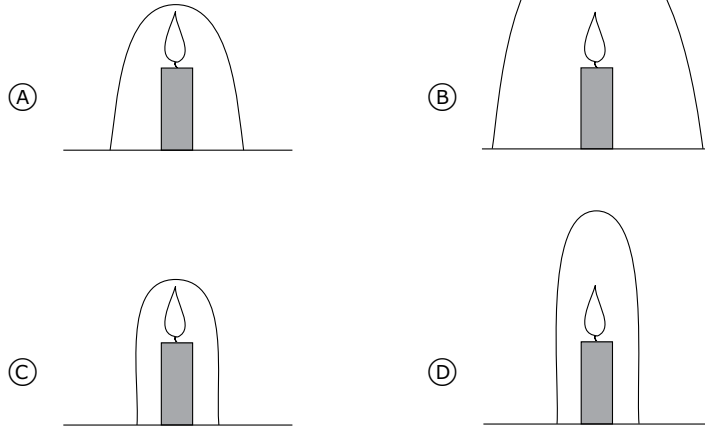
Item Number: X3

If you throw each one of these things away, which will decay fastest?

- Ⓐ A glass bottle
- Ⓑ A metal can
- Ⓒ A plastic bottle
- Ⓓ An apple core

Item Number: S011008

The pictures below show four identical burning candles. Each is covered by a glass container of a different size. Which candle flame will be the **last** to go out?



Item Number: S031061

Which of these activities will result in a different kind of material being formed?

- Ⓐ A nail is left outside and it rusts.
- Ⓑ A glass is dropped and it shatters into small pieces.
- Ⓒ A rubber band is stretched until it breaks.
- Ⓓ A pencil is sharpened to a point.

Item Number: S031420

A strong magnet will separate a mixture of

- Ⓐ clear glass and green glass.
- Ⓑ paper cups and plastic cups.
- Ⓒ iron nails and aluminum nails.
- Ⓓ sand and salt.

Item Number: S011006

Which of these things will dissolve in water?

- Ⓐ iron filings
- Ⓑ wood chips
- Ⓒ sand
- Ⓓ sugar

Item Number: S031035

Many objects are made of metals (like copper, iron and gold).
This is because metals have many useful properties.

A. Name one object that is made out of metal.

B. What property of the metal makes it useful for this object?

Item Number: S031406A

Many objects are made of metals (like copper, iron and gold).
This is because metals have many useful properties.

A. Name one object that is made out of metal.

B. What property of the metal makes it useful for this object?

Item Number: S031406B

Which statement is true for all objects?

- (A) All objects are shiny.
- (B) All objects are hard.
- (C) All objects are rough.
- (D) All objects have mass.

Item Number: S031409

The properties of three materials are compared in the table below.
One of the materials is wood, one is rock and one is iron.

Property	Material 1	Material 2	Material 3
Sinks in water?	Yes	No	Yes
Burns easily?	No	Yes	No
Attracted by a magnet?	Yes	No	No

Identify the three materials by filling in the spaces below.

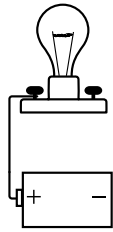
Wood is material number: _____

Rock is material number: _____

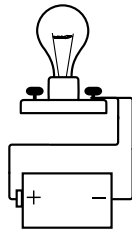
Iron is material number: _____

Item Number: S031053

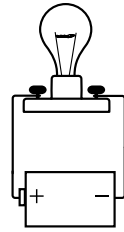
The pictures show a lightbulb connected to a battery.
Which bulb will light?



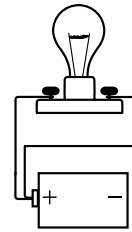
(A)



(B)

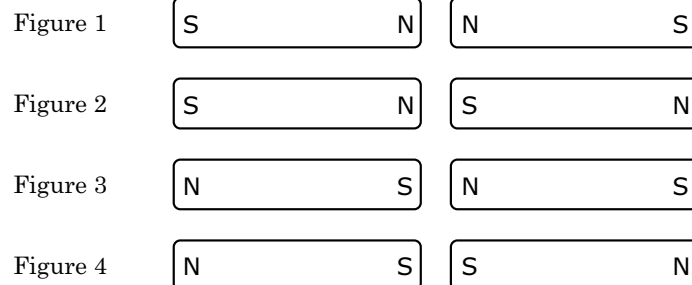


(C)



(D)

Item Number: S031038



Which of the figures above shows a situation where two magnets repel each other?

- (A) Figures 1 and 3
- (B) Figures 2 and 3
- (C) Figures 1 and 4
- (D) Figures 1, 2, 3, and 4

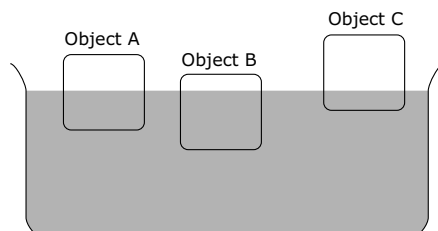
Item Number: S031306

A renewable energy source is a source that will not run out. Which is an example of the use of such a source?

