

GRADE 5

STUDENT PRACTICE TEST BOOKLET

Student Name: _____



MEA

Maine Educational Assessment

RELEASED 2015 SCIENCE ITEMS

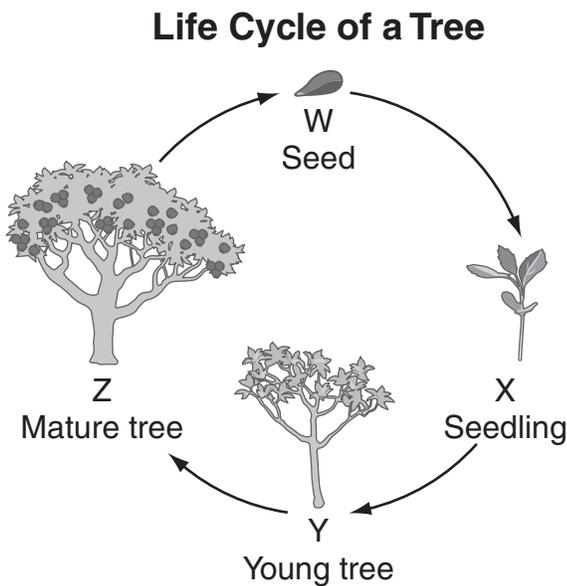
Maine Department of Education

SCIENCE PRACTICE TEST

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

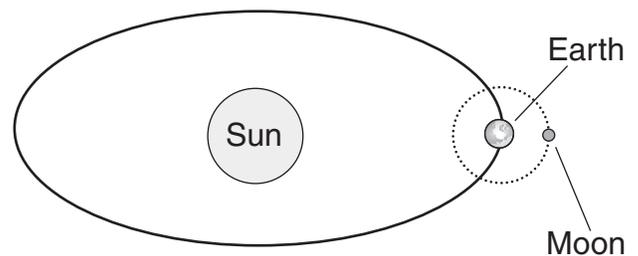
Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 1 through 16 on page 2 of your practice test answer booklet.

- 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.



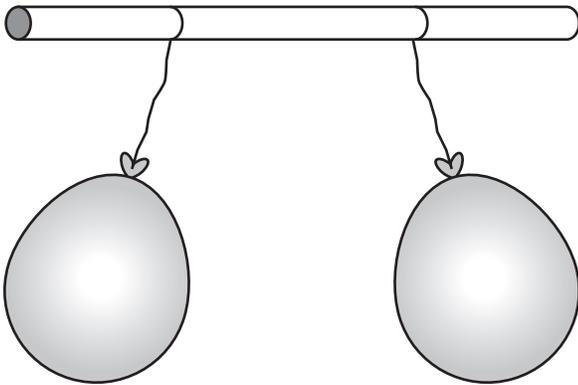
What does the dotted line in the model represent?

- 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

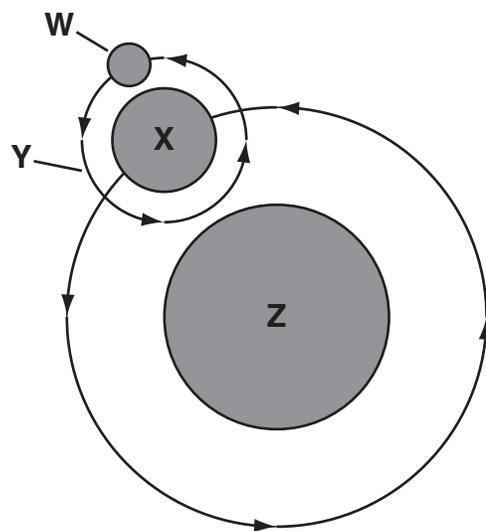
- 6 Two flowers are both roses. One rose is larger and has more fragrance than the other rose. What advantage will one of the roses **most likely** gain because of this difference?
- A. The larger rose will have fewer petals than the smaller rose.
 - B. The larger rose will more easily attract bees than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



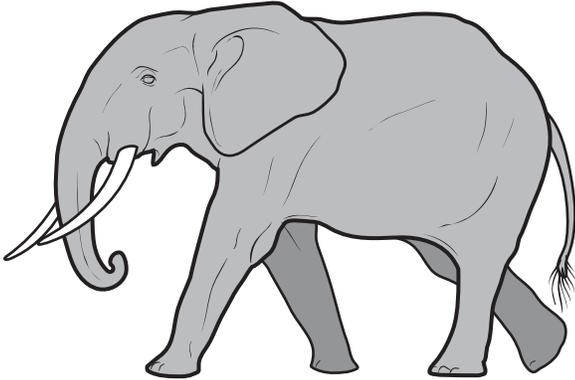
Which letter represents the Sun?

