

GRADE 5

Science

Modified

Administered April 2014

RELEASED

SCIENCE

DIRECTIONS

Read each question and choose the best answer from the three choices provided. Then fill in the answer on your answer document.

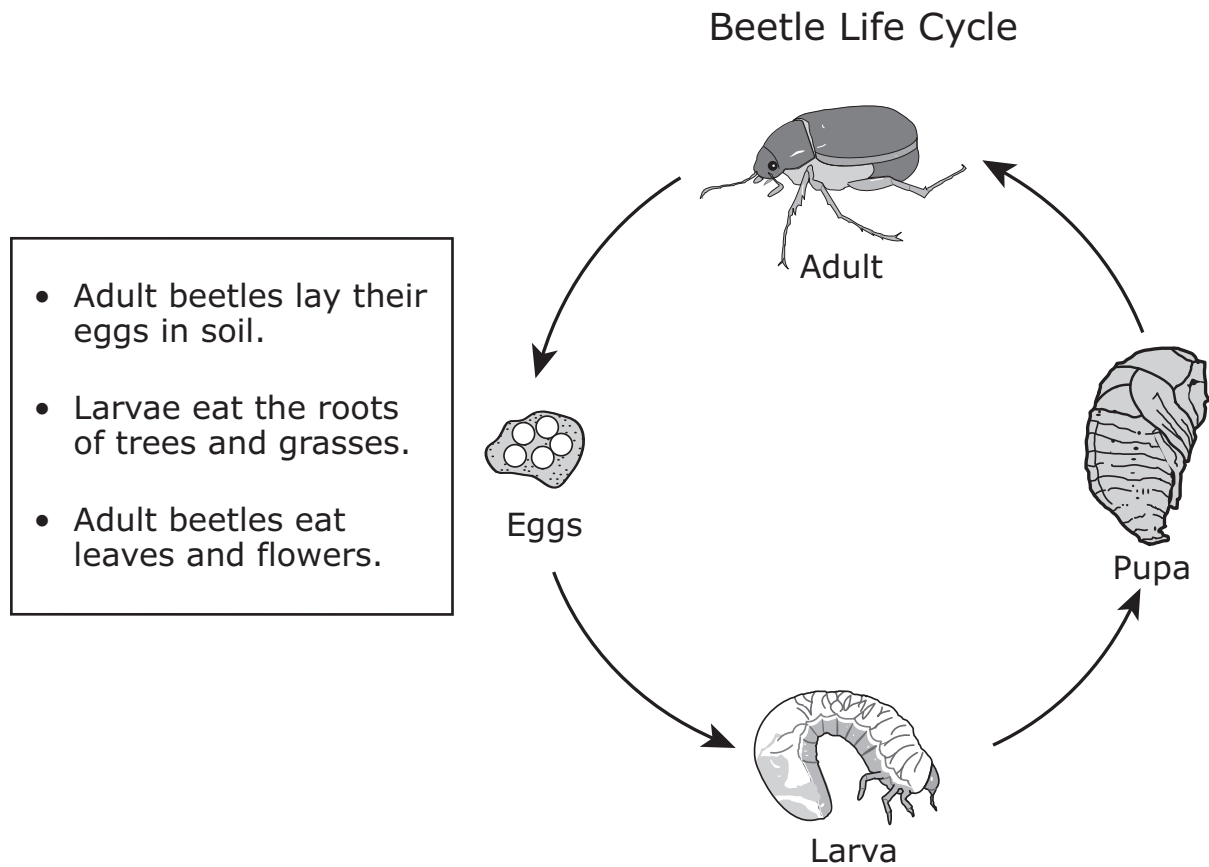
1 Which of these characteristics would a black bear most likely inherit from its parents?

- A** Wet fur
- B** Dirty claws
- C** Round ears

2 Why are fossil fuels classified as a nonrenewable resource?

- F** Fossil fuels take a long time to form.
- G** Fossil fuels come from solid rock.
- H** Fossil fuels are expensive to produce.

3 Look at the information below.



Where would this beetle most likely live during all the stages of its life cycle?

