

GRADE 5

STUDENT PRACTICE TEST BOOKLET

Student Name: _____



MEA

Maine Educational Assessment

RELEASED 2016 SCIENCE ITEMS

Maine Department of Education

SCIENCE PRACTICE TEST

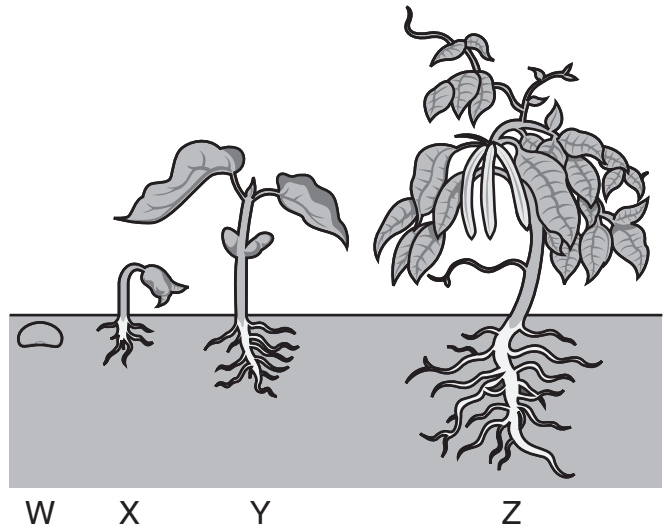
This practice test has sixteen multiple-choice questions and two constructed-response questions.

Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 1 through 16 on page 2 of your practice test answer booklet.

1 What is the main source of heat for Earth's surface?

- A. fire
- B. lightning
- C. the Sun
- D. the ocean

2 The diagram below shows stages in the life cycle of a bean plant.



During which stage of the life cycle does the plant **start** using sunlight to keep growing?

- A. stage W
- B. stage X
- C. stage Y
- D. stage Z

PLEASE GO ON →

3 During which time of day are the highest temperatures **most** often recorded?

- A. sunset
- B. afternoon
- C. sunrise
- D. night

4 People without safe drinking water may get an illness called dysentery. Dysentery is caused by a type of amoeba that lives inside the body. Doctors can find these amoebas by looking at body samples under a microscope.

Which characteristic of amoebas **best** explains why doctors use microscopes to find dysentery amoebas?

- A. Amoebas can change their shape.
- B. Amoebas need humans to survive.
- C. Amoebas look just like human cells.
- D. Amoebas are made of only one cell.

5 A student walks to school each morning in Maine. It is dark outside when he begins walking. As the days pass, the student notices the mornings are becoming brighter. The Sun is rising earlier each day. He also notices that there is more daylight after school. The Sun is setting later in the day.

Which change of seasons is occurring?

- A. winter to spring
- B. summer to fall
- C. spring to winter
- D. fall to winter

6 A balloon filled with water is placed in a freezer.

Which property of the water will change as the water reaches its freezing point?

- A. color
- B. mass
- C. state
- D. weight

PLEASE GO ON →

- 7 A student observes that a one-celled organism and a plant leaf have similar green parts. The student thinks that both organisms use the green parts to live.

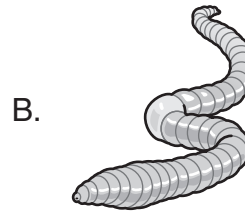
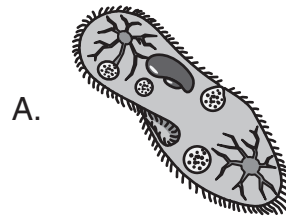
Which evidence supports the conclusion that both organisms need the green parts to live?

- A. Both organisms use the green parts to move.
- B. Both organisms die if the green parts are removed.
- C. The green parts in both organisms are observed making light.
- D. The green parts in both organisms can make more green parts.

- 8 How do plants affect their environment?

- A. Plants clean the soil.
- B. Plants make sunlight brighter.
- C. Plants make food used by other organisms.
- D. Plants create water that collects in small pools.

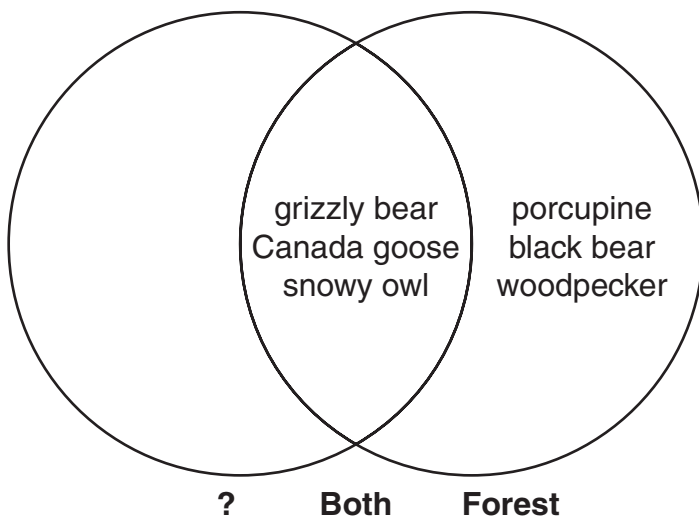
- 9 Which organism is made of a single cell?



PLEASE GO ON →

- 10 A student finds a round, smooth pebble on a beach. Which action made the pebble smooth?
- A. rain falling
 - B. wind blowing
 - C. snow melting
 - D. waves moving

- 11 The diagram below sorts animals from two different environments.



Which group of three animals belongs in the empty section in the diagram?

