

# Tennessee TCAP 2020 Grade 3 Science Practice

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# Tennessee Comprehensive Assessment Program TCAP

## Science Grade 3 | Practice Test



***Please PRINT all information in the box.***

Student Name: \_\_\_\_\_

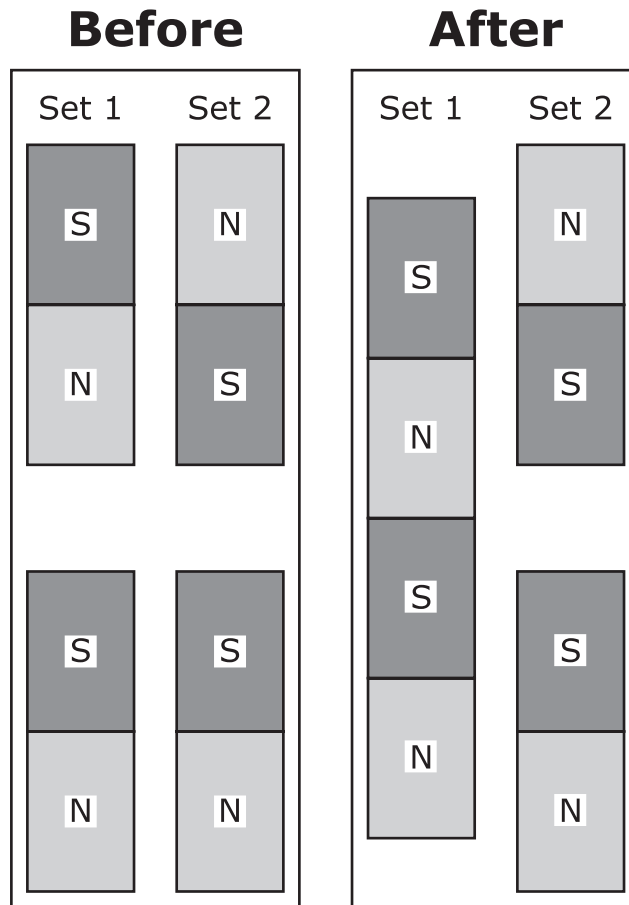
Teacher Name: \_\_\_\_\_

School: \_\_\_\_\_

District: \_\_\_\_\_

**All practice test items represent the appropriate grade level/content standards—however, the practice test may contain item types that no longer appear on the operational assessment.**

1. Students placed two sets of identical magnets near each other, as shown in the Before diagram. The After diagram shows that the magnets in the first set moved toward each other. The magnets in the second set did not move toward each other.



Which statement best explains the behavior of one of these sets of magnets?

- A.** The magnets in the first set moved toward each other because the opposite poles of the magnets attracted each other.
- B.** The magnets in the second set did not move toward each other because the distance between the magnets was too large.
- C.** The magnets in the first set moved toward each other because the north pole of each magnet was stronger than its south pole.
- D.** The magnets in the second set did not move toward each other because these magnets need electricity to work.

- 2. Fishery departments set catch limits on fish. Catch limits tell people how many fish they can keep each day.**

**How are catch limits good for people?**

- M.** Catch limits cause the biodiversity in the oceans to go down.
- P.** Catch limits cause the price of fish at local stores to go up.
- R.** Catch limits allow for invasive species to move into the ecosystem.
- S.** Catch limits ensure that there will be a steady food source in the future.

3. The table lists properties of three different materials.

### Material Properties

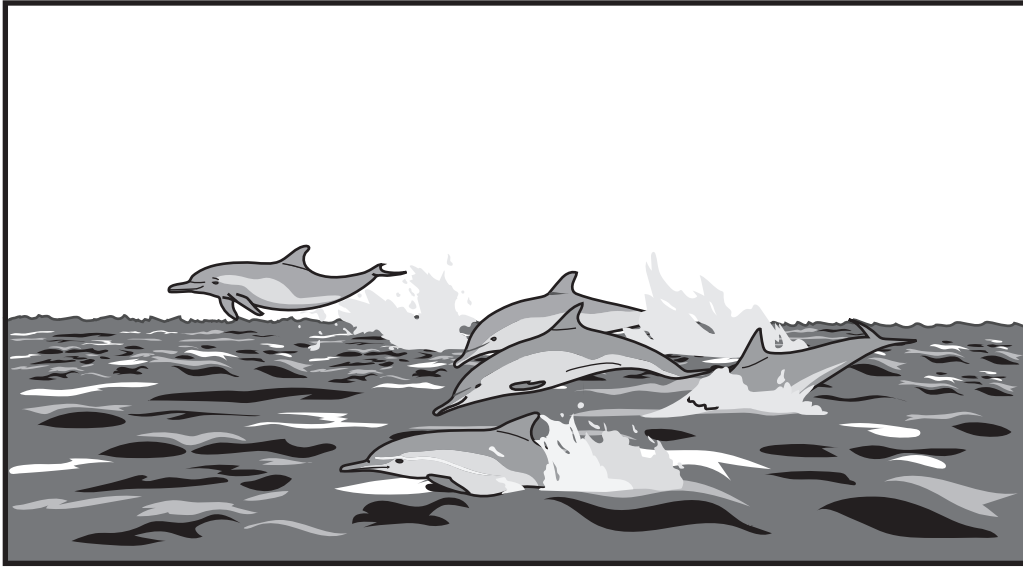
Material 1	Material 2	Material 3
Has a definite shape	Takes the shape of its container	Takes the shape of its container
Takes up a certain amount of space	Takes up a certain amount of space	Spreads out to fill up a space

Which of these is most likely Material 1?

- A. paper
- B. air
- C. juice
- D. oil

4. Dolphins are sometimes seen in groups. The groups are called pods. The picture shows a pod of dolphins.

### Pod of Dolphins



A student claims that living in pods is better for the dolphins than living alone. Which two activities are easier for dolphins because they live in a pod?