- A** Desert sand
- B** Pond water
- C** Backyard garden

4 Which of these objects can most easily operate using solar energy?

F Calculator

G Bicycle

H Jump rope

5 Look at the list of materials in the box below.

- Electrical wires
- Lightbulb
- Base for the lightbulb
- Battery

A student wants to make the lightbulb light up. The student must arrange the materials so that —

A electricity is stored in the lightbulb

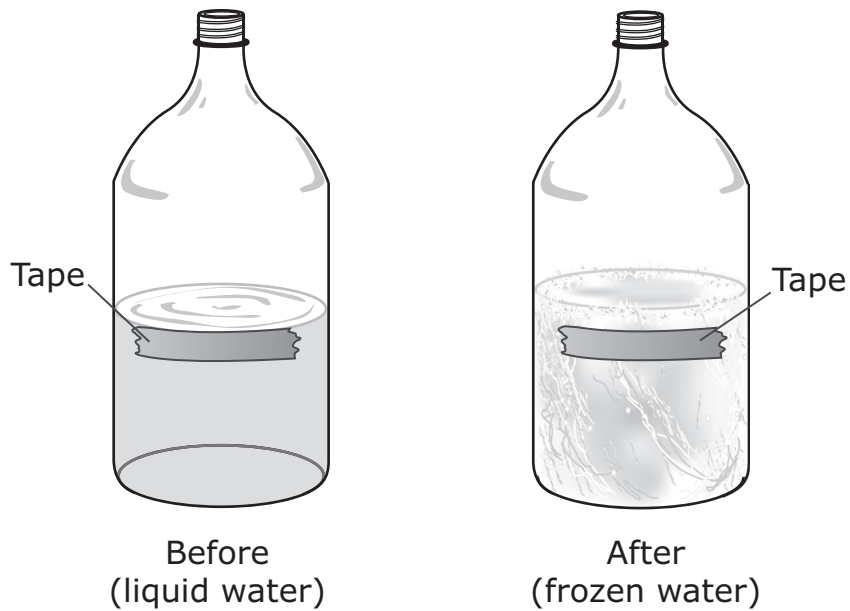
B electricity flows in a complete circuit

C electricity goes into the air

6 The moon and Earth have craters. Many craters on the moon have sharp edges. Craters on Earth become smooth over time. What causes the craters on Earth to become smooth?

- F** Erosion
- G** Sunlight
- H** Magnetism

- 7** The diagrams below show the same bottle of water before it was frozen and after it was frozen. A piece of tape was used to mark the starting level of the water.



Which hypothesis was most likely being tested?

- A** Water takes longer to freeze in a water bottle than in a tray.
- B** Water freezes faster than oil.
- C** Water volume increases when water freezes.

8 Which part of a pond ecosystem absorbs carbon dioxide from the atmosphere?

F Plants

G Fish

H Frogs

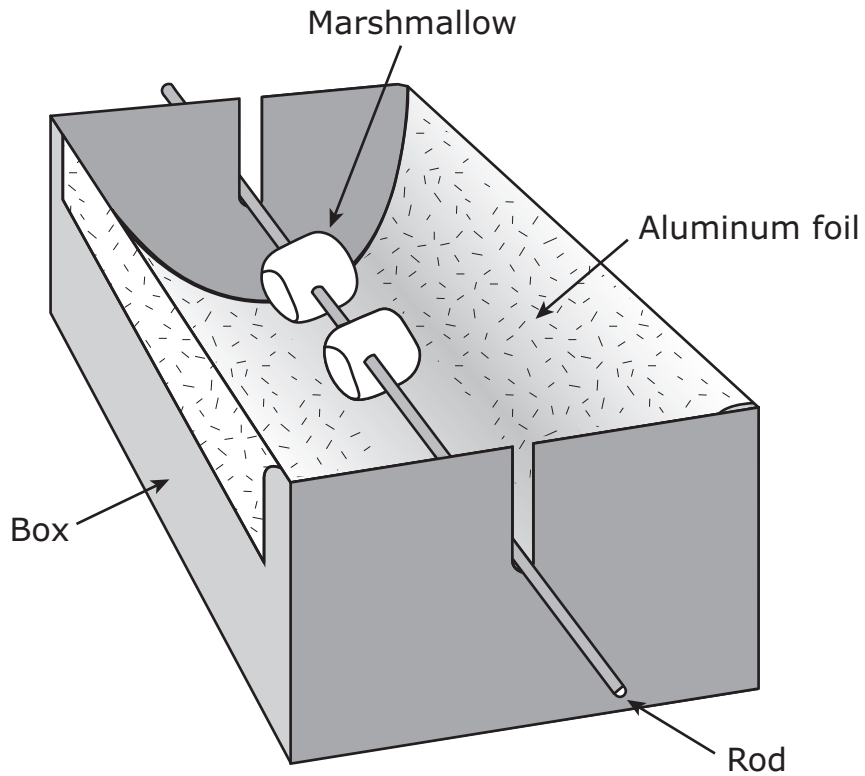
9 About how much time passes between one full-moon phase and the next full-moon phase?