- Ⓐ A coal furnace heating a house
- Ⓑ A windmill pumping water on a farm
- Ⓒ A kerosene lamp lighting a room
- Ⓓ A diesel truck traveling along a road

Item Number: S011011

The picture shows three solid objects of the same size floating in water.



Which object weighs the most?

- (A) Object A
- (B) Object B
- (C) Object C
- (D) They all weigh the same.

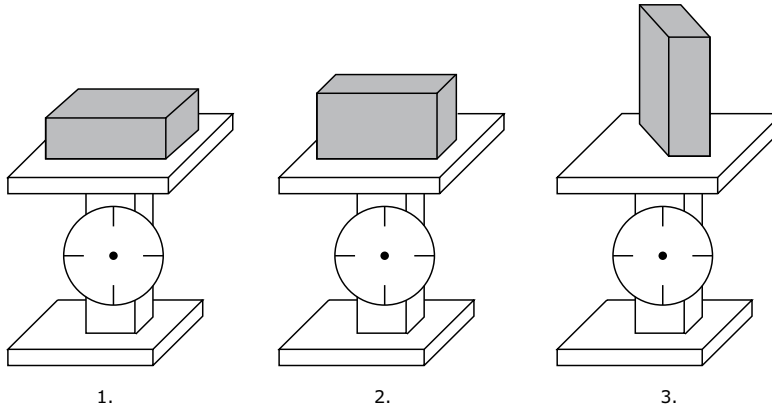
Item Number: S011001

Which of the following can make objects repel each other?

- Ⓐ gravity
- Ⓑ magnetism
- Ⓒ both gravity and magnetism
- Ⓓ neither gravity nor magnetism

Item Number: S031313

The same brick is put on a scale in three different ways.



What will the scale show?

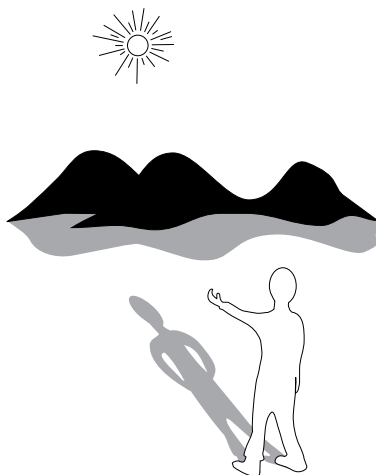
- (A) 1 will show the greatest weight.
- (B) 2 will show the greatest weight.
- (C) 3 will show the greatest weight.
- (D) All will show the same weight.

Item Number: S011009

Jessica gave some reasons why kettles and kitchen pans are often made of copper. Which reason is correct?

- Ⓐ Copper is a good conductor of heat.
- Ⓑ Copper is easy to melt.
- Ⓒ Copper is difficult to shape.
- Ⓓ Copper dissolves in hot water.

Item Number: S011014



There are two things wrong with the shadow of the man shown in the picture above.

Write down the two things that are wrong.

1.

2.

Item Number: S031072

Which pair together could cause a rainbow?

- Ⓐ Fog and clouds
- Ⓑ Rain and snow
- Ⓒ Clouds and ice
- Ⓓ Sunshine and rain

Item Number: S011029

When you make soap bubbles, what is inside the bubbles?

- Ⓐ Air
- Ⓑ Soap
- Ⓒ Water
- Ⓓ Nothing

Item Number: S011017

What happens to water when it boils?

- Ⓐ It changes color.
- Ⓑ It becomes heavier.
- Ⓒ It changes into water vapor.
- Ⓓ It stops bubbling.

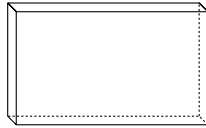
Item Number: S011030

Describe one difference between solids and liquids.

Item Number: S031370

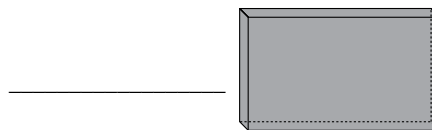
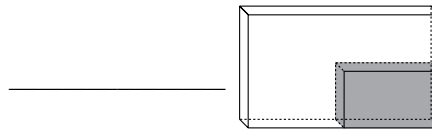
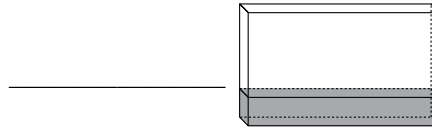


The figure **above** shows a box that contains a material that could be a solid, a liquid or a gas. The material is then put into a box four times as large.



Look at the figures **below**. They show how the different types of material will look when put into the larger box.

- A. Identify which figure shows a solid, which shows a liquid and which shows a gas. (Write the word *solid*, *liquid* or *gas* on the line next to each figure below. Use each word only once.)

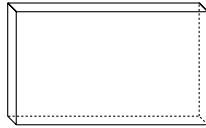


- B. Explain your answers.

