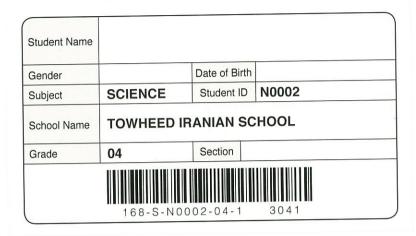






2016



Science

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.

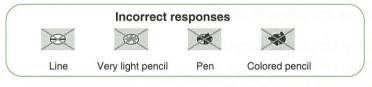
Choose the BEST answer from the four options, A, B, C or D.

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:





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 pictures show the position of the Sun at different times of the day.









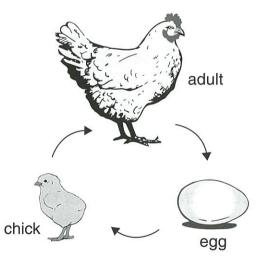


Position I

Position II

Position III

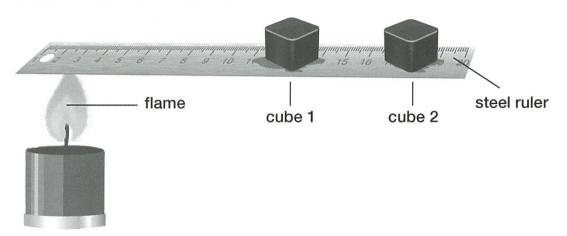
- At what time of the day will the Sun be at Position II?
 - A sunrise
 - B midday
 - C late afternoon
 - D sunset
- What causes the Sun to change position in the sky during the day?
 - The Earth's axis is tilted.
 - B The Earth spins on its axis.
 - The Earth moves around the Sun.
 - The Sun moves around the Earth.
- What does the diagram tell us?
 - Baby chicks lay eggs.
 - Baby chicks eat eggs.
 - Adult chickens start life as an egg.
 - Adult chickens give birth to live baby chicks.
- How do we know a chicken is a bird?
 - It lays eggs.
 - It has feathers.
 - It can make nests.
 - It can walk.



Lifecycle of a chicken

Two chocolate cubes are placed on a steel ruler.

The ruler is heated with a candle.



Cube 1 melts before cube 2.

- What does this show?
 - Steel expands when heated.
 - Heat can pass through steel.
 - Chocolate melts when it touches steel.
 - Chocolate cubes melt when kept in the open.
- The test is repeated with a thicker steel ruler.

What is most likely to happen this time?

- Neither cube melts.
- Cube 1 melts slower than cube 2.
- Both the cubes melt slower than before.
- Cube 1 and cube 2 melt at the same time.



Team A

Team B

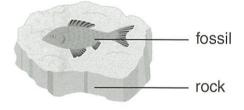
Two teams of children, A and B, play tug-o-war.

What force does each team use?

Choose the correct row.

	Team A	Team B
Α	push	pull
В	pull	pull
С	push	push
D	pull	push

38 A rock in a valley contains a fossil.



What is most likely true about the valley?

- A It was a desert in the past.
- **B** It was a volcano in the past.
- C It was under water in the past.
- **D** It was covered with ice in the past.

Four toy cars are given the same starting push on a wooden floor.

	Car 1	Car 2	Car 3	Car 4
Distance the car moved	20 cm	10 cm	30 cm	40 cm

- 5 Which toy car moved the furthest?
 - A Car 1
 - B Car 2
 - C Car 3
 - D Car 4
- 6 What would make the cars move further?
 - A wider wheels on the cars
 - **B** a stronger push on the cars
 - **C** adding extra wheels to the cars
 - **D** pushing the cars on a rougher floor
- 7 The sunrise and sunset times on Monday for four weeks are recorded in the table.

Sunrise and sunset times for four Mondays					
Day	Time of sunrise	Time of sunset			
Monday Week 1	06:39	17:44			
Monday Week 2	06:47	17:33			
Monday Week 3	06:54	17:23			
Monday Week 4	07:02	17:13			

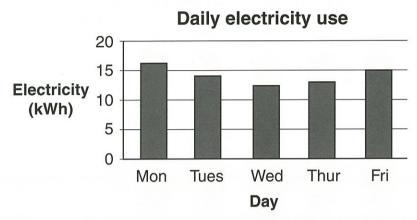
What time of year was this information collected?