A One week

B One month

C One year

10 A student made the device below and put it outside on a sunny day.



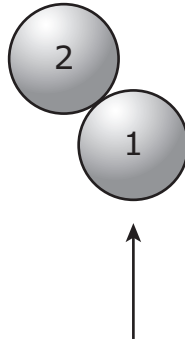
When marshmallows are roasted with this device, what kind of energy is used?

- F** Solar energy
- G** Electrical energy
- H** Sound energy

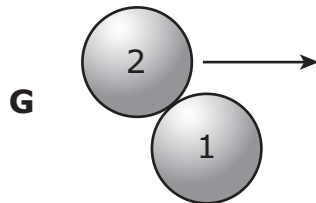
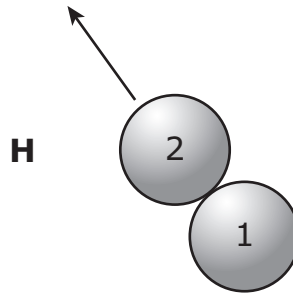
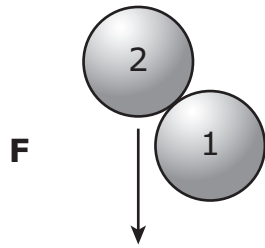
11 Some plants and animals lived in the ocean millions of years ago. After they died, their remains were buried under sand and silt. Over time heat and pressure changed these plant and animal remains into —

- A** lava and magma
- B** oil and gas
- C** rivers and lakes

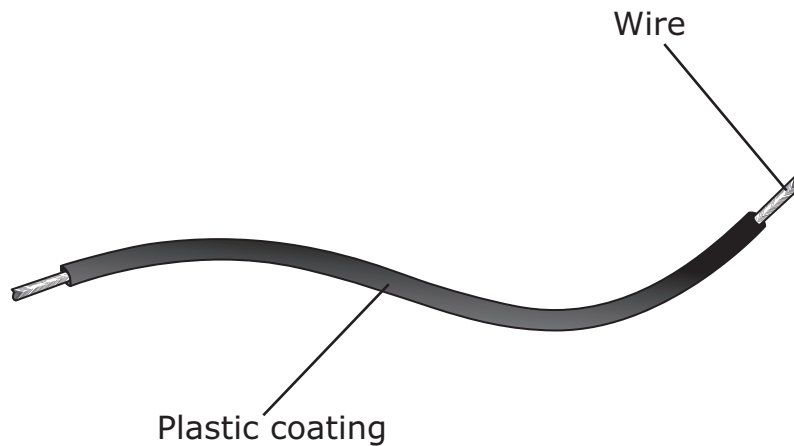
12 The diagram below shows Ball 1 hitting Ball 2. Both balls are the same size.



Which diagram shows how Ball 2 will most likely move after it is hit by Ball 1?



- 13** Look at the diagram below. It shows an electric wire covered by a plastic coating.



