

VIRGINIA STANDARDS OF LEARNING

Spring 2010 Released Test

GRADE 3 SCIENCE

Form S0110, CORE 1

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Directions

Read each question and choose the best answer. Then fill in the circle on your answer document for the answer you have chosen.

SAMPLE

When Earth is seen from outer space, it looks mainly blue. This is because most of Earth is covered with —

- A** ice
- B** mountains
- C** oceans
- D** deserts

1 Mold is often found growing on old bread. In a food chain, mold is a —

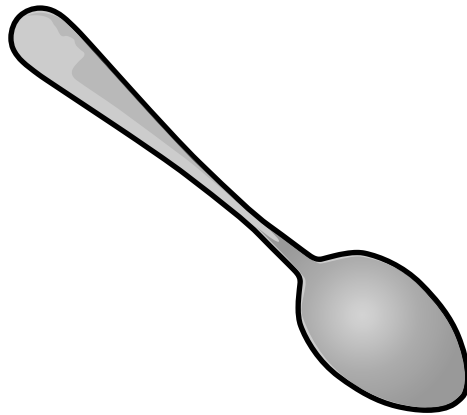
- A** decomposer
- B** producer
- C** consumer
- D** scavenger

2 Skunks spray a strong-smelling liquid to —

- F** get rid of wastes
- G** attract prey
- H** defend themselves
- J** help nearby plants grow

3

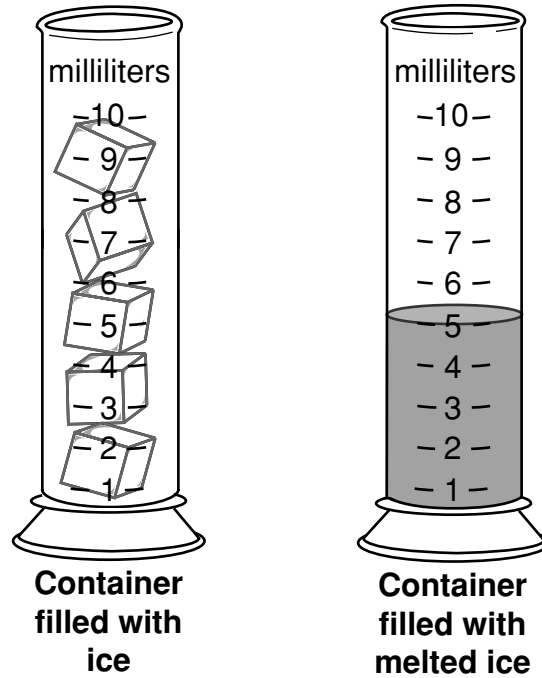
Spoon



Which of these BEST describes the texture of the metal spoon?

- A** Small
- B** Smooth
- C** Flexible
- D** Shiny

4



A container was filled with ice cubes. The container was left outside until the ice cubes melted. Based on the picture, how much water came from the melted ice cubes?

- F** 3 milliliters
- G** 5 milliliters
- H** 7 milliliters
- J** 10 milliliters

5 When notebook paper is folded to make an airplane, what physical property of the paper changes?

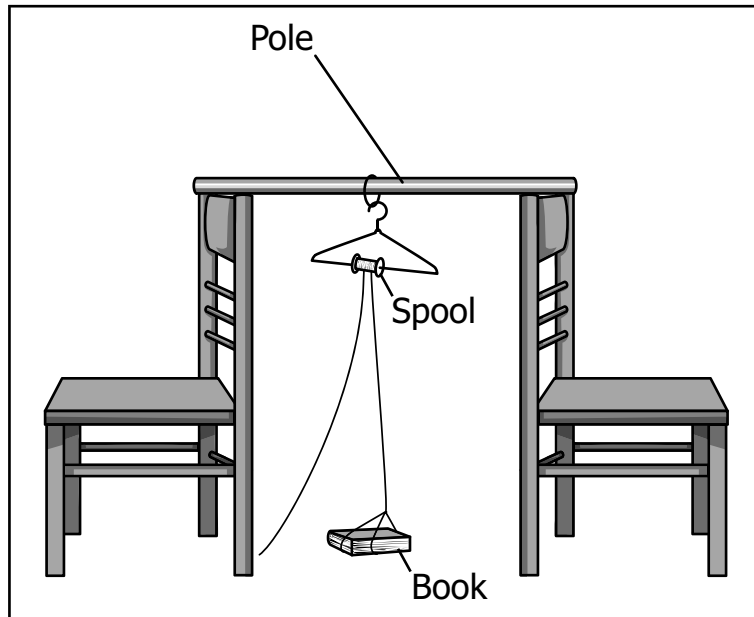
- A** Mass
- B** Weight
- C** Shape
- D** Smell