Item Number: S031372A

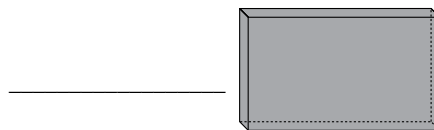
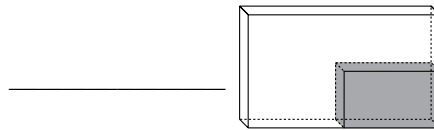
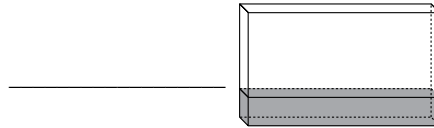


The figure **above** shows a box that contains a material that could be a solid, a liquid or a gas. The material is then put into a box four times as large.



Look at the figures **below**. They show how the different types of material will look when put into the larger box.

- A. Identify which figure shows a solid, which shows a liquid and which shows a gas. (Write the word *solid*, *liquid* or *gas* on the line next to each figure below. Use each word only once.)



- B. Explain your answers.

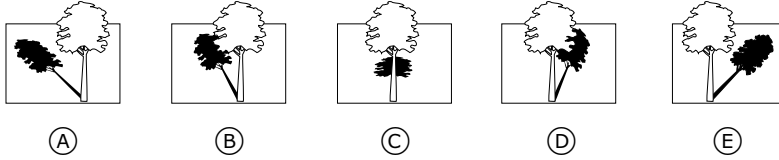
Item Number: S031372B

A closed glass bottle filled with water was left in the freezer overnight.
In the morning the glass was found broken.

Why did freezing the water cause the bottle to break?

Item Number: S031005

At different times during a sunny day a tree was seen to cast a shadow of different length as shown in the diagrams below. Which diagram shows the shadow at mid-day (12 noon)?



Item Number: S011027

Which of these is hottest?

- (A) The Earth
- (B) Mars
- (C) The Moon
- (D) The Sun

Item Number: S011018

Each year the Earth moves once around

- Ⓐ Mars
- Ⓑ the Sun
- Ⓒ the Moon
- Ⓓ all of the other planets

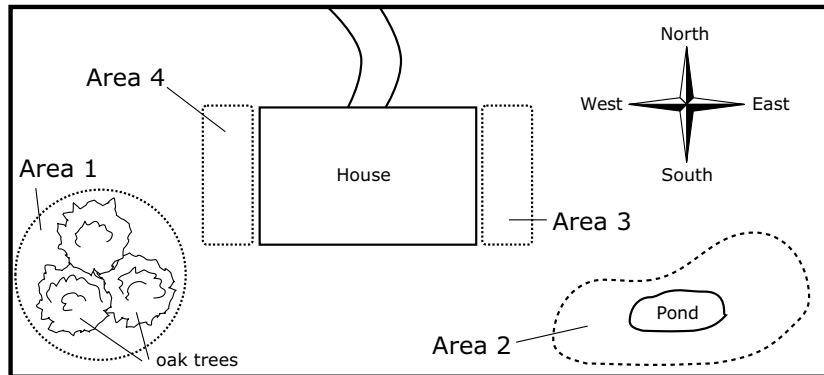
Item Number: S011022

Kate sees a full moon. About how much time will go by before the next full moon?

- (A) one week
- (B) two weeks
- (C) one month
- (D) one year

Item Number: S031060

A plan of Rebecca's house and garden is shown below. There are four areas in the garden where she would like to grow some plants (Areas 1, 2, 3, and 4).



Which side of Rebecca's house will receive the most sun in the morning?

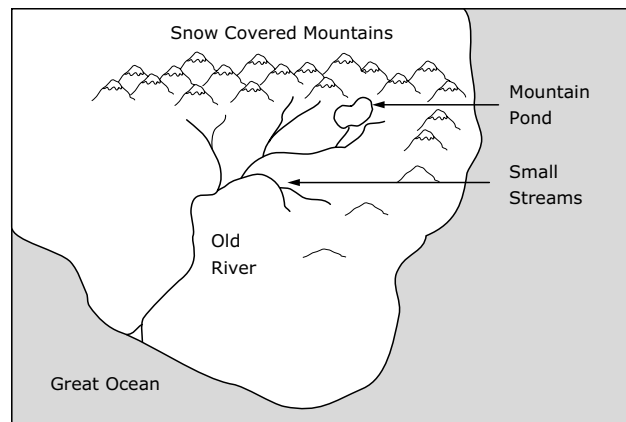
(Check one box.)

- East side (Area 3)
- West side (Area 4)

Explain your answer.

Item Number: S031440

Draw an arrow on the Old River to show the direction that the water flows.



Item Number: S011032

On a hot, humid day the air contains a lot of water vapor. What happens to the water vapor in the air when the air becomes very cold?

Item Number: S031382

The fossils of dinosaurs that lived millions of years ago can be found in

- (A) the water of oceans.
- (B) the ice on ponds.
- (C) the trunks of trees.
- (D) rocks in the ground.