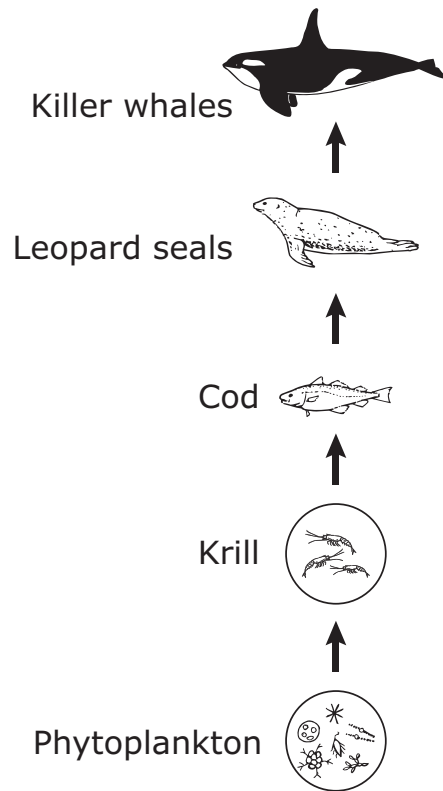
Electric wires are often covered by a plastic coating because plastic —

- A** is not magnetic
- B** keeps its shape
- C** is a good insulator

-
- 14** Bees depend on the flowers of some plants for food. How do bees help these plants?

- F** By spreading pollen
- G** By making honey
- H** By removing waste

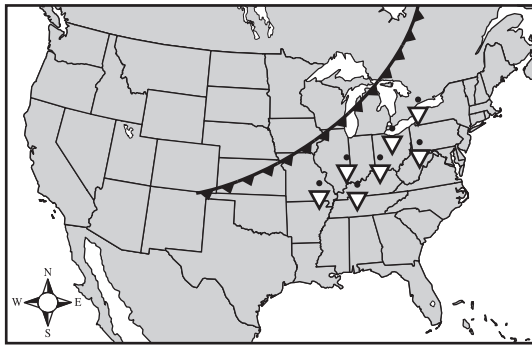
15 Look at the food chain below.



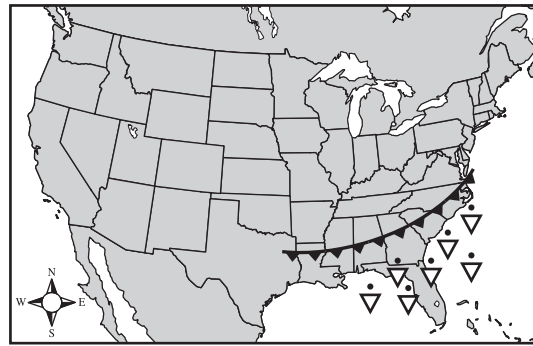
Which organism in this food chain gets energy directly from the sun?

- A** Killer whales
- B** Phytoplankton
- C** Cod

- 16** The weather maps below show the position of a cold front on two different days.



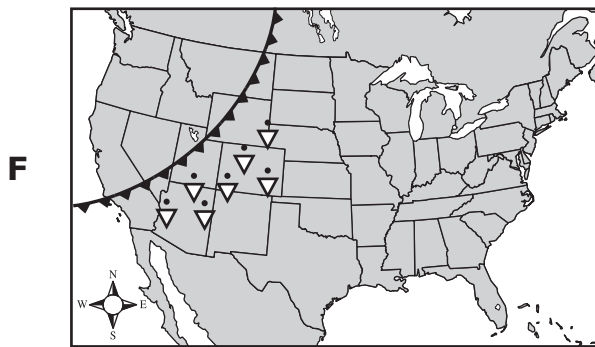
Wednesday



Thursday

KEY	
	Cold front
	Rain

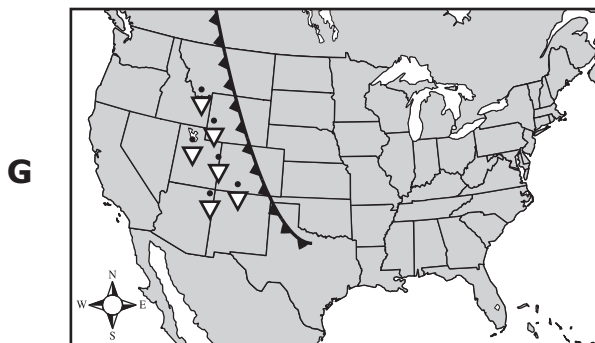
Which of these weather maps shows the most likely position of the cold front on Friday?