- A as spring was changing to summer
- B as winter was changing to spring
- c as summer was changing to autumn
- D in the middle of spring

Grade 4 Science 2016

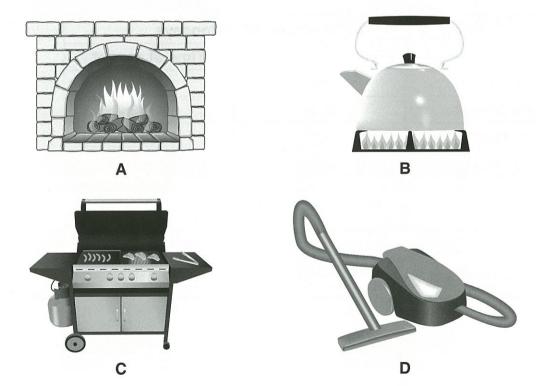
Raj reads the electricity meter on his house each day.

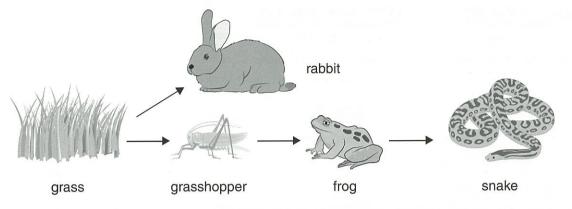
This graph shows how much electricity was used over five days.



The average electricity use for homes in Raj's area is 14 kWh per day. On which days was Raj's electricity use above the average?

- A Monday and Tuesday only
- B Wednesday and Thursday only
- C Monday and Friday only
- **D** Wednesday, Thursday and Friday only
- 9 Which of these items from Raj's home uses electricity?





Key: grass → grasshopper; means the grasshopper eats grass

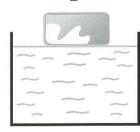
Look at the food chain above.

What does the snake eat?

- A grass
- **B** frogs
- **C** rabbits
- **D** grasshoppers
- Which animals in the food chain eat the same food?
 - A frog and rabbit
 - B frog and snake
 - **C** snake and rabbit
 - D grasshopper and rabbit
- 36 Which picture best shows how an ice block floats in water?

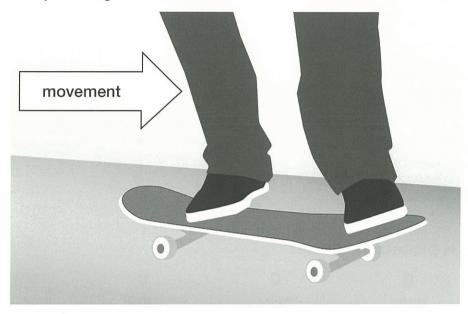
В

C



Grade 4 Science 2016

A boy is riding a skateboard.



- What force acts between the wheels and the ground?
 - electric
 - В friction
 - air pressure
 - magnetism
- Four children use the same skateboard.

Which child can move the skateboard using the smallest pushing force?

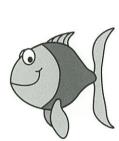
- A a 20-kg child
- a 30-kg child
- a 40-kg child
- a 50-kg child

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- Which of these is a non-contact force?
 - A a man pushing a door
 - an apple falling from a tree
 - water turning a water wheel
 - a train engine pulling train coaches

- Which animal is a predator?
 - A cat
 - В pigeon
 - rabbit
 - squirrel
- What tells you if an animal is a predator?
 - how big it is
 - where it lives
 - if it has claws
 - what it eats
- Which of these organisms makes its own food?

Α



В



C

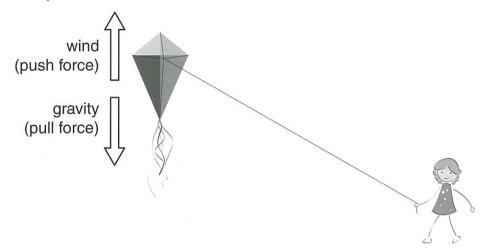


tree

Grade 4 Science 2016

Science

The picture shows two of the forces that act on a kite.

