

GRADE 5

STUDENT PRACTICE TEST BOOKLET

Student Name: _____



MEA

Maine Educational Assessment

RELEASED 2013 SCIENCE ITEMS