Friday

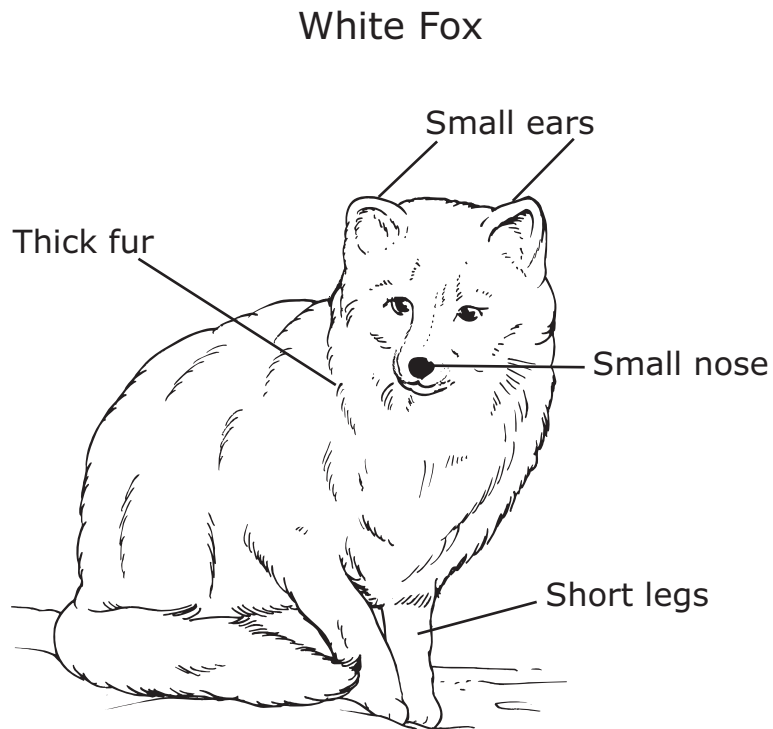


Friday



Friday

17 Look at the diagram below. It shows four features of the white fox.



These features allow the white fox to survive in a —

- A** tundra
- B** grassland
- C** rain forest

18 The information below shows the properties of some substances.

Properties of Some Substances

Substance	Does it conduct heat?	Does it conduct electricity?	Does it attract a magnet?
Wood	No	No	No
Iron	Yes	Yes	Yes
Copper	Yes	Yes	No
Gold			

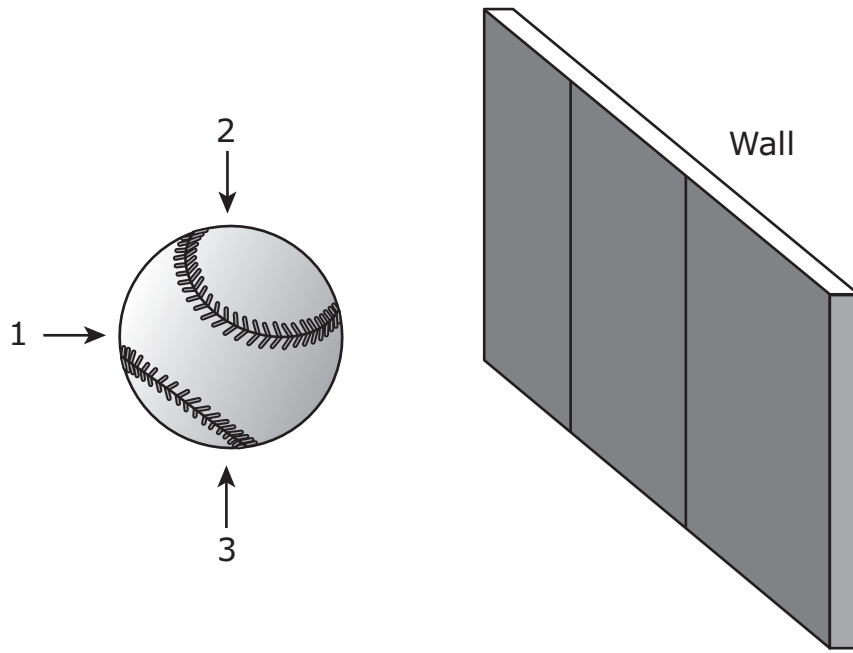
Gold heats up quickly. Gold is used as an electrical conductor in computers. Pure gold will not attract a magnet. Based on the table, which substance has properties that are most like gold?