6 Why is it important to protect soil?

- F** It covers the bedrock layer in the earth.
- G** It has nutrients used by plants to grow.
- H** It holds many harmful pollutants.
- J** It dries quickly in sunlight.

7 Jake's cats eat food from a can. The cats come running into the kitchen when they hear the electric can opener. Now, each time Jake's mother opens a can of corn, the cats come running. This is an example of —

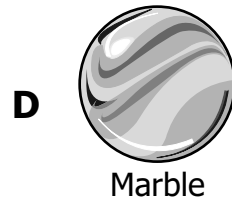
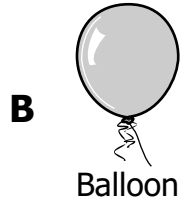
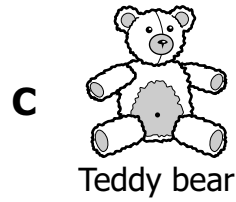
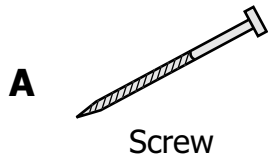
- A** learned behavior
- B** correct behavior
- C** instinct
- D** migration

Model of a Simple Machine

Which of these simple machines does this model represent?

- F** A screw
- G** A wedge
- H** A lever
- J** A pulley

9 A student is blindfolded and given several objects to feel. Which of these would he describe as hard and smooth?



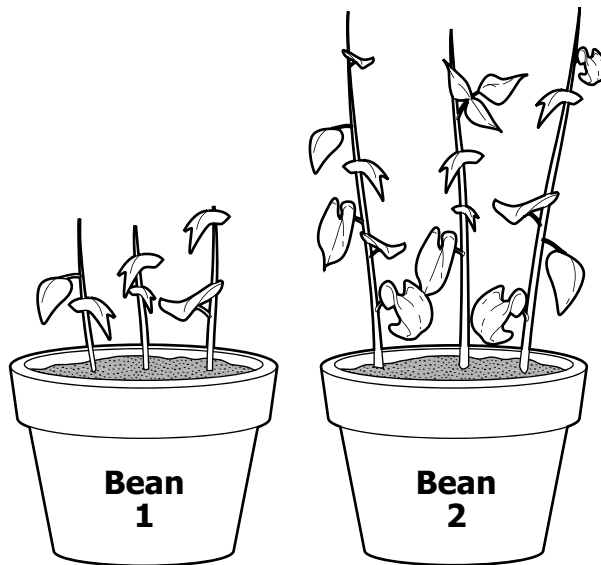
10 Which of these will take the LONGEST time to observe?

- F** One moon-phase cycle
- G** One ocean-tide cycle
- H** An acorn growing into an adult tree
- J** A caterpillar becoming a butterfly

11 Which of these is the BEST way to save animals and trees?

- A** Ride bikes more
- B** Make more farmland
- C** Take care of forests
- D** Move to the city

12



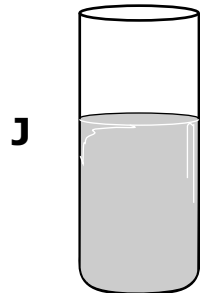
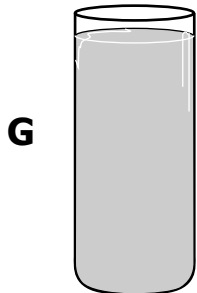
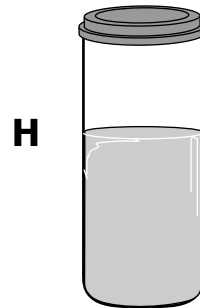
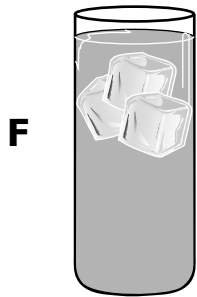
Students planted two types of bean seeds. Both types of bean plants are measured after two weeks. Which of these questions are they MOST likely trying to answer?