- A. shark, tuna, sea turtle
- B. frog, raccoon, garter snake
- C. arctic fox, caribou, polar bear
- D. penguin, hummingbird, ostrich

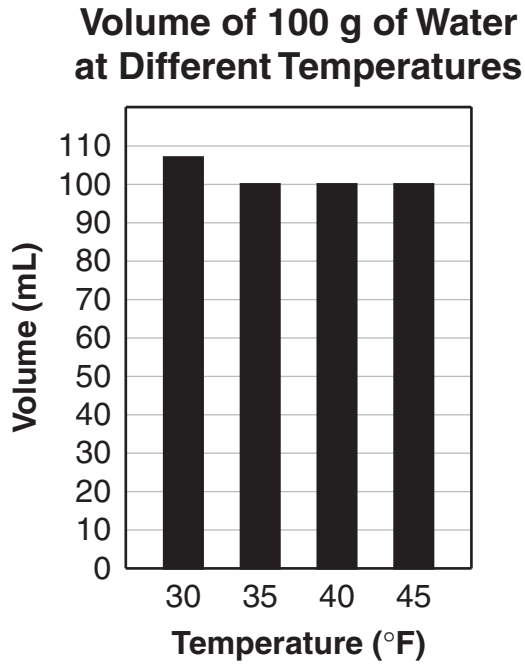
- 12 A group of Canada geese left a Florida lake in the spring. The geese arrived at a Maine lake 2,000 km away in 40 days.

If the geese traveled at a constant rate, how far did the geese travel on the first day?

- A. 5 km
- B. 20 km
- C. 40 km
- D. 50 km

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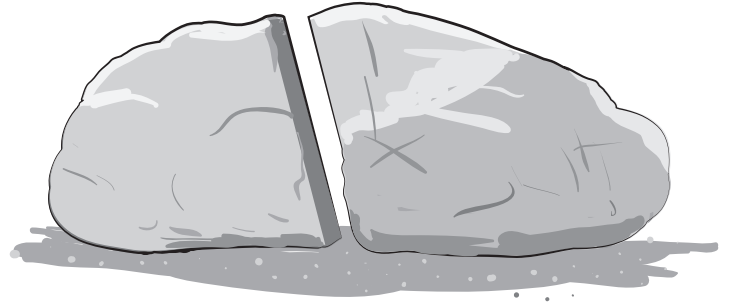
- 13 A student measured the volume of 100 grams of water at four temperatures. The results are shown in the graph below.



The student observed that the volume of the water was greater at 30°F than at other temperatures. What else was different about the water at 30°F?

- A. the taste of the water
- B. the state of matter of the water
- C. the temperature at which ice melts
- D. the material that makes up the water

- 14 The picture below shows a large rock that has split into two pieces.



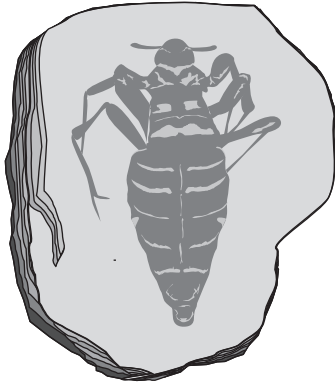
Which of the following **most likely** caused this rock to split?

- A. water freezing inside a crack in the rock
- B. rain washing over the rock
- C. wind blowing sand in a crack in the rock
- D. waves pounding against the rock

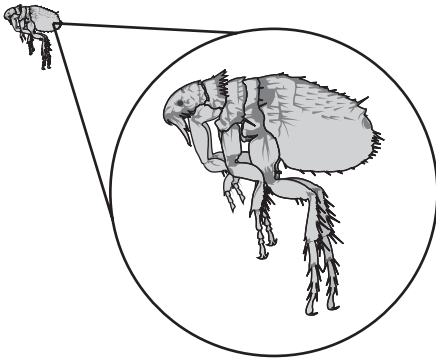
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- 15 The pictures below show a fossil of an ancient relative of the present-day flea. It is eight times larger than the present-day flea.

Ancient Flea



Present-day Flea



Which statement **best** describes the animals that the ancient flea used as a food source?

- A. The animals were immune to the ancient flea.
- B. The animals were larger.
- C. The animals were smaller.
- D. The animals were a different color from the ancient flea.

- 16 The table below shows examples of different actions.

Push	Pull	Push and Pull
A person shoving a heavy box across the floor	?	North-to-south and south-to-south facing magnets placed together

Which example **best** completes the table?

- A. a person kicking a soccer ball
- B. a person plugging in a lamp
- C. an apple falling toward the ground
- D. two objects having the same electrical charge

PLEASE GO ON →

Write your answers to constructed-response questions 17 and 18 in the boxes provided on pages 2 and 3 of your practice test answer booklet. Be sure to answer and label all parts of the questions.

- 17 A student makes cookie dough using an egg, water, sugar, and flour. The student observes the cookie dough before and after baking.
- Describe **two** observations about the cookie dough before baking.
 - Describe **two** observations about the cookie dough after baking that show a change has occurred.
 - Select **one** observation from part b and describe what caused the change.

Be sure to label parts a, b, and c in your answer booklet.

- 18 A farmer raises rabbits. Rabbits can be brown, black, or white. The farmer mates a brown female rabbit with a black male rabbit. This pair has three litters of baby rabbits, as shown in the table below.

Rabbit Litters

Litter #	Number of Offspring by Coat Color		
	Brown	Black	White
1	5	2	0
2	5	1	0
3	6	2	0

- Make a conclusion about how the rabbit offspring got their coat colors. Identify the data in the table that supports your conclusion.
- Describe why none of the offspring are white rabbits. Explain your reasoning.

Be sure to label parts a and b in your answer booklet.