- M.** communicating with different species
- P.** swimming in calm waters
- R.** breathing above the surface
- S.** hunting for prey
- T.** finding a mate

5. Inner planets are closer to the sun than outer planets are. Inner planets have a smaller orbit around the sun. The table shows orbit data for four planets.

### Planet Orbit Data

Planet	Time to Orbit Sun
1	109 Earth days
2	4,380 Earth days
3	10,585 Earth days
4	88 Earth days

Which planets from the table are most likely inner planets?

- A. Planets 1 and 2
- B. Planets 2 and 3
- C. Planets 3 and 4
- D. Planets 1 and 4

6. The chart shows four changes made by heating.

### Changes Made by Heating

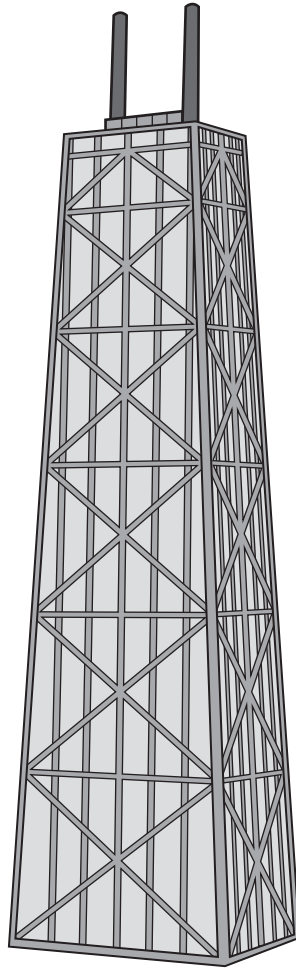
Change	Description
1	A stick of butter turns to liquid in a frying pan.
2	A snow cone melts while sitting on the counter.
3	Water is heated to make steam.
4	A piece of wood is burned in a fireplace.

Which change cannot be reversed by cooling?

- M.** Change 1
- P.** Change 2
- R.** Change 3
- S.** Change 4



7. The picture shows a building that has special features. These features help keep the building from falling down during an earthquake.

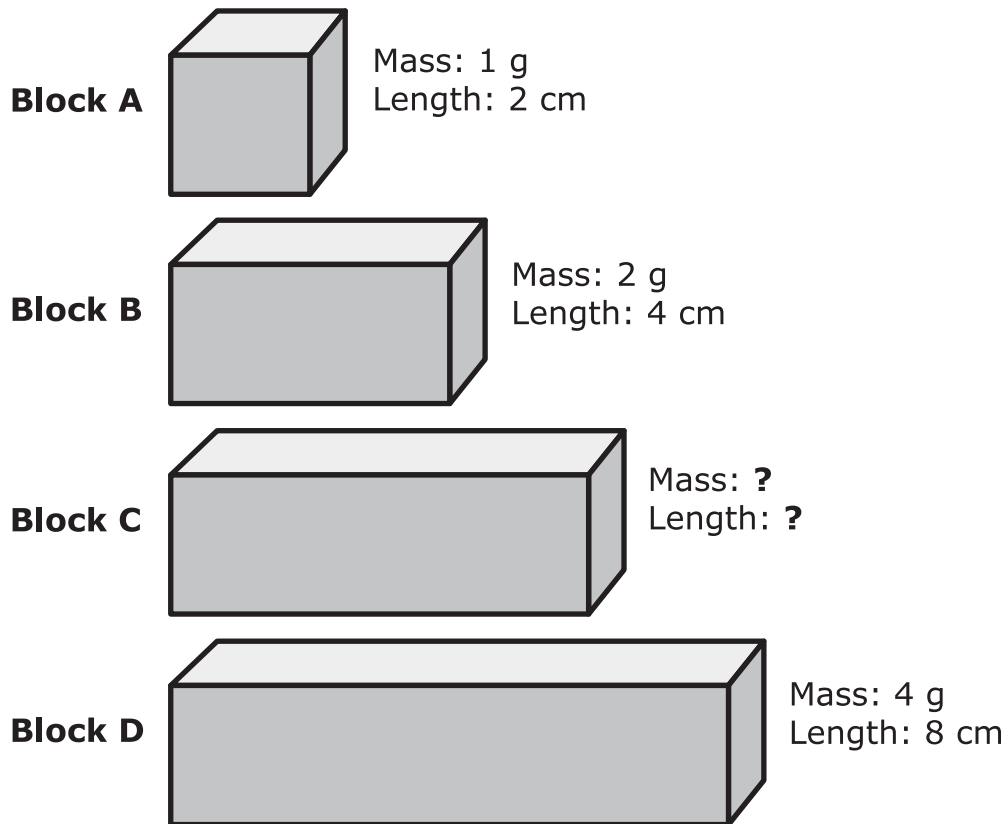


Which feature most likely helps the building stay standing during an earthquake?

- A. many windows to prevent the building's walls from breaking during an earthquake
- B. a square shape so that the building will not roll during an earthquake
- C. many metal bars to stop the building from shaking during an earthquake
- D. a tall height so that the building will be far above the ground during an earthquake

8. A student had four blocks made of the same type of solid wood. The student measured and recorded the mass of each block. Then the student made some predictions about Block C.