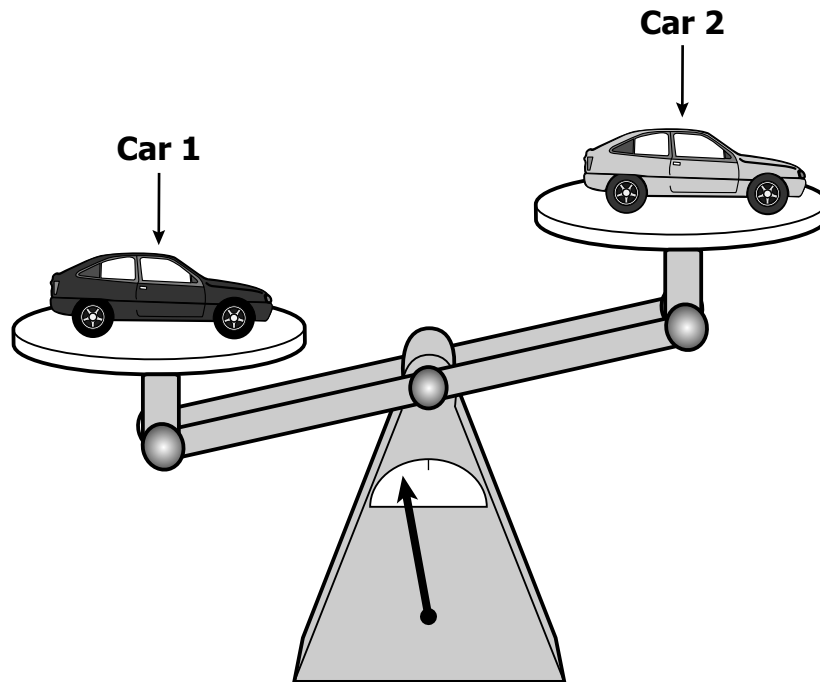
- F** Which type of bean plant grows faster?
- G** Which type of bean plant is prettier?
- H** Which type of bean plant tastes better?
- J** Which type of bean plant costs more?

13 The teeth of a carnivore are MOSTLY —

- A** pointed
- B** rounded
- C** wide
- D** flat

14 Which of these glasses will MOST likely become empty first because of evaporation?

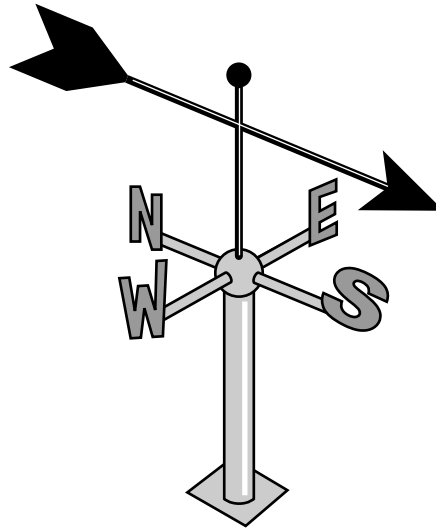




Students made observations about these toy cars. Which of these BEST describes Car 1 and Car 2?

- A** Car 1 is heavier than Car 2.
- B** Car 2 is darker than Car 1.
- C** Car 2 is bigger than Car 1.
- D** Car 1 is longer than Car 2.

Weather Vane



What does a weather vane show?

- F** Wind direction
- G** Air temperature
- H** Cloud cover
- J** Air pressure

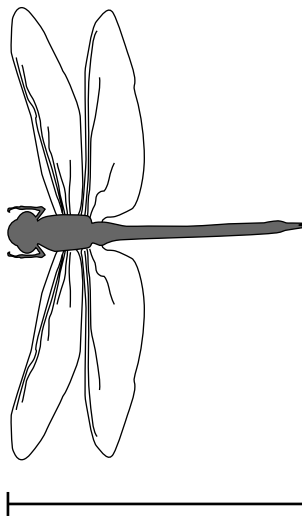
17 Which part of a bicycle BEST moves in a circle?