F Wood

G Iron

H Copper

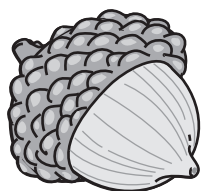
19 Look at the diagram below.



Each arrow in this diagram represents a force acting on the ball. Which force, acting alone, will cause the ball to move toward the wall?

- A** Force 1
- B** Force 2
- C** Force 3

20 Look at the drawings below.



Acorn



Peanut

Acorn seeds and peanut seeds are both covered on the outside by a shell. What do these shells provide to the seeds?

F Protection

G Oxygen

H Nutrition

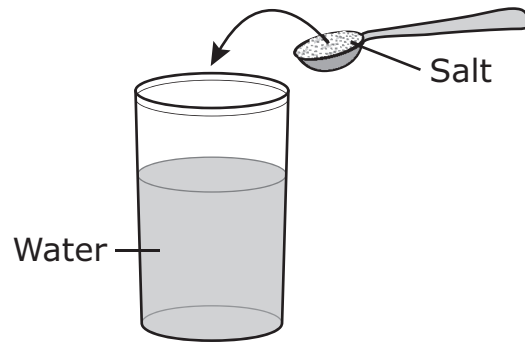
21 A rock sparkles in bright sunlight. Which of these is a property of light that causes the rock to sparkle?

A Mass

B Volume

C Reflection

22 Look at the diagram below.



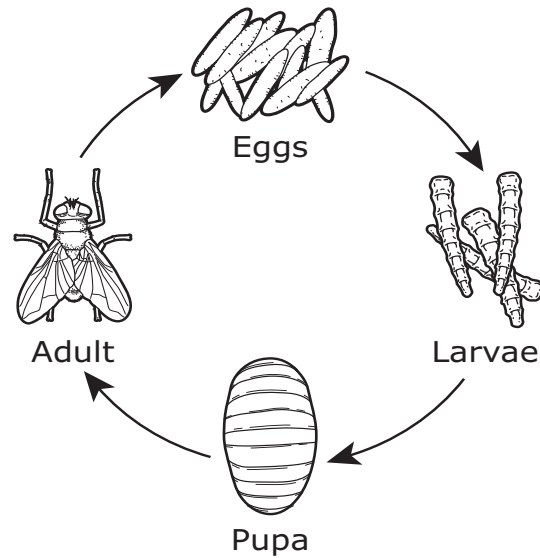
A student puts a spoonful of salt into a glass of water and stirs the mixture. Which of these will most likely happen next?

- F** The salt will expand in the water.
- G** The salt will dissolve in the water.
- H** The salt will absorb the water.

23 What causes the day-and-night cycle every 24 hours?

- A** The revolution of Earth around the sun
- B** The rotation of Earth on its axis
- C** The revolution of the moon around Earth

24 The life cycle of a housefly is shown in the diagram below.



Which part of this life cycle is most like the seed stage in the life cycle of an apple tree?

- F** Eggs
- G** Pupa
- H** Adult

25 Read the information in the box below.

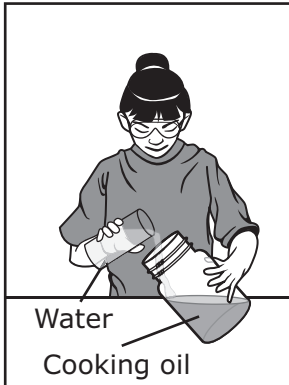
A Planet in Our Solar System

- It is made up mostly of metal and rock.
- It is closest to the sun.