Item Number: S011005

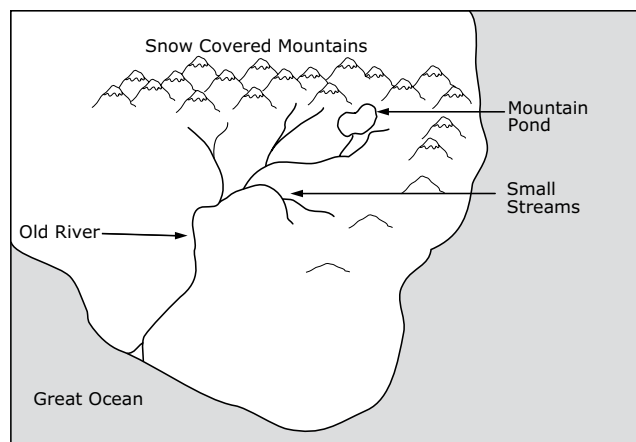
	Clouds in the Sky	Lowest Temperature	Highest Temperature
Town A	no	10°C	25°C
Town B	yes	20°C	30°C
Town C	no	-10°C	-1°C
Town D	yes	-15°C	5°C

The table above shows some weather information for four different towns during a 24-hour period. In which town did it most likely snow?

- (A) Town A
- (B) Town B
- (C) Town C
- (D) Town D

Item Number: S031383

Look at this diagram.

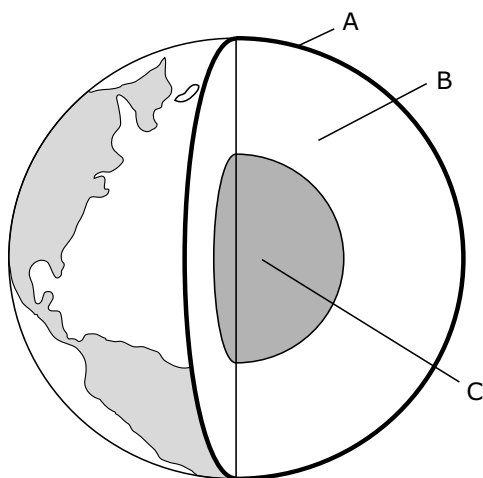


The saltiest water is in the

- (A) Great Ocean
- (B) Mountain Pond
- (C) Old River
- (D) Small Streams

Item Number: S011007

The picture shows the three main layers of the Earth.



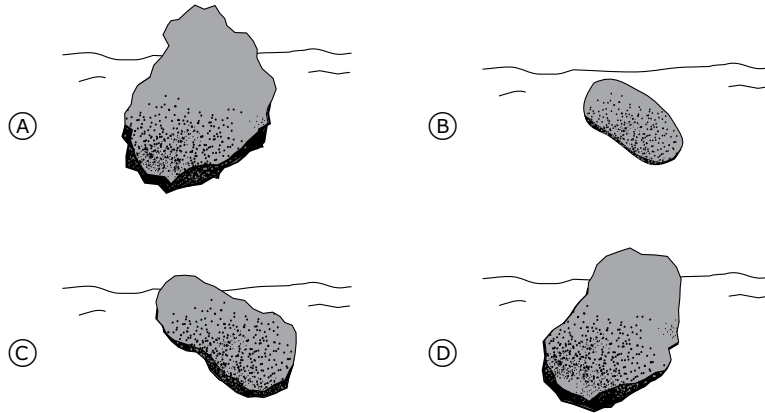
Where is it the hottest?

- Ⓐ Layer A
- Ⓑ Layer B
- Ⓒ Layer C
- Ⓓ All three layers are the same temperature.

Item Number: S012007

Lily found four rocks of the same material in a riverbed. They had different shapes and sizes.

Which rock has most likely been carried the farthest down the river?



Item Number: S031082

What covers most of the Earth's surface?

- Ⓐ Water
- Ⓑ Bare rock
- Ⓒ Farm land
- Ⓓ Cities and towns

Item Number: S011003

What gas in the air do we need to breathe in order to live?

- Ⓐ nitrogen
- Ⓑ oxygen
- Ⓒ carbon dioxide
- Ⓓ hydrogen
- Ⓔ water vapor

Item Number: S011012

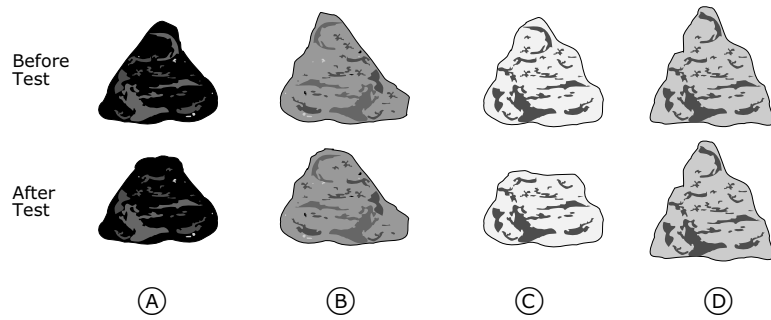
Large amounts of metals like iron and aluminum are found in