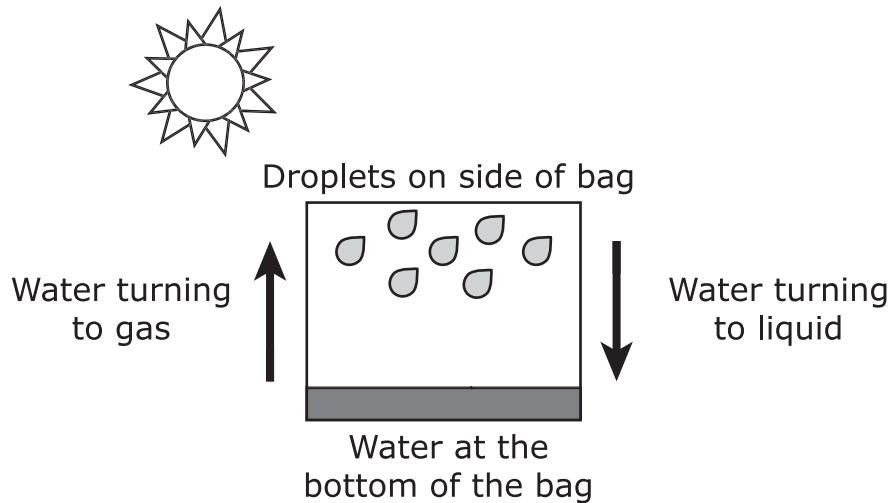
### Wooden Blocks



Which three predictions are best supported by the models?

- M.** The mass of Block C is 3 grams.
- P.** The length of Block C is 3 centimeters.
- R.** The mass of Block C is greater than the mass of Block D.
- S.** The volume of Block C is greater than the volume of Block B.
- T.** The mass of Block C is the same as the masses of Block A and Block B together.

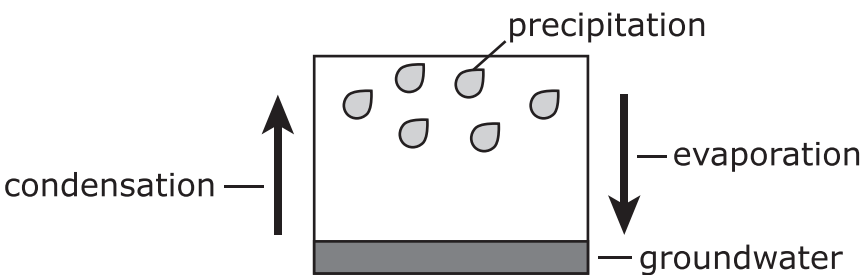
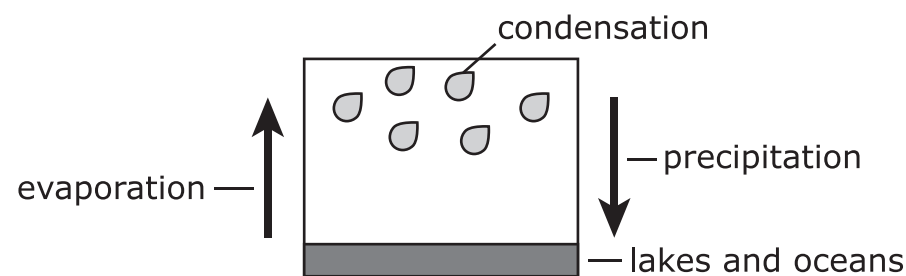
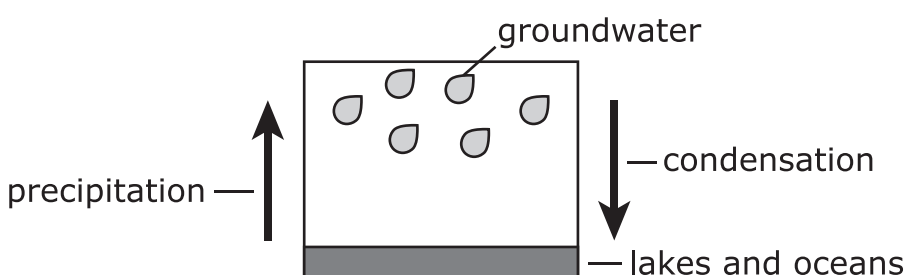
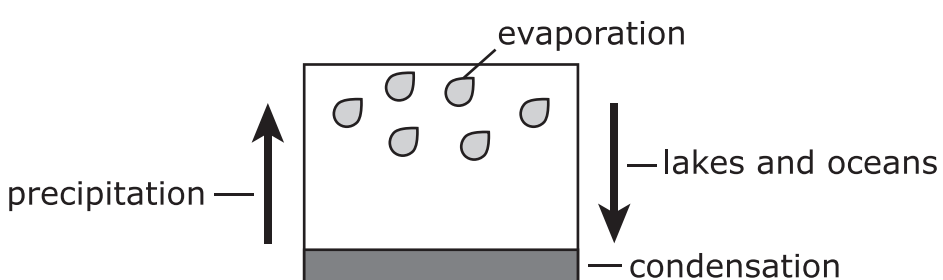
9. The diagram shows a student model of the water cycle. A sealed bag with water in it is taped to a window. The sun warms the water in the bag and turns some of it to gas. Droplets form on the inside and run down the bag. The droplets collect at the bottom of the bag.



*(This item continues on the next page.)*

(**Item 9**, continued from the previous page)

**Which diagram shows the labels that correctly complete the model?**

- A.**
- 
- B.**
- 
- C.**
- 
- D.**
- 

10. A student has to place photographs on the metal door of a cabinet. The student has to follow these instructions.

- The photographs cannot be damaged.
- The metal door of the cabinet cannot be damaged.
- It should be easy to change the position of the photographs.

The student uses the information in this table to choose a tool.

### Tool Ideas

Tool	Result
nails	damaged the cabinet
tape	tore the photographs
magnets	no damage
glue	cannot move photographs

Based on the evidence, which tool is the best to use?