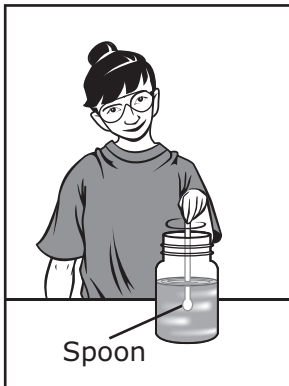
Which planet is described in this box?

- A** Mars
- B** Jupiter
- C** Mercury

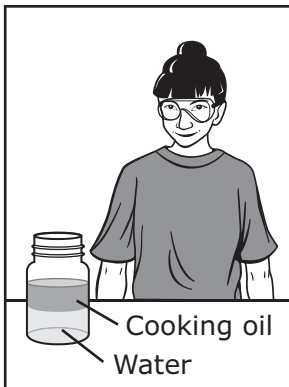
26 The steps in an investigation are shown below.



Step 1 A student poured water and cooking oil into a jar.



Step 2 Then the student stirred the liquids together with a spoon.



Step 3 The student let the jar sit on the table for 3 minutes.

Which of these conclusions is supported by the picture in Step 3?

- F** The two liquids blended together.
- G** The liquids combined to form a solid substance.
- H** The physical properties of each liquid stayed the same.

27 A mockingbird attacks a squirrel that comes near its nest. This behavior is most likely connected to —

- A** hunting food
- B** defending territory
- C** seeking shelter

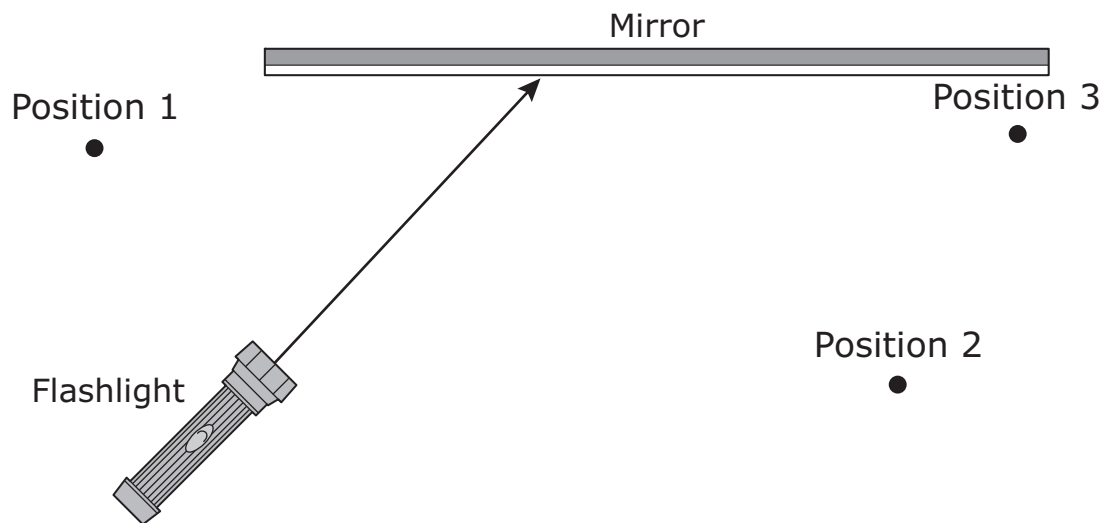
28 Most of the sand dunes in deserts are formed by —

- F** earthquakes
- G** winds
- H** volcanoes

29 In the water cycle, water moves back and forth between the surface of Earth and the atmosphere. What is the main source of energy for the water cycle?