- Ⓐ dead trees
- Ⓑ water
- Ⓒ animal bones
- Ⓓ oil wells
- Ⓔ rocks

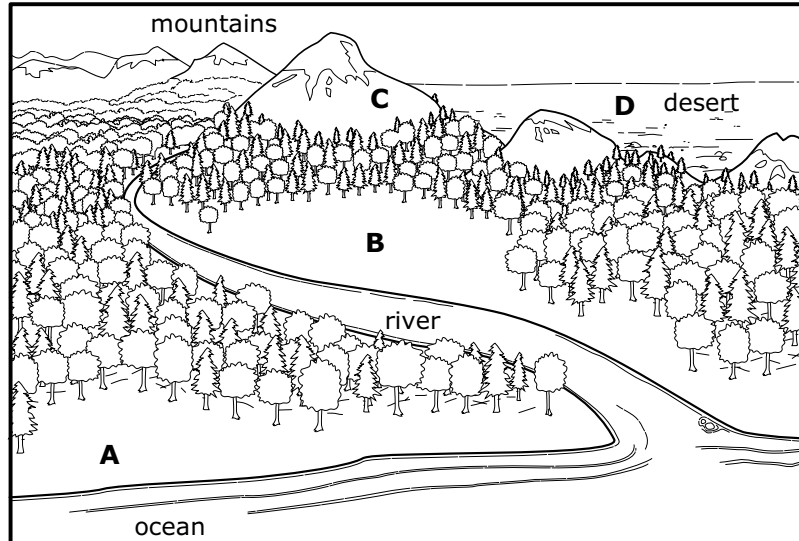
Item Number: S011013

Terry tested four rocks to see how hard they are. He rubbed each of them against some hard steel for one minute. He drew pictures of what they looked like before he rubbed them and after he rubbed them.

Circle which of Terry's rocks is the hardest.



Item Number: S011023



Look at the picture above. Where is the best location to grow crops?

- (A) Location A
- (B) Location B
- (C) Location C
- (D) Location D

Item Number: S031379

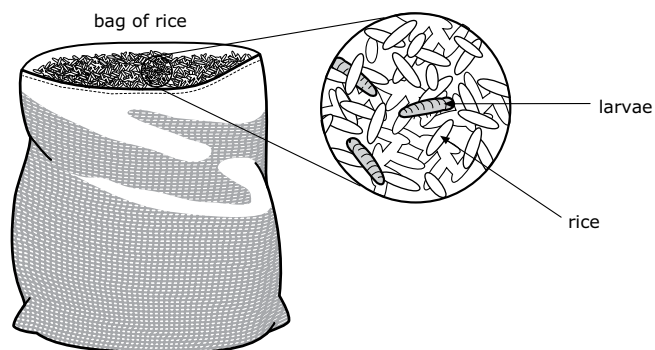
Write down what happens to plants and fish in a river when a factory pours large amounts of hot water into the river.

Item Number: S011019

Minerals are used for making many things including jewelry, chalk, and concrete. Where do we get the minerals needed to make these things?

- Ⓐ from air
- Ⓑ from wood
- Ⓒ from rocks
- Ⓓ from crops

Item Number: S031398



Larvae were found in a bag of rice. What best explains how the larvae got there?

- (A) They came from water in the bag.
- (B) They came from air in the bag.
- (C) They came from the rice itself.
- (D) They came from eggs laid by insects.

Item Number: S031003

Children grow taller and become heavier as they develop into adults.
Describe one other physical change that takes place in children's bodies as they become adults.

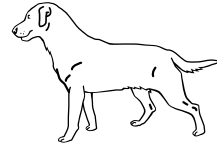
Item Number: S031251



human



frog



dog



butterfly



bird



whale

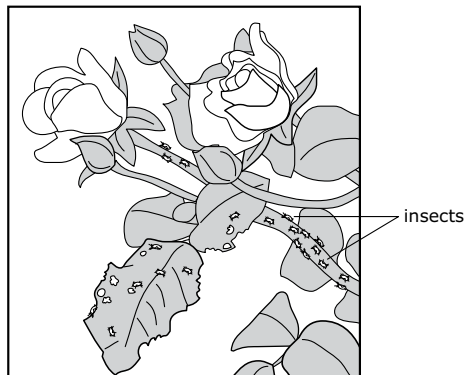
Some of the organisms shown above give birth to young that develop inside the mother. Some of the organisms have young that hatch from eggs that are laid outside the mother.

In the table below, write down the names of the organisms that belong to each group.

Organisms that give birth	Organisms that lay eggs

Item Number: S031252

Rebecca noticed that the leaves on her rose bushes were getting eaten by insects as shown in the picture below.



Rebecca was planning to use insect spray to kill the insects. Her friend Gwen said that the insect spray might kill other insects that are important for some of the flowering plants in the garden.

Why are some insects important for flowering plants?

Item Number: S031443

Which of these insects is correctly paired with its young form?