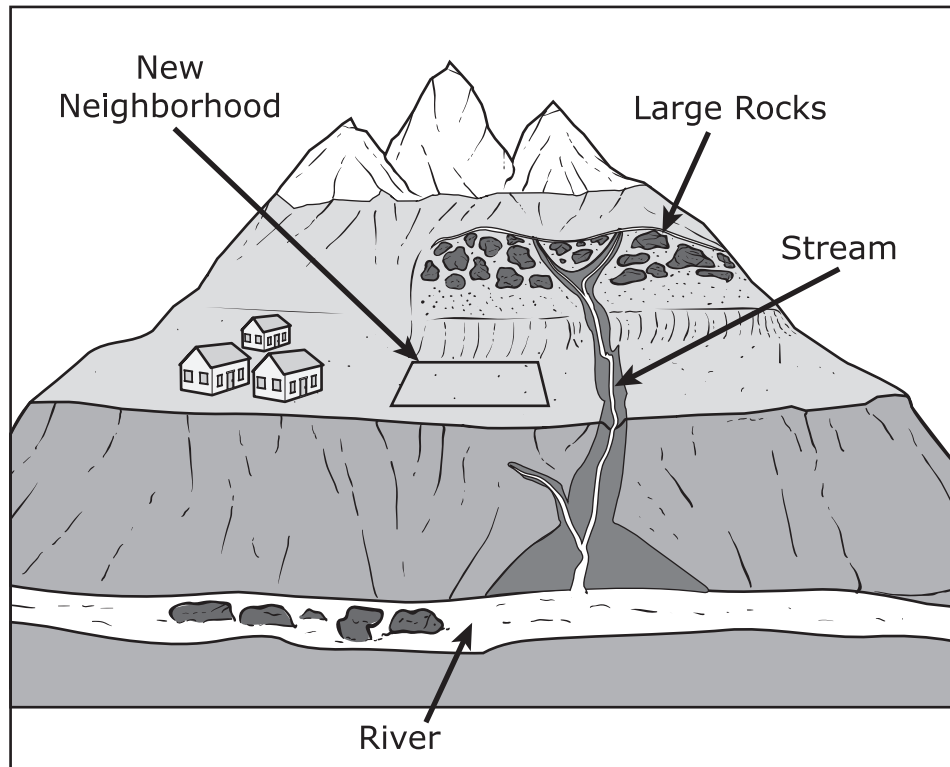
- M.** nails
- P.** tape
- R.** magnets
- S.** glue

- 11. A student learns that the temperatures are getting warmer on Earth. The student claims that warmer temperatures are bad for polar bears.**

**Which polar bear action supports the student's claim?**

- A.** The bears build dens in the same place.
- B.** The bears move to colder areas to find ice.
- C.** The bears change fur color to find a mate.
- D.** The bears produce more cubs in warmer seasons.

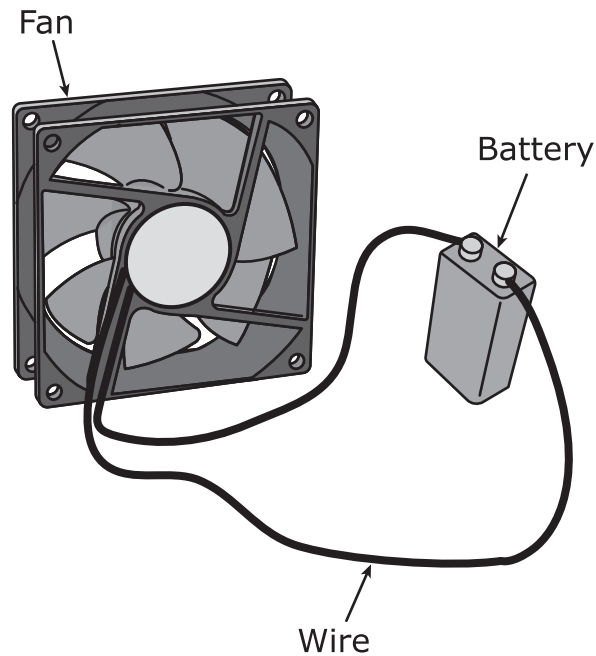
12. A diagram of a mountainside is shown. Builders want to construct a new neighborhood in the area marked on the diagram.



Which three solutions will best reduce the threat of landslides for the new neighborhood?

- M.** Place pipes under the new neighborhood to drain water away.
- P.** Use machines to make the stream flow away from the houses.
- R.** Add plants that have wide and deep root systems.
- S.** Form a hill at the bottom of the slope.
- T.** Build smaller houses.

13. A student builds a circuit with a fan, a battery, and some wire. The battery is being drained too quickly.



**Which of these should the student add to the circuit so the battery drains more slowly?**

- A.** a switch, so the fan can be turned on and off
- B.** a lightbulb, to show when the battery is getting low
- C.** a different battery that provides less energy
- D.** a different fan that requires more power