- A** Lightning
- B** Gravity
- C** Sun

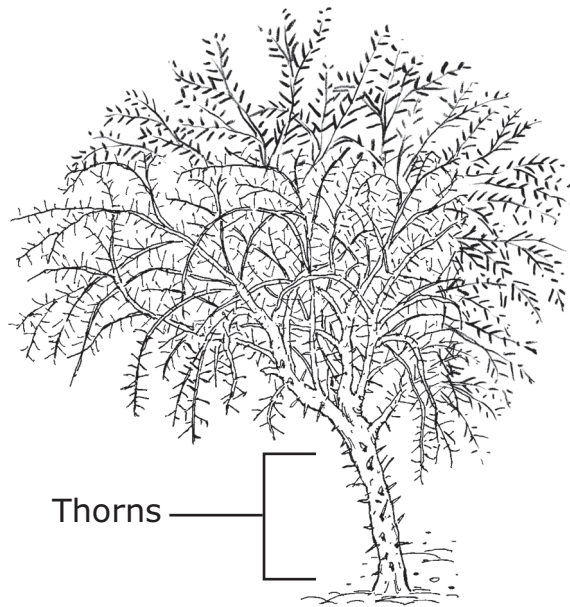
30 Look at the diagram below.



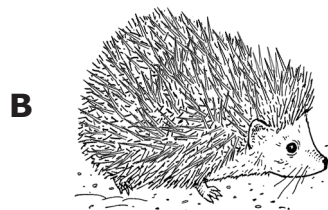
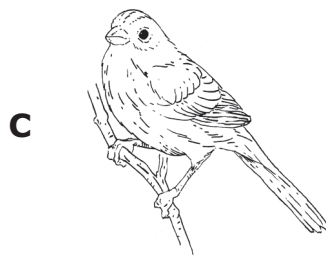
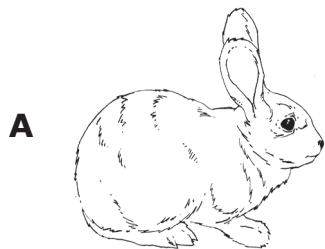
A beam of light coming from the flashlight hits the mirror and then travels toward —

- F** Position 1
- G** Position 2
- H** Position 3

31 Look at the tree below.



This tree has thorns as an adaptation to protect it from predators. Which animal has a similar adaptation?



- 32** A student places four water samples with different starting temperatures in a freezer.

Freezing Water

Water Sample	Starting Temperature (°C)	Freezing Temperature (°C)
Sample 1	15	0
Sample 2	17	0
Sample 3	20	0
Sample 4	24	?

Based on the table, what is most likely the freezing temperature of Sample 4?

- F** 0°C
- G** 2°C
- H** 5°C

33 The steps below describe a classroom investigation.

Classroom Investigation

1. Take a handful of soil.
2. Add water slowly to the soil until you can roll it into a ball.
3. Feel the soil while you are working with it.

This investigation was most likely designed to test soil —

- A** mass
- B** color
- C** texture

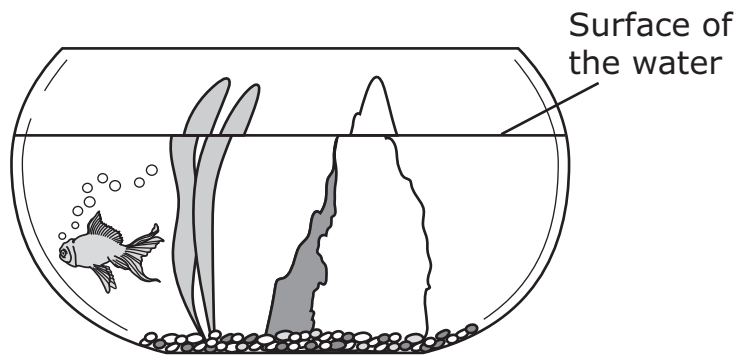
34 Look at the diagram below.



How is the tiger in this diagram using the plants?

- F** As a food source
- G** To hide from prey
- H** To find a mate

35 Look at the fishbowl below.



In this fishbowl, the plastic mountain and the plant appear broken at the surface of the water. This is caused by light —

- A** bending
- B** being absorbed
- C** rotating

STAAR MODIFIED
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