Housefly



(A)

Mosquito



(B)

Grasshopper



(C)

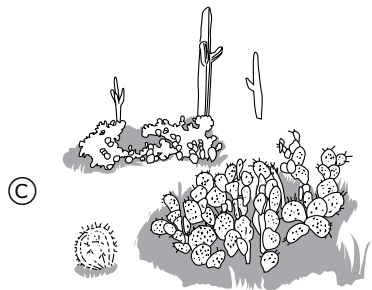
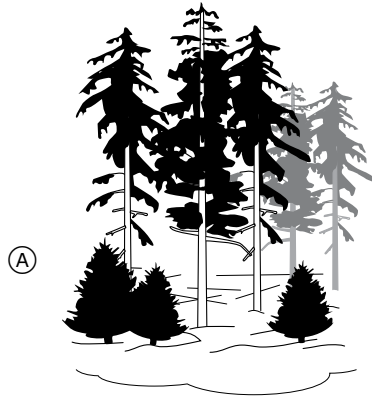
Butterfly



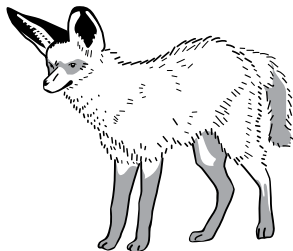
(D)

Item Number: S031017

Which of these types of plants are usually found growing in a tropical rain forest?



Item Number: S031287



Animals usually have physical features that help them live in certain places. Look at the picture shown above. This animal lives in a hot desert.

What physical feature does this animal have that helps it lose heat?

- (A) a thick coat of fur
- (B) a bushy tail
- (C) small eyes
- (D) large ears

Item Number: S031284

Rebecca moved into a new house. She wanted to grow plants in different areas of her garden.

A. Rebecca knows that plants need light to grow.
Why do plants need light to grow?

B. Plants also need water to grow.
Name one other thing plants need in order to grow well.

Item Number: S031439A

Rebecca moved into a new house. She wanted to grow plants in different areas of her garden.

A. Rebecca knows that plants need light to grow.
Why do plants need light to grow?

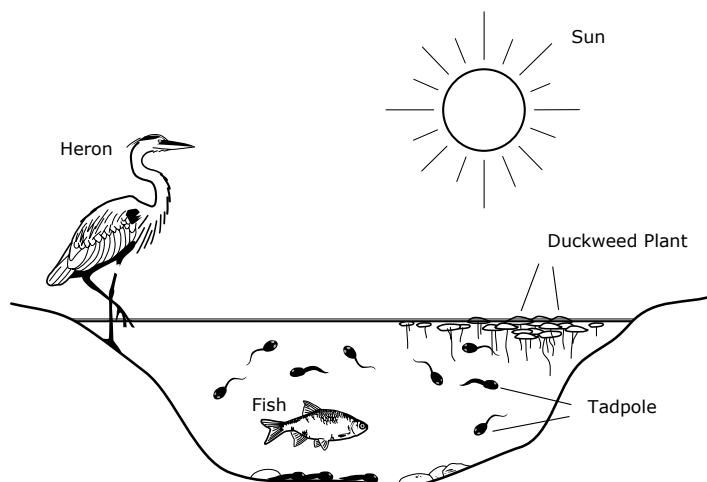
B. Plants also need water to grow.
Name one other thing plants need in order to grow well.

Item Number: S031439B

Which animal eats only plants?

- Ⓐ Cat
- Ⓑ Dog
- Ⓒ Lion
- Ⓓ Rabbit

Item Number: S011010

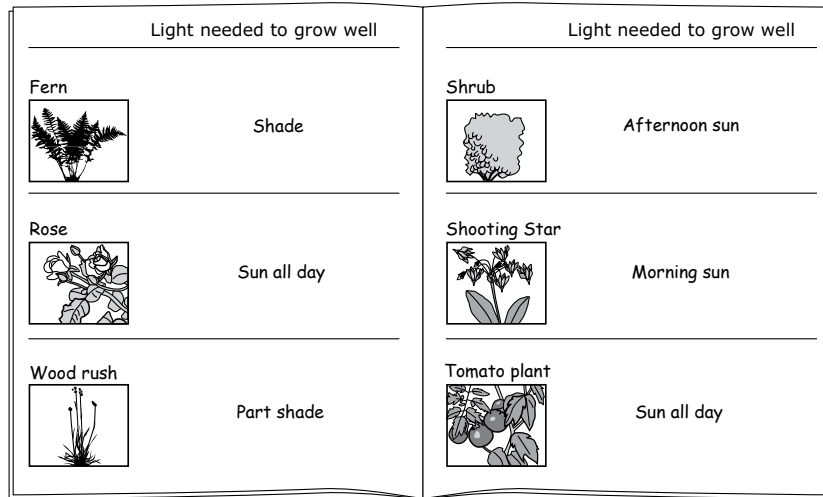


The picture above shows a pond and some of the organisms that live in and around the pond. They all depend on each other for food. The tadpole most likely gets its food from which of the following?