14. A teacher plans an outdoor science experiment. In the morning, he looks at the sky and sees the clouds shown.

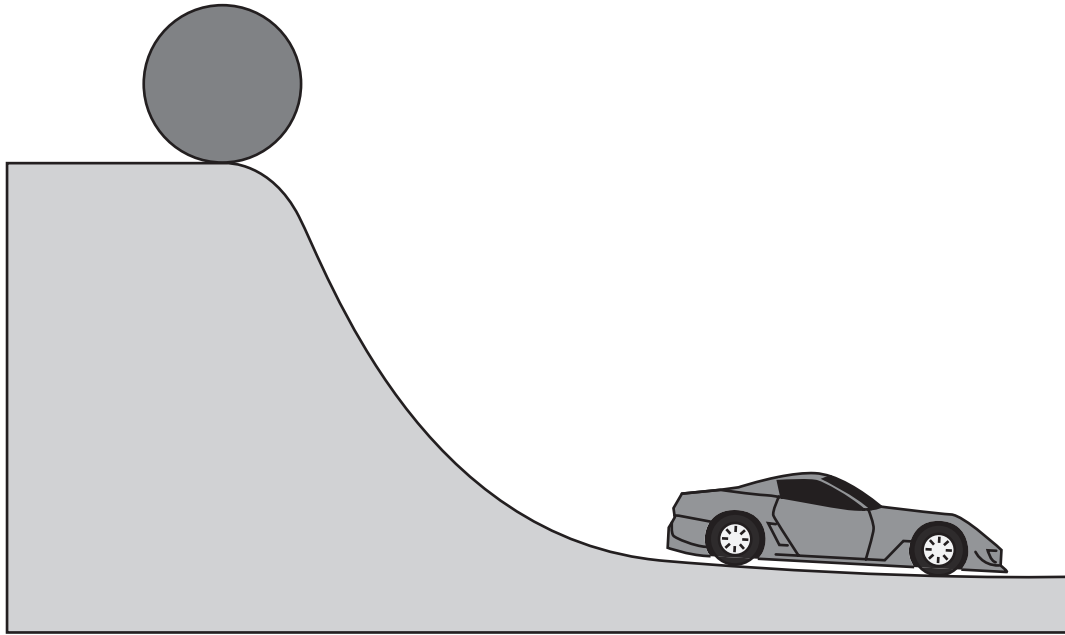


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**Which type of clouds did the teacher see and for which type of weather should the teacher prepare?**

- M.** cirrus clouds and sunny weather
- P.** stratus clouds and foggy weather
- R.** cumulonimbus clouds and stormy weather
- S.** cumulus clouds and rainy weather

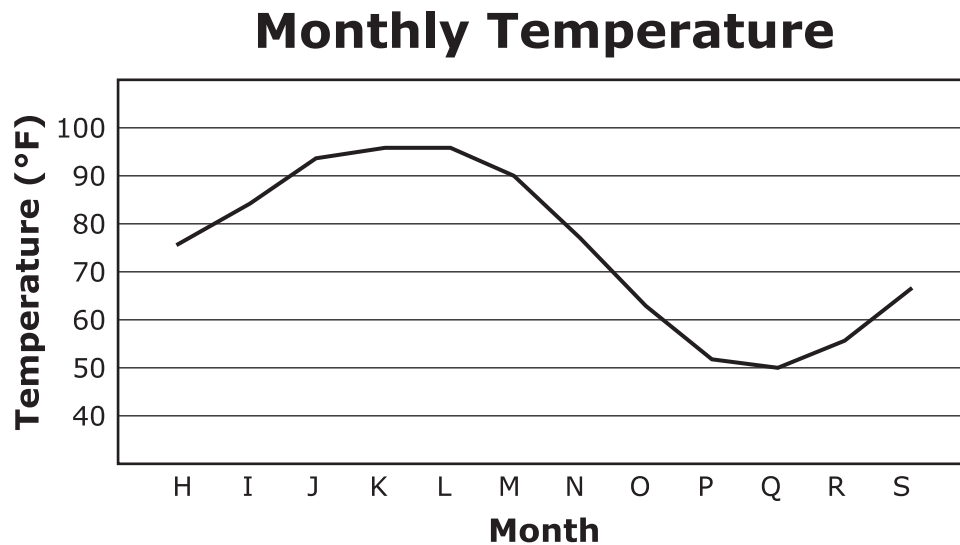
15. A student rolls a ball down a ramp that has a toy car sitting at the bottom. The ball hits the car at the bottom. The car rolls off the ramp and onto the floor.



**The student wants to make the car roll farther and faster. In which of these ways can the student give the car more energy?**

- A.** Use a different ball that weighs less.
- B.** Tape a small weight to the top of the car so it is heavier.
- C.** Use a taller ramp that raises the ball higher off the ground.
- D.** Make the bottom of the ramp longer so the ball has to roll farther before hitting the car.

16. The graph shows the highest monthly temperature for each month of one year.



Summer months are usually the hottest months. Winter months are usually the coldest months. Which two statements are correct about the graph?

- M.** Months J, K, and L are the summer months.
- P.** Months Q, R, and S are the winter months.
- R.** Months N and O are summer months but Month P is not.
- S.** Months M and N are summer months but Month O is not.
- T.** Months Q and R are winter months but Month S is not.

17. Magnets have north and south poles.

### System 1



### System 2



### System 3



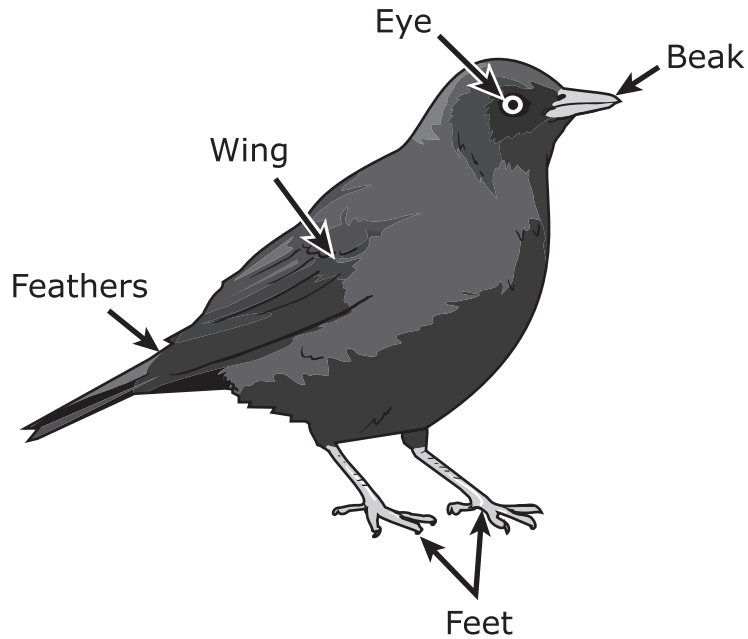
### System 4



Which systems show magnets that will repel each other?