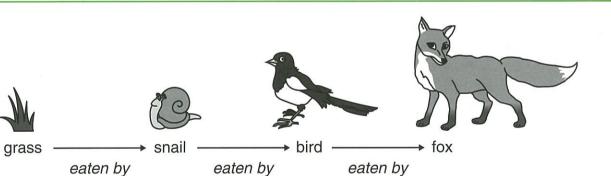


- 13 The kite will fall to the ground if
 - A the wind's push force increases.
 - **B** the push and pull forces are equal.
 - **C** the pull force is bigger than the push force.
 - **D** the push force is bigger than the pull force.
- 14 The material used to make a kite should be

A lightweight.

B flexible.

C thick. **D** soft.



15 When the bird eats the snail, the bird will

A

В

C

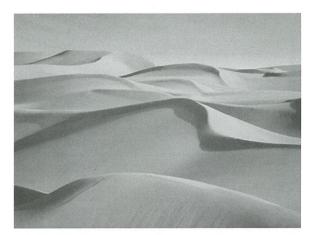
D

lose energy.

gain energy.

not be affected.

eat a fox.



28 What type of landform is shown in the picture?

A cliff **B** dune

C

D

gully

valley

29 What created the landform in the picture?

A wind **B** water **C** humans

D

volcanoes

Two bean seeds are placed in two glass dishes.

One dish contains moist soil. The other dish contains moist cotton.









Seeds in moist cotton

- 30 Which question can be answered from this experiment?
 - **A** Do seeds need soil to germinate?
 - B Can seeds germinate in a glass dish?
 - C Do seeds need sunlight to germinate?
 - **D** How many seeds can germinate at one time?

Science

В

D

^oThe picture shows two changes, 1 and 2.



What are the two changes?
Choose the correct row.

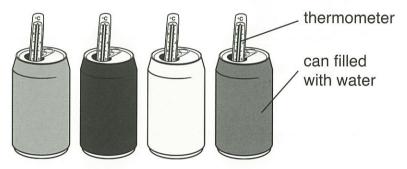
Change 1	Change 2
melting	boiling
boiling	freezing
melting	freezing
freezing	melting

- What does Change 1 show?
 - A Water has a fixed shape.
 - B Water boils when heated.
 - C Water can dissolve sugar.
 - **D** Water can change from solid to liquid.
- Why do butterflies land on flowers?
 - A to lay eggs
 - **B** to collect nectar
 - **C** to give food to the plant
 - D to help the flowers open up



Jacob sets up this experiment.

- Get four different coloured cans of the same size and shape.
- Fill the cans with water and put them in the sun.
- Measure how long the water in each can takes to reach 25 °C.



- 16 What is Jacob most likely to be testing?
 - A Which coloured can heats up the fastest.
 - B How much water evaporates from the cans.
 - C Whether cans with more water stay cool longer.
 - **D** Which thermometer has the highest temperature.



17 What is the turbine used for?

A B C D
to drill for oil to cool the air to clean the air to make electricity

- 18 What makes the turbine spin?
 - A falling rain
 - **B** moving air
 - C burning petrol
 - D the Sun heating the blades

Science



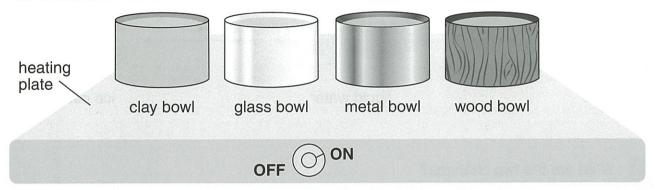


polar bear

- 19 What is one way the camel is different from the polar bear?
 - A The camel has two eyes.
 - **B** The camel has a short neck.
 - **C** The camel lives in a hot place.
 - **D** The camel needs food for energy.
- What is the same about the camel and the polar bear?
 - A They both have four legs.
 - **B** They both have a long tail.
 - **C** They both have sharp claws.
 - **D** They both have a large hump.
- 21 Which of these is made of plant leaves?
 - A tea
 - **B** rice
 - C wheat
 - **D** coffee
- Which is true?
 - A All animals eat plants.
 - B All animals can move.
 - C All animals live on land.
 - **D** All animals have two legs.

In a test, four bowls of the same size are filled with water.

The bowls are heated for two minutes.



- 23 In which bowl will the water be hottest?
 - A the clay bowl
 - B the glass bowl
 - C the metal bowl
 - D the wood bowl
- Why was the same amount of water used in each bowl?
 - A to save water
 - B to make the test fair
 - **C** to stop the water from boiling
 - to keep each bowl at the same mass