- (A) sun
- (B) fish
- (C) duckweed plant
- (D) heron

Item Number: S031338

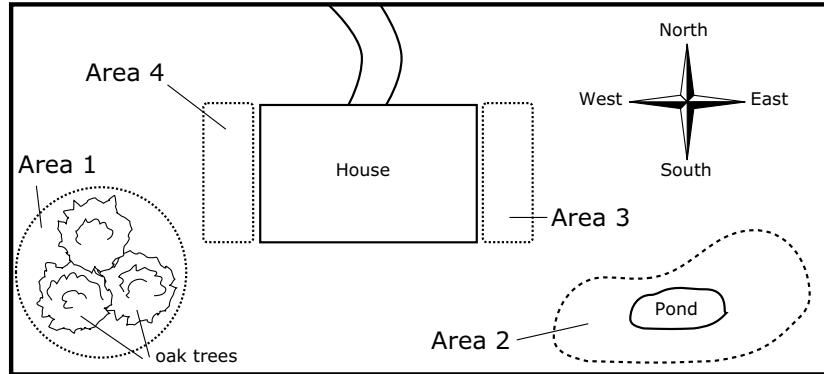
Rebecca wanted to plant each area with different types of plants. She collected pictures of her favorite plants and found out how much sunlight they needed to grow well. She put the pictures and the information she found into a scrap book as shown below.



- A. Rebecca wanted to grow roses in Area 1 under the oak trees. Her friend Gwen disagreed and told her that the roses would **not** grow well in Area 1. Explain why Gwen says this.

Continued

Item Number: S031441A

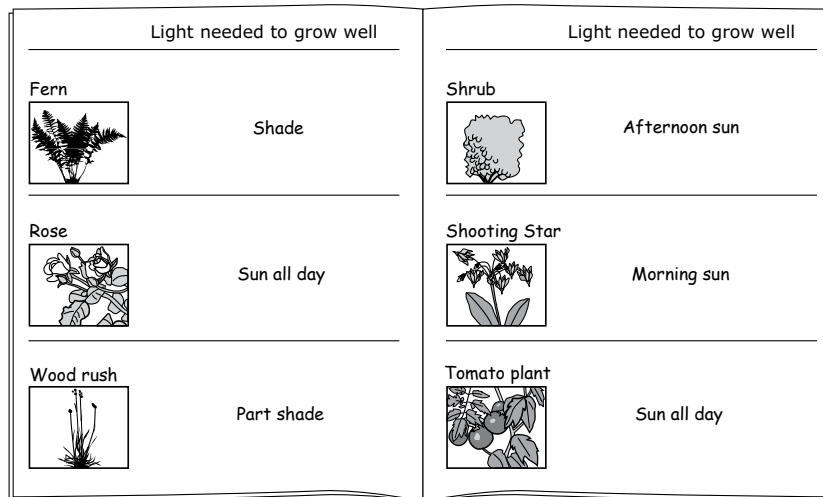


B. Look at the information for each plant given in Rebecca's scrap book and the plan of her garden above. Write the names of the plants that would grow best in each area in the boxes below.

Area 1	
Area 2	
Area 3	
Area 4	

Item Number: S031441A

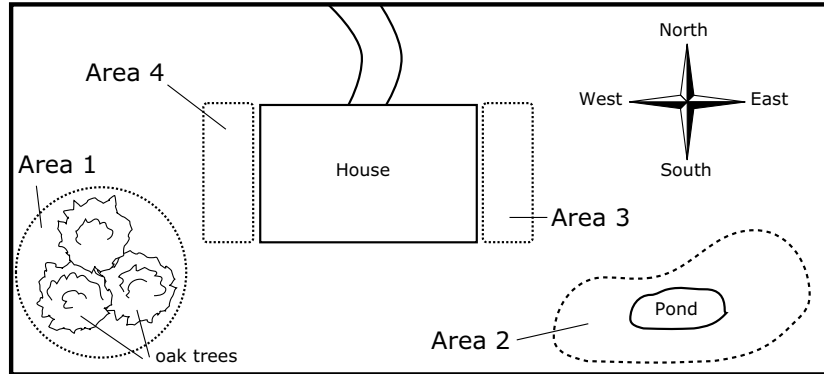
Rebecca wanted to plant each area with different types of plants. She collected pictures of her favorite plants and found out how much sunlight they needed to grow well. She put the pictures and the information she found into a scrap book as shown below.



- A. Rebecca wanted to grow roses in Area 1 under the oak trees. Her friend Gwen disagreed and told her that the roses would **not** grow well in Area 1. Explain why Gwen says this.

Continued

Item Number: S031441B



B. Look at the information for each plant given in Rebecca's scrap book and the plan of her garden above. Write the names of the plants that would grow best in each area in the boxes below.

Area 1	
Area 2	
Area 3	
Area 4	

Item Number: S031441B

How can washing your hands help keep you from getting sick?

- Ⓐ It washes away germs.
- Ⓑ It makes your hands look nice.
- Ⓒ It keeps your skin from drying out.
- Ⓓ It makes your hands warmer.

Item Number: S011031

People need to protect themselves from getting too much sun. Name one thing that can happen to their bodies if they are not protected from the sun.

Item Number: S031330

Which plant is grown for food?

- Ⓐ Rice
- Ⓑ Tobacco
- Ⓒ Orchid
- Ⓓ Cotton

Item Number: S011021

What will most likely affect your adult height?