- A. System 1 and System 2
- B. System 2 and System 3
- C. System 3 and System 4
- D. System 4 and System 1

18. The picture shows a common blackbird. Blackbirds can be found all over the United States.



**Blackbirds are known to eat small seeds that have hard shells. Which part of the bird helps it crack open the seed?**

- M.** Eyes
- P.** Beak
- R.** Feathers
- S.** Wing

19. Data on four planets in the solar system are shown.

### Planet Data

Planet	Inner Planet	Shape of the Orbit	Shape of the Planet	Color of the Planet	Description of the Surface
Venus	Yes	Oval	Sphere	Yellow	Rocky
Mars	Yes	Oval	Sphere	Red	Rocky
Jupiter	No	Oval	Sphere	Red, Brown, and White	Gas
Neptune	No	Oval	Sphere	Blue	Gas

Which piece of data best helps determine if a planet is an inner planet?

- A. Shape of the Orbit
- B. Shape of the Planet
- C. Color of the Planet
- D. Description of the Surface

20. Properties of five objects are recorded in the data table shown.

**Properties of Five Solid Objects**

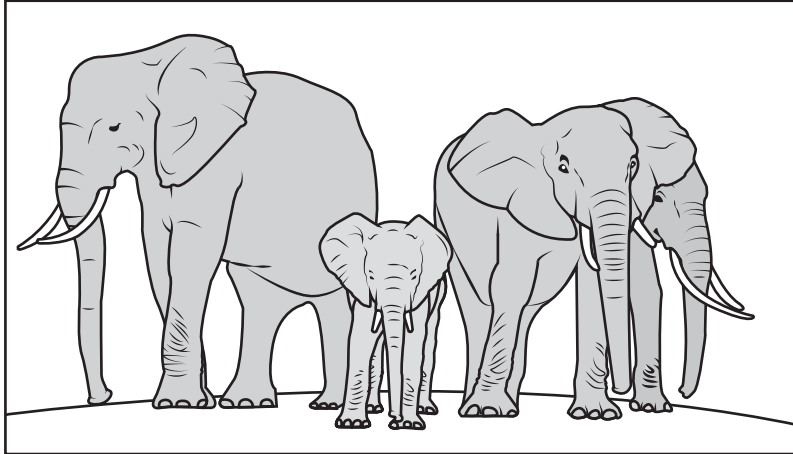
Object	Color	Texture	Hardness	Mass in Grams (g)	Length in Centimeters (cm)
1	Black	Smooth	Hard	13	5
2	Gray	Smooth	Soft	9	5
3	Gold	Rough	Hard	97	5
4	Silver	Rough	Hard	53	5
5	White	Smooth	Hard	13	5

Which three statements are best supported by the data?

- M.** All of the objects have the same length.
- P.** All of the objects have the same mass.
- R.** Objects 1 and 5 have four properties in common.
- S.** Objects 2 and 3 have the greatest difference in their masses.
- T.** Objects 3, 4, and 5 have the same texture.

21. Elephants live in groups called herds. A student claims that living in herds helps elephants survive. The picture shows larger elephants in a herd surrounding a young, small elephant.

### Elephant Herd



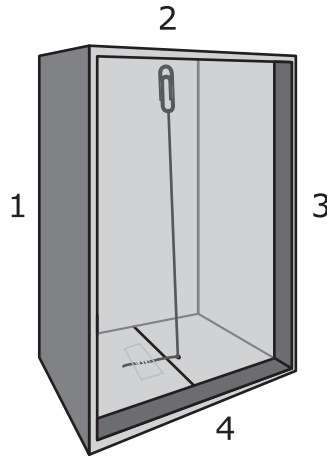
**How does the elephant behavior shown support the student's claim?**

- A.** The larger elephants in the herd step on the smaller elephant.
- B.** The larger elephants in the herd keep the smaller elephant from eating food.
- C.** The larger elephants in the herd protect the smaller elephant from predators.
- D.** The larger elephants in the herd can get to water more easily than the smaller elephant can.



22. A student makes a box with a hidden magnet. The student ties a string to a paper clip. The student tapes the string to the bottom of the box. The picture shows how the paper clip moves.

### Student Setup



Which number shows where the magnet is hidden?

- M. 1
- P. 2
- R. 3
- S. 4

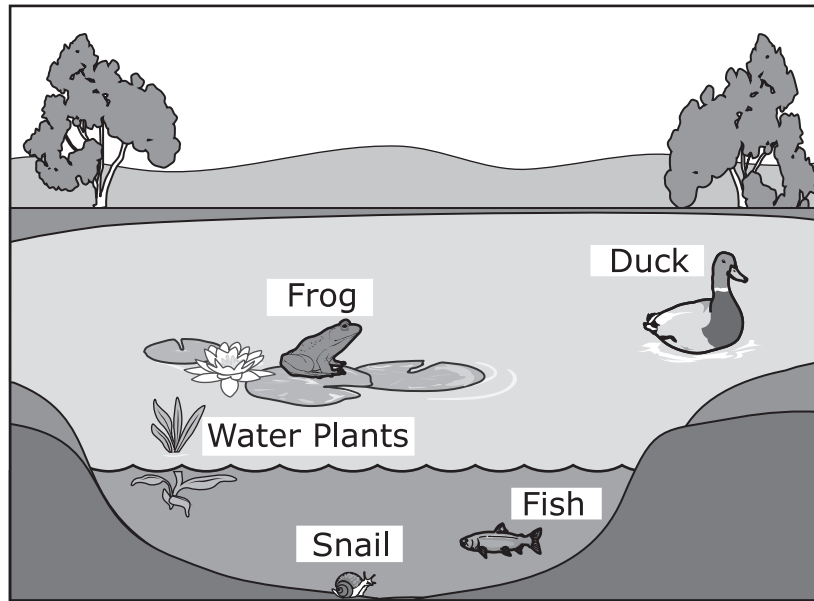
- 23. In the past, a hillside once had plants and bushes. All of the bushes have now been crushed by rocks. The trees are leaning or have been crushed by rocks as well. There are no signs of water or heat damage.**