- A** Seat
- B** Frame
- C** Foot pedal
- D** Kickstand

18 When it rains, some animals will —

- F** hibernate for the season
- G** migrate to warmer climates
- H** change their body covering
- J** move to seek shelter

19



About how long is the dragonfly in the picture?

- A** 2 centimeters
- B** 4 centimeters
- C** 6 centimeters
- D** 8 centimeters

20 Having dry, hot weather for a long time can cause a —

- F** drought
- G** thunderstorm
- H** tornado
- J** flood

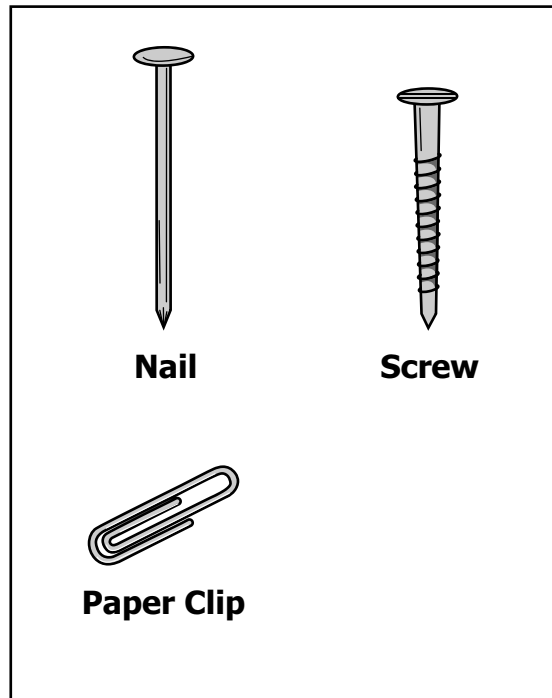
21 Which of these describes water in a solid state?

- A** Vapor rising in the sky
- B** Hail during a storm
- C** Waves crashing on the seashore
- D** Rain falling from the clouds

22 Which lists the correct order of changes that happen to a plant in spring?

- F** Buds form, flowers open, fruits grow
- G** Flowers die, fruits grow, buds form
- H** Seeds drop, flowers open, buds form
- J** Seeds drop, flowers die, fruits grow

23

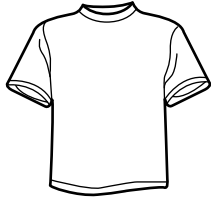


Which of these is the BEST title for the group of objects shown?

- A** Heavy Objects
- B** Rough Objects
- C** Wooden Objects
- D** Magnetic Objects

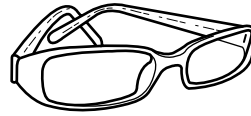
24 Which of these is made from a plant?

F



Cotton Shirt

H



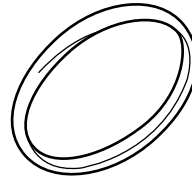
Plastic Glasses

G

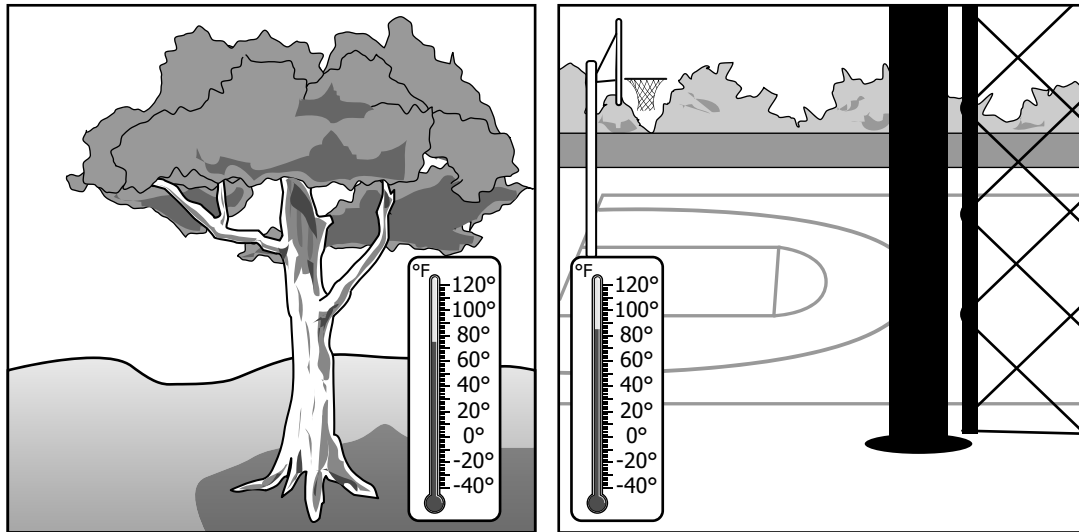


Leather Boots

J

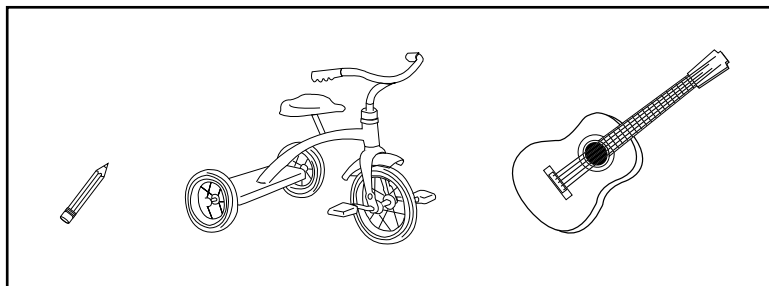


Metal Bracelet



Students used thermometers to compare temperatures around their school. Which of these is MOST likely the reason it was cooler under a tree than on the playground?

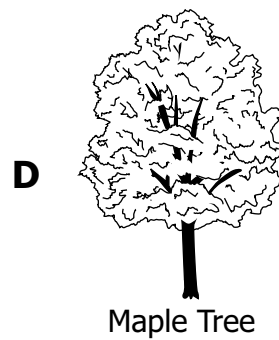
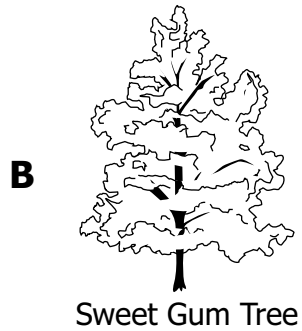
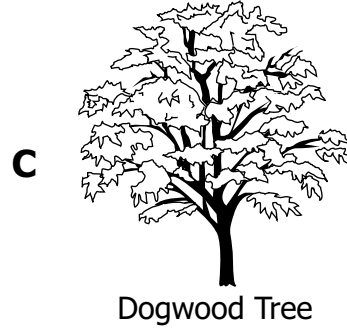
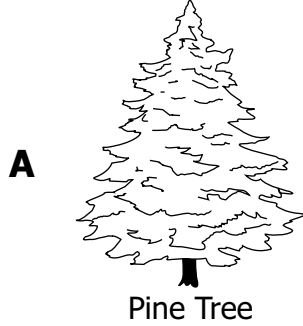
- A** The tree blocked the cold wind.
- B** A student blocked the wind.
- C** Tree leaves blocked some of the sunlight.
- D** A cloud blocked the Sun.



All of the objects shown can be described as —

- F** having moving parts
- G** having the same size
- H** needing a magnifying glass to be seen
- J** being made from more than one material

27 Which of these trees stays green all year?



28 Which of these can make a shadow on the ground during the day?

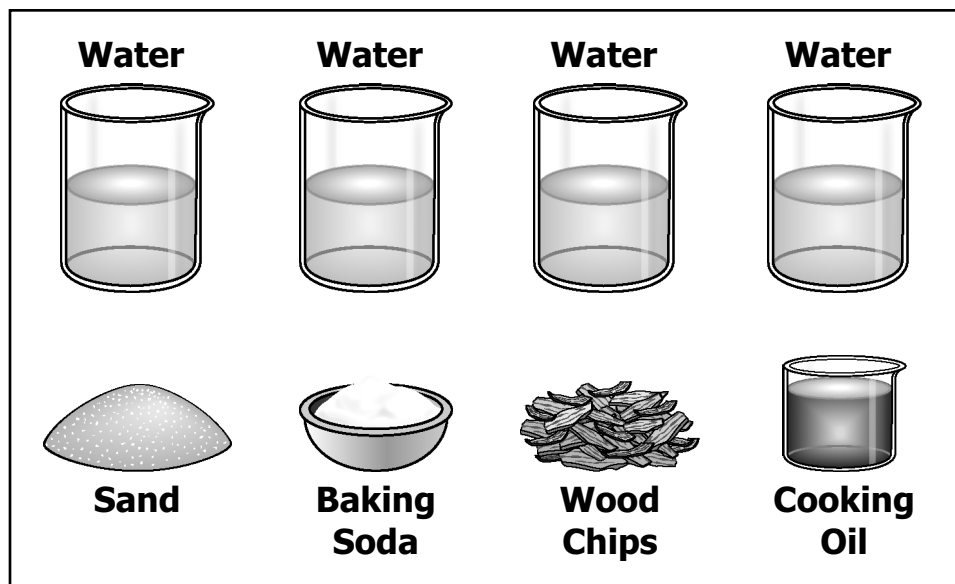
- F** River
- G** Air
- H** Thunder
- J** Cloud

29 People can help keep a forest a good place for birds to live by —

- A** dumping garbage in a small part of the forest
- B** building a road through the middle of the forest
- C** burning dead trees to make smoke in the air
- D** preventing too many trees from being cut down

30

Mixing Substances With Water



Which of these can be dissolved in water?

- F** Grains of sand
- G** Baking soda
- H** Wood chips
- J** Cooking oil

Paper Clips



Pencil

This pencil is about how many paper clips long?

- A 2
- B 5
- C 7
- D 9

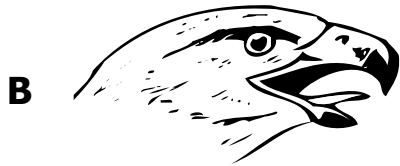
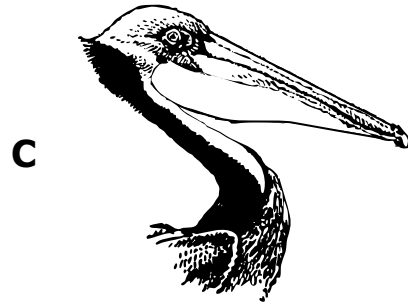
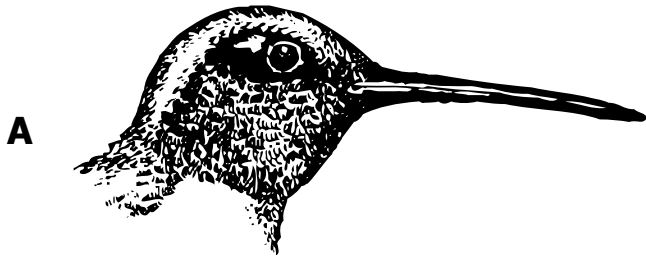


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Which of these BEST describes this leaf?

- F** Long
- G** Square-shaped
- H** Round
- J** Star-shaped

33 Which of these birds **MOST** likely uses its beak to scoop up small fish for food?

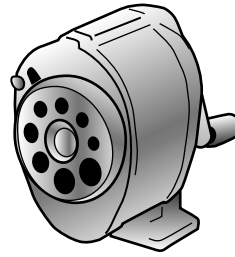


34 Which of these is a compound machine that is a lever and a wedge working together?

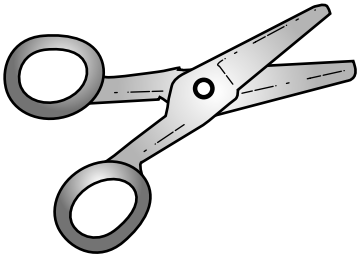
F



H



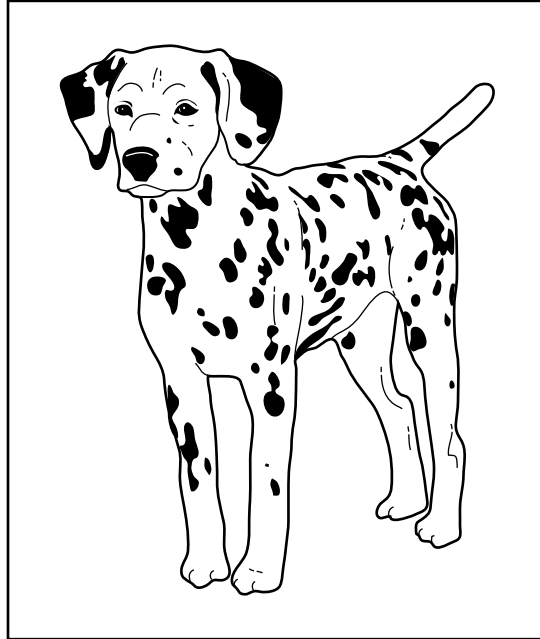
G



J

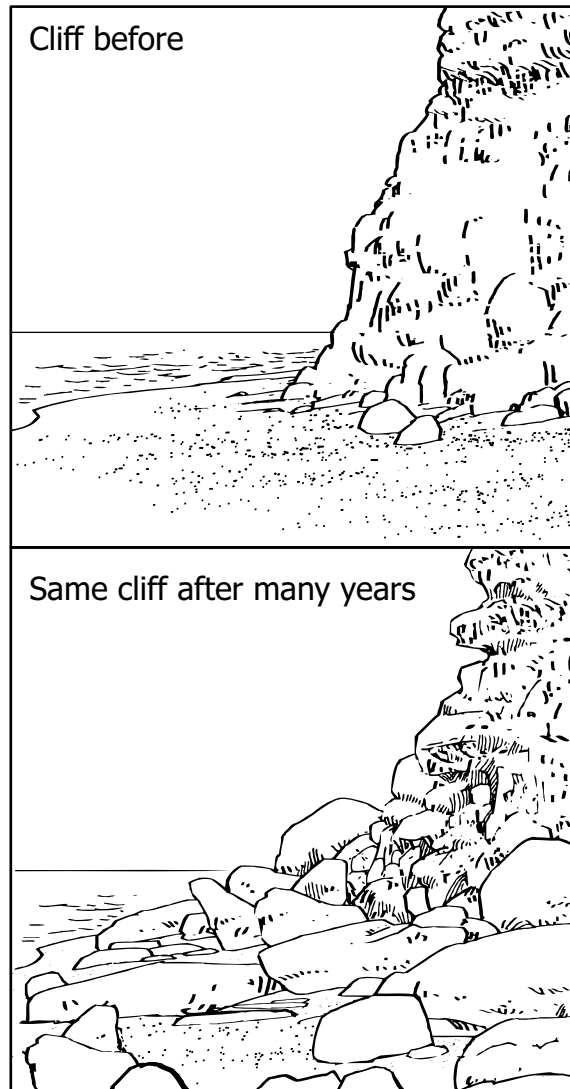


Dog



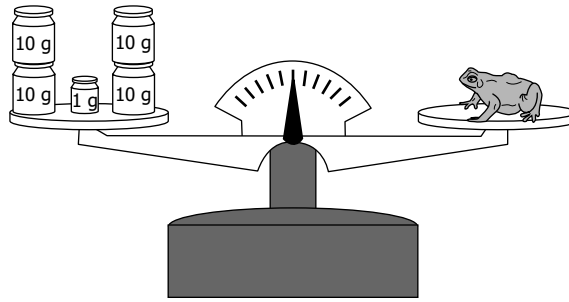
Based on the picture of this dog, an observation can be made that this animal —

- A** runs fast
- B** barks loudly
- C** jumps high
- D** has spots



Which of these may have caused the boulders to break away from the cliff?

- F** Weathering
- G** Evaporating
- H** Depositing
- J** Grinding



What is the mass of the frog?

- A** 39 grams (g)
- B** 40 grams (g)
- C** 41 grams (g)
- D** 42 grams (g)

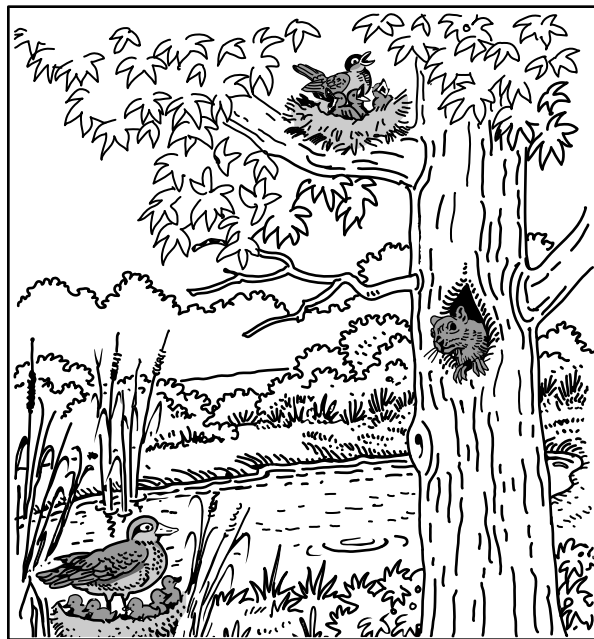
38 A company plants trees on a bare hillside. Which of these is the BEST reason for planting the trees?

- F** The trees provide oxygen for the soil.
- G** The trees prevent soil from washing away.
- H** The trees make shade for animals living there.
- J** The trees cause animals to move to other places.

39 A simple machine makes work easier because using it —

- A** takes less force to move something heavy
- B** changes the weight of something heavy
- C** improves the way something looks
- D** lets something become a different shape

40



This picture BEST shows how —

- F** animals use plants for food
- G** animals use plants for homes
- H** plants get in the way of animals
- J** plants keep animals warm in winter

Answer Key-3005-S0110

Test Sequence Number	Correct Answer	Reporting Category	Reporting Category Description
1	A	003	Life Processes and Living Systems
2	H	003	Life Processes and Living Systems
3	B	002	Force, Motion, Energy, and Matter
4	G	001	Scientific Investigation, Reasoning, and Logic
5	C	002	Force, Motion, Energy, and Matter
6	G	004	Earth / Space Systems and Cycles
7	A	003	Life Processes and Living Systems
8	J	002	Force, Motion, Energy, and Matter
9	D	001	Scientific Investigation, Reasoning, and Logic
10	H	004	Earth / Space Systems and Cycles
11	C	004	Earth / Space Systems and Cycles
12	F	001	Scientific Investigation, Reasoning, and Logic
13	A	003	Life Processes and Living Systems
14	J	002	Force, Motion, Energy, and Matter
15	A	001	Scientific Investigation, Reasoning, and Logic
16	F	004	Earth / Space Systems and Cycles
17	C	002	Force, Motion, Energy, and Matter
18	J	004	Earth / Space Systems and Cycles
19	B	001	Scientific Investigation, Reasoning, and Logic
20	F	004	Earth / Space Systems and Cycles
21	B	002	Force, Motion, Energy, and Matter
22	F	003	Life Processes and Living Systems
23	D	001	Scientific Investigation, Reasoning, and Logic
24	F	003	Life Processes and Living Systems
25	C	001	Scientific Investigation, Reasoning, and Logic
26	J	002	Force, Motion, Energy, and Matter
27	A	003	Life Processes and Living Systems
28	J	004	Earth / Space Systems and Cycles
29	D	004	Earth / Space Systems and Cycles
30	G	002	Force, Motion, Energy, and Matter
31	B	001	Scientific Investigation, Reasoning, and Logic
32	J	004	Earth / Space Systems and Cycles
33	C	003	Life Processes and Living Systems
34	G	002	Force, Motion, Energy, and Matter
35	D	001	Scientific Investigation, Reasoning, and Logic
36	F	004	Earth / Space Systems and Cycles
37	C	001	Scientific Investigation, Reasoning, and Logic
38	G	003	Life Processes and Living Systems
39	A	002	Force, Motion, Energy, and Matter
40	G	003	Life Processes and Living Systems

Grade 3 Science, Core 1

If you get this many items correct:	Then your converted scale score is:
0	000
1	111
2	155
3	182
4	202
5	218
6	231
7	243
8	254
9	264
10	273
11	282
12	290
13	298
14	305
15	313
16	320
17	327
18	335
19	342
20	349
21	356
22	363
23	370
24	378
25	386
26	393
27	402
28	410
29	419
30	428
31	438
32	449
33	461
34	474
35	489
36	507
37	529
38	558
39	600
40	600

A total raw score (left column) is converted to a total scaled score (right column). The total scaled score may range from 0 to 600. A scaled score of 400 or more means the student passed the SOL test, while a scaled score of 399 or less means the student did not pass the test. A scaled score of 500 or more indicates the student passed the SOL test at an advanced level.