

GRADE 5

STUDENT PRACTICE TEST BOOKLET

Student Name: _____



MEA

Maine Educational Assessment

RELEASED 2015 SCIENCE ITEMS

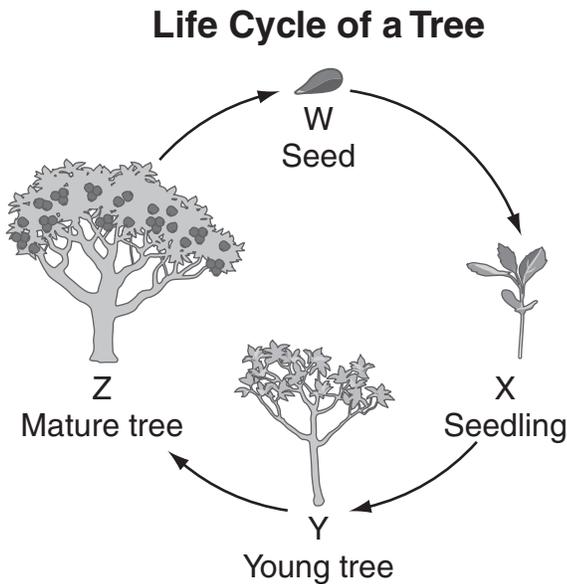
Maine Department of Education

SCIENCE PRACTICE TEST

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

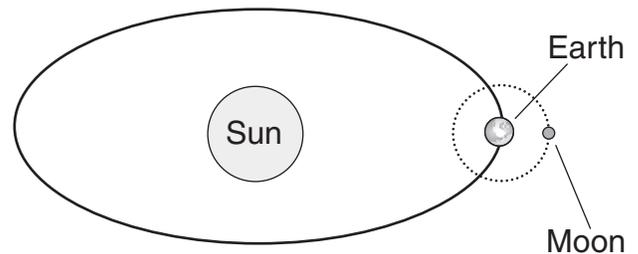
Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 1 through 16 on page 2 of your practice test answer booklet.

- 1 The diagram below shows the life cycle of a tree.



Which stage of the life cycle will **most** limit the amount of sunlight reaching other plants?

- 2 A model of a part of our solar system is shown below.



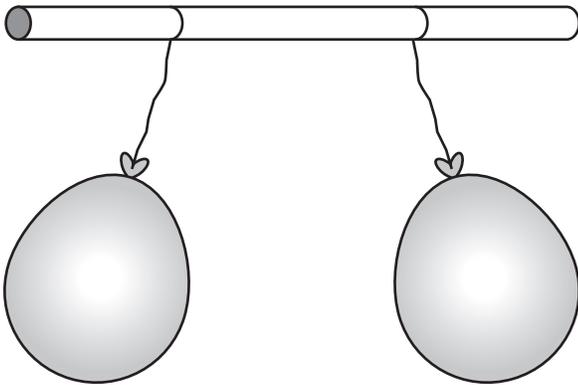
What does the dotted line in the model represent?

- A. the orbit of the Moon
B. the phases of the Moon
C. the seasons on Earth
D. the North Pole on Earth
- 3 What happens when a warm object is put inside a cooler object?
- A. The warm object loses energy and the cool object gains energy so that both objects stay at different temperatures.
B. The warm object gains energy and the cool object loses energy so that both objects stay at different temperatures.
C. The warm object loses energy and the cool object gains energy until both objects are the same temperature.
D. The warm object gains energy and the cool object loses energy until both objects are the same temperature.

PLEASE GO ON ➔

- 4 Which of the following is **not** passed from parents to children?
- A. hair color and freckles
 - B. a scar on the knee
 - C. the need to breathe air
 - D. the ability to roll the tongue

- 5 A student rubs two balloons on a sweater and hangs the balloons from pieces of string. The balloons move apart from each other, as shown in the diagram below.



What causes the balloons to move apart?