**Based on this evidence, which type of natural disaster caused these changes?**

- A.** landslide
- B.** flood
- C.** fire
- D.** volcanic eruption

24. A healthy pond ecosystem is shown in the picture.

### Pond Ecosystem



**A scientist predicts that the pond will dry up and fill with sandy soil. Which two organisms will most likely survive the change?**

- M.** The fish will survive because it will be able to breathe air with its gills.
- P.** The frog will survive because it will be able to move to another pond.
- R.** The snail will survive because it will learn to eat minerals from the soil.
- S.** The water plants will survive because they will learn to live on land.
- T.** The duck will survive because it will be able to find food to eat in another area.

25. Students studied weather for a city in another part of the world. The students used online resources to find weather data for that city. The table shows the temperature and rainfall data for each season of the year.

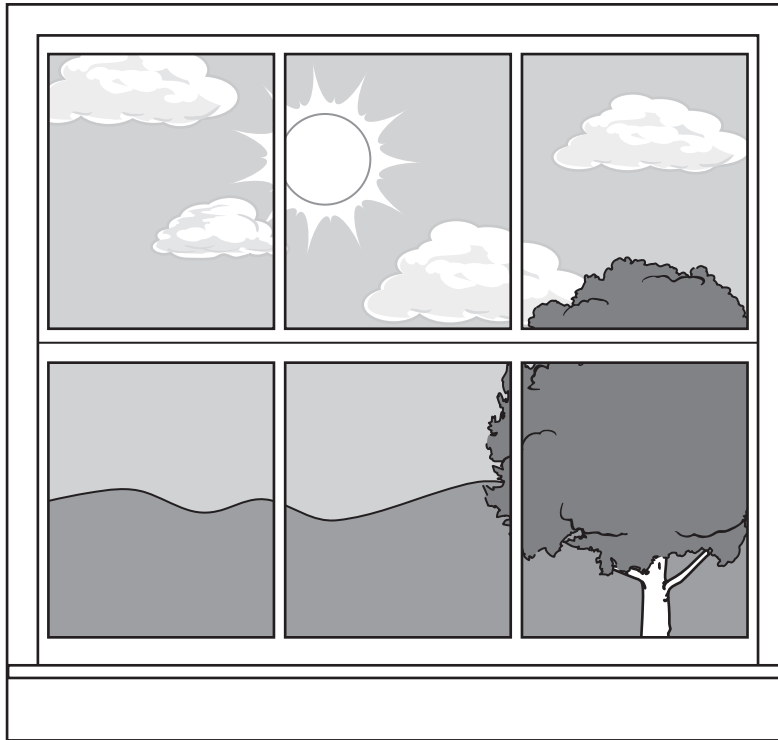
### Temperature and Rainfall Data

	Fall	Winter	Spring	Summer
Temperature	Cool	Cold	Cold	Cool
Rainfall	None	Very little	None	Very little

The students must draw a conclusion about the climate of the city. Which climate best describes the city?

- A. temperate
- B. tropical wet
- C. polar
- D. hot desert

26. A student looks out the window to see what the weather is like.



The student reports that the weather is good today. Which of these is the best evidence for the student's report?

- M.** There are cumulus clouds in the sky, and the sun is shining.
- P.** There are stratus clouds in the sky, and the tree has leaves.
- R.** There are cirrus clouds in the sky, and the temperature is cold.
- S.** There are cumulonimbus clouds in the sky, and rain is falling.

27. A magnet was tested to see if it could attract iron screws. The magnet was placed at three different distances from the screws. The table shows the results of the test.

### Magnet Test Results

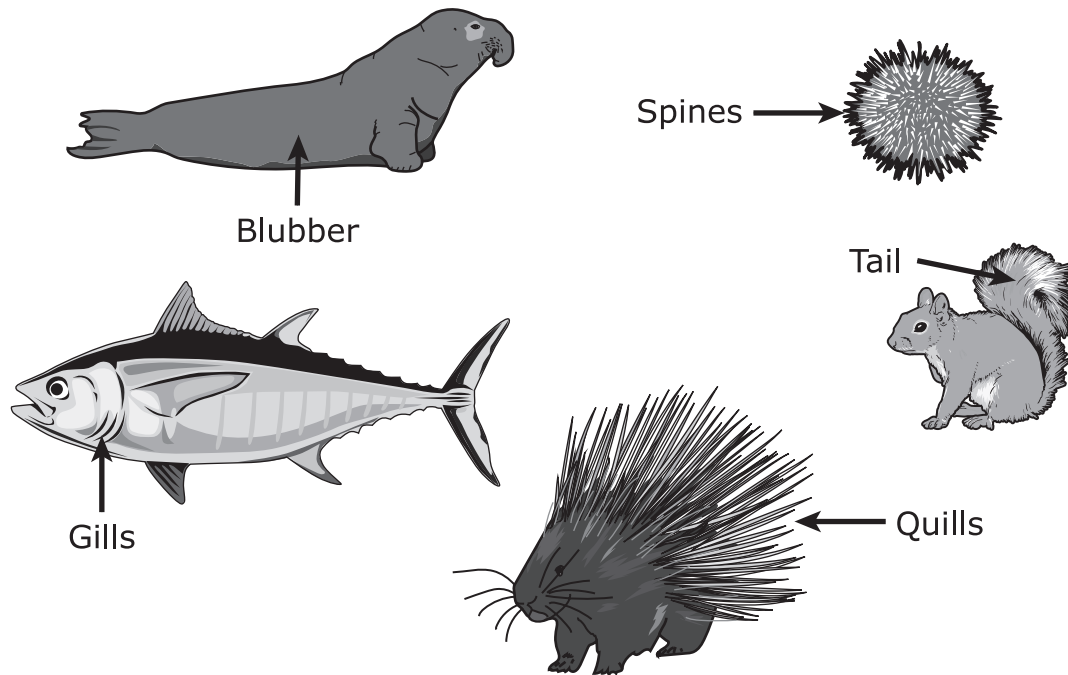
Trial	Distance from Screws (inches)	Did the Screws Move?
1	16	No
2	12	No
3	8	Yes