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

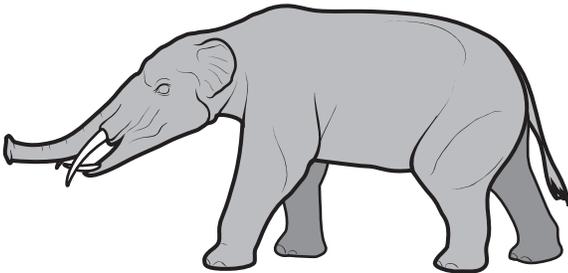
PLEASE GO ON →

- 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.

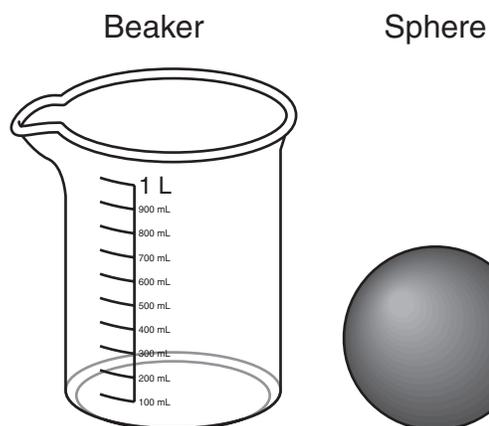
PLEASE GO ON →

- 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

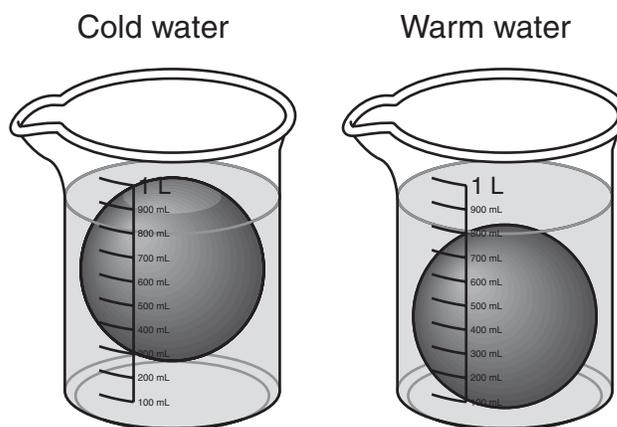
- 14 Ten grams of sugar is dissolved in 100 grams (g) of water. How many grams is the sugar-and-water solution?
- A. 90 g
 - B. 100 g
 - C. 110 g
 - D. 1000 g

- 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?

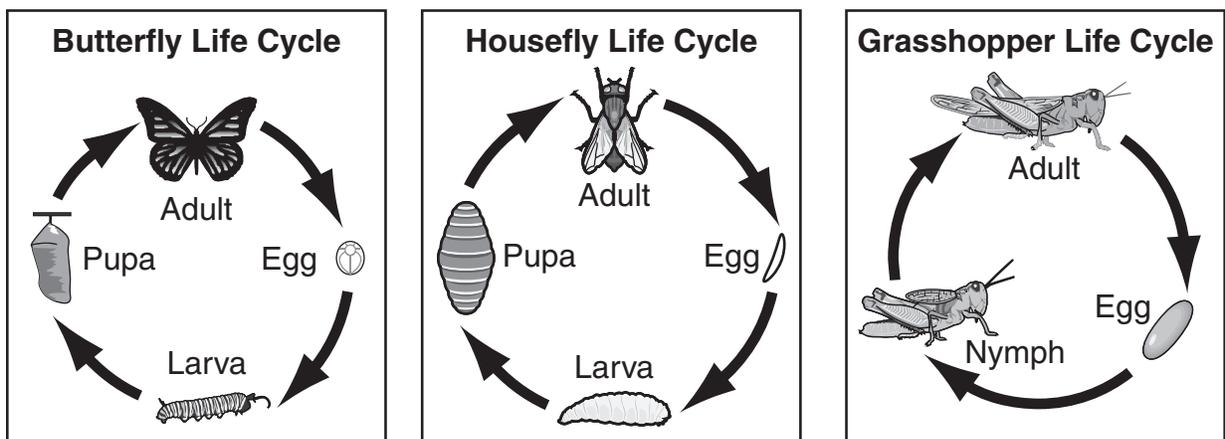
- A. Why does the temperature of water increase?
- B. How much water is required for metal to float?
- C. At what temperature does water turn into a gas?
- D. How does heating change the properties of water?

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.