- A. having opposite magnetic poles
- B. being attracted to magnets
- C. having the same electrical charges
- D. being made from rubber

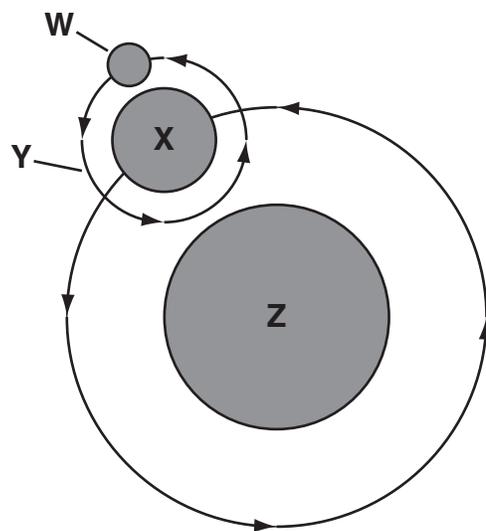
- 6 Two flowers are both roses. One rose is larger and has more fragrance than the other rose. What advantage will one of the roses **most likely** gain because of this difference?
- A. The larger rose will have fewer petals than the smaller rose.
 - B. The larger rose will more easily attract bees than the smaller rose.
 - C. The smaller rose will have more pollen than the larger rose.
 - D. The smaller rose will grow faster than the larger rose.

PLEASE GO ON →

- 7 After a heavy rain, a mudslide flows into a pond and mud mixes into the water. Which of the following is **most likely** to happen?
- A. Fish will have more food.
 - B. Trees will be able to get more light.
 - C. Raccoons will not be able to find food.
 - D. Underwater plants will receive less light.

- 8 Constellations are patterns of objects seen in the night sky from Earth. How are the objects in constellations like the Sun?
- A. The objects are stars.
 - B. The objects are planets.
 - C. The objects are located in this solar system.
 - D. The objects heat the atmosphere of Earth.

- 9 The diagram below shows the locations and orbits of the Sun, Earth, and the Moon.



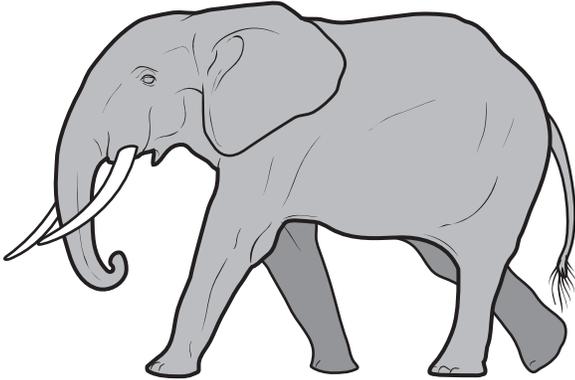
Which letter represents the Sun?

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

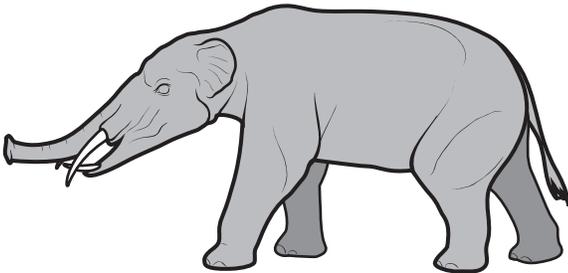
PLEASE GO ON →

- 10 The diagram below shows a present-day elephant and an ancestor of the elephant.

Present-day Elephant



Ancestor of the Elephant



Based on the diagram, what is a major difference between the two elephants?

- A. The ancestor elephant has fur.
- B. The ancestor elephant has a tail.
- C. The present-day elephant has larger tusks.
- D. The present-day elephant has smaller feet.

- 11 Balsam fir trees in Maine have similar needle length. Why do the trees have similar needle length?

- A. because of the amount of sunlight they receive
- B. because of their closeness to the ocean
- C. because of the inherited information inside the seeds
- D. because of the type of insects that eat the needles

- 12 Which statement describes the weather when water droplets in clouds become heavy and the temperature is 20°C (68°F)?

- A. It is clear and breezy.
- B. It is raining.
- C. It is snowing.
- D. It is sunny and clear.

PLEASE GO ON →

13 What is a source of food and growth for a mushroom?

- A. rotting organisms
- B. sunshine
- C. minerals in soil
- D. water in soil

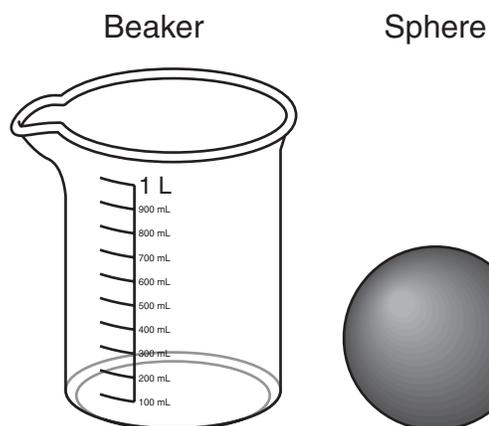
14 Ten grams of sugar is dissolved in 100 grams (g) of water. How many grams is the sugar-and-water solution?

- A. 90 g
- B. 100 g
- C. 110 g
- D. 1000 g

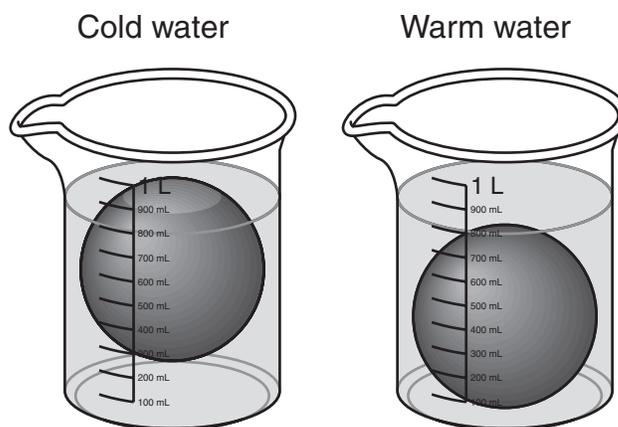
15 Which type of organism is made of one cell?

- A. trees
- B. bacteria
- C. fern
- D. fish

16 The picture below shows a beaker and a hollow metal sphere.



A student doing an investigation observes that a hollow metal sphere floats in cold water but sinks in warm water, as shown below.



Which question does the student's investigation **best** answer?

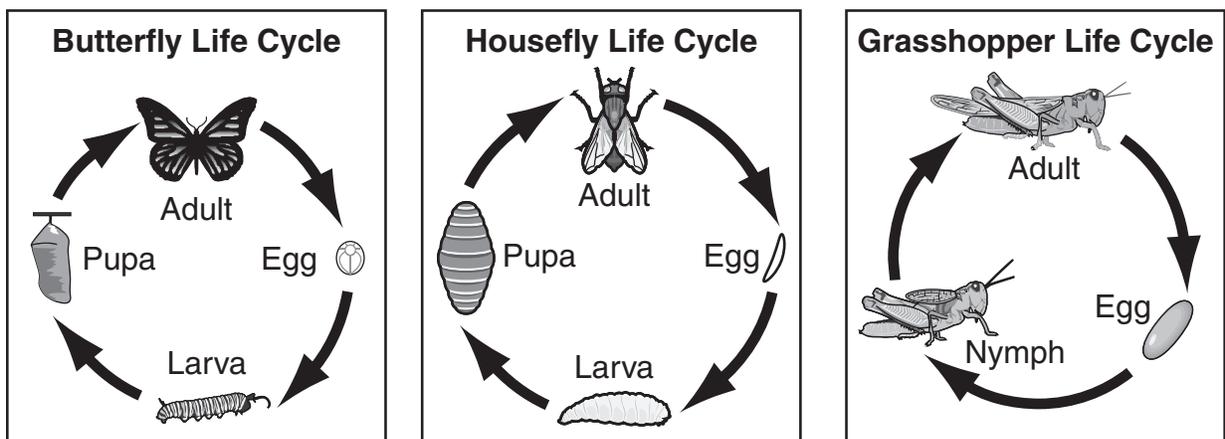
- A. Why does the temperature of water increase?
- B. How much water is required for metal to float?
- C. At what temperature does water turn into a gas?
- D. How does heating change the properties of water?

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 The shape of Earth's surface is changing all the time.
- Describe **two** ways that water, in its various forms, can change the shape of Earth's surface.
 - Describe **two** ways that forces other than water can change the shape of Earth's surface.
- Be sure to label parts a and b in your answer booklet.

- 18 Three insect life cycles are shown in the diagrams below.



- Based on the diagrams, identify which insects have the same life stages.
- Based on the diagrams, identify which insects have different life stages.
- Sort the insects into two groups. Be sure to include labels. Use evidence from the diagrams to support your response.

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