- Ⓐ The height of your parents
- Ⓑ The height of your brothers and sisters
- Ⓒ Your hair color
- Ⓓ Your weight

Item Number: S011033

A plant has yellow flowers. What best explains why the flowers are yellow?

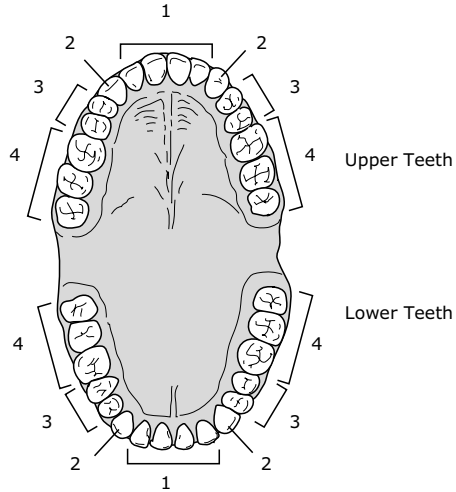
- Ⓐ The sunshine colored the flowers yellow.
- Ⓑ The flowers of the parent plants were yellow.
- Ⓒ It was very warm when they flowered.
- Ⓓ It rained every day.

Item Number: S031269

If the body takes in more food than it uses,

- Ⓐ breathing becomes faster.
- Ⓑ weight is lost.
- Ⓒ the heart rate increases.
- Ⓓ the food is stored as fat.

Item Number: S011004

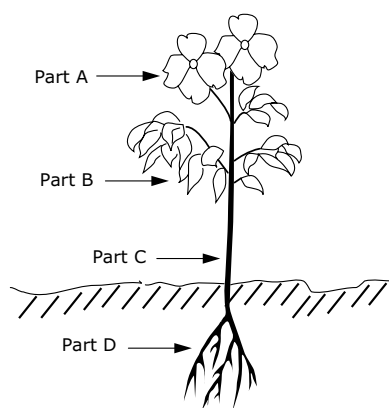


The teeth that people use for grinding their food are labeled in the picture as

- (A) 1 only
- (B) 3 only
- (C) 1 and 2
- (D) 3 and 4

Item Number: S011015

Which part of the plant takes in the MOST water?



- (A) Part A
- (B) Part B
- (C) Part C
- (D) Part D

Item Number: S011026

Beth is playing soccer. She gets very hot. Name one thing her body does to cool down.

Item Number: S031246

Where does air go when a person breathes in?

- Ⓐ Into the heart
- Ⓑ Into the stomach
- Ⓒ Into the lungs
- Ⓓ Into the liver

Item Number: S011025

Humans interpret seeing, hearing, tasting and smelling in the

- Ⓐ brain
- Ⓑ spinal cord
- Ⓒ receptors
- Ⓓ skin

Item Number: S012033

Immediately before and after running a 50 meter race, your pulse and breathing rates are taken. What changes would you expect to find?

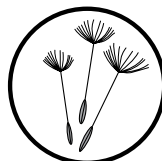
- Ⓐ no change in pulse but a decrease in breathing rate
- Ⓑ an increase in pulse but no change in breathing rate
- Ⓒ an increase in pulse and breathing rate
- Ⓓ a decrease in pulse and breathing rate
- Ⓔ no change in either

Item Number: S012010

Rebecca planted her garden. After a few months, she noticed some plants growing that she had not planted. She knew that the plants must have grown from seeds. She collected some seeds from one of the plants. The plant and seeds are shown in the picture below.



Plant



Seeds

How did the seeds most likely get into her garden?

Item Number: S031442

Which one of these animals does NOT lay eggs?

- Ⓐ chickens
- Ⓑ dogs
- Ⓒ frogs
- Ⓓ turtles

Item Number: S011016

Are plants living or nonliving?

(Check one box.)

Living

Nonliving

Explain your answer.

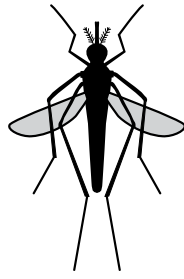
Item Number: S031218

Which group consists only of living things?

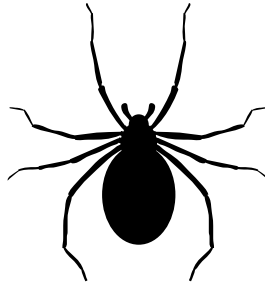
- Ⓐ rabbit, seed, bird
- Ⓑ seed, bird, wind
- Ⓒ volcano, candle, rabbit
- Ⓓ wind, candle, volcano

Item Number: S031212

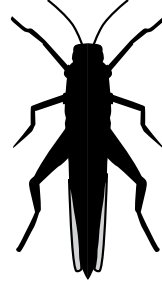
Which of these are insects?



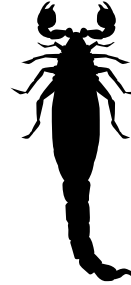
1



2



3



4

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

Item Number: S031349

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S031383	99		
S011007	100		
S012007	101		
S031082	102		
S011003	103		
S011012	104		
S011013	105		
S011023	106		
S031379	107		