**Why did the magnet attract the screws only from Trial 3?**

- A.** The magnet changed strength.
- B.** The magnet did not always attract iron.
- C.** The screws were different sizes in the other trials.
- D.** The magnet was too far from the screws in the other trials.

28. The picture shows some organisms and their adaptations.

## Organism Adaptations

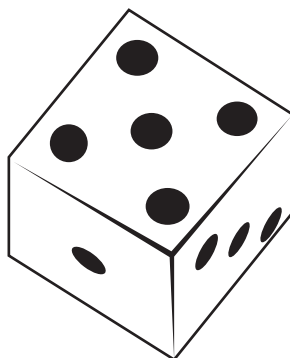


Which two adaptations best defend the organism against attacks from predators?

- M.** Spines
- P.** Gills
- R.** Blubber
- S.** Quills
- T.** Tail

29. A student is given an object. The student makes a list of some of the object's properties, as shown.

### Object



### Properties

It is white.
It feels cold.
It keeps its own shape.
It can be moved.

The student decides that the object is a solid.

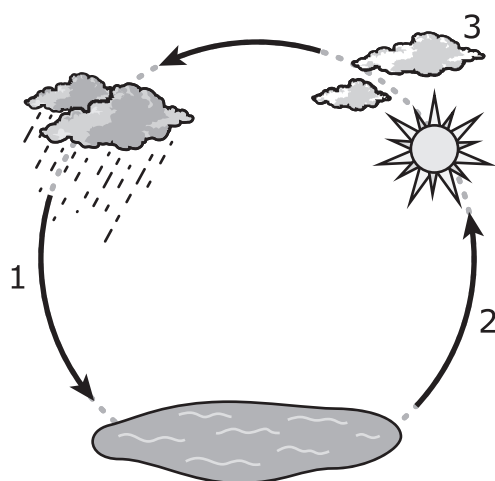
Which property is the reason the student says the object is a solid?

- A. The object is white.
- B. The object feels cold.
- C. The object keeps its own shape.
- D. The object can be moved.



30. The water cycle is shown in the diagram.

### The Water Cycle



*(This item continues on the next page.)*

(**Item 30**, continued from the previous page)

Which table lists the correct labels for the diagram?

**M.**

Step	Process
1	Precipitation
2	Evaporation
3	Condensation

**P.**

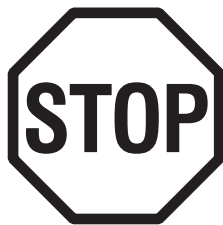
Step	Process
1	Precipitation
2	Runoff
3	Evaporation

**R.**

Step	Process
1	Condensation
2	Evaporation
3	Precipitation

**S.**

Step	Process
1	Runoff
2	Precipitation
3	Condensation



**This is the end of the Grade 3 Science test.**

1. ● (B) (C) (D)
2. (M) (P) (R) ●
3. ● (B) (C) (D)
4. (M) (P) (R) ● ● (select **two**)
5. (A) (B) (C) ●
6. (M) (P) (R) ●
7. (A) (B) ● (D)
8. ● (P) (R) ● ● (select **three**)
9. (A) ● (C) (D)
10. (M) (P) ● (S)
11. (A) ● (C) (D)
12. ● ● ● (S) (T) (select **three**)
13. ● (B) (C) (D)
14. (M) (P) ● (S)
15. (A) (B) ● (D)
16. ● (P) (R) (S) ● (select **two**)
17. (A) ● (C) (D)
18. (M) ● (R) (S)
19. (A) (B) (C) ●
20. ● (P) ● ● (T) (select **three**)
21. (A) (B) ● (D)
22. (M) ● (R) (S)
23. ● (B) (C) (D)
24. (M) ● (R) (S) ● (select **two**)
25. (A) (B) ● (D)

26. ☒ ☐ P ☐ R ☐ S
27. ☐ A ☐ B ☐ C ☒
28. ☒ ☐ P ☐ R ☒ ☐ T (select **two**)
29. ☐ A ☐ B ☒ ☐ D
30. ☒ ☐ P ☐ R ☐ S

### TCAP Practice Test Standards Alignment and Key - Grade 3 Science

Question No.	Key	Standard
1	A	3.PS3.3
2	S	3.LS4.3
3	A	3.PS1.1
4	S, T	3.LS2.1
5	D	3.ESS1.1
6	S	3.PS1.2
7	C	3.ESS3.2
8	M, S, T	3.PS1.3
9	B	3.ESS2.1
10	R	3.PS2.2
11	B	3.LS4.1
12	M, P, R	3.ESS3.2
13	A	3.PS3.2
14	R	3.ESS2.2
15	C	3.PS3.1
16	M, T	3.ESS2.3
17	B	3.PS2.1
18	P	3.LS1.1
19	D	3.ESS1.1
20	M, R, S	3.PS1.3
21	C	3.LS2.1
22	P	3.PS3.3
23	A	3.ESS3.1
24	P, T	3.LS4.1
25	C	3.ESS2.4
26	M	3.ESS2.2
27	D	3.PS2.1
28	M, S	3.LS4.2
29	C	3.PS1.1
30	M	3.ESS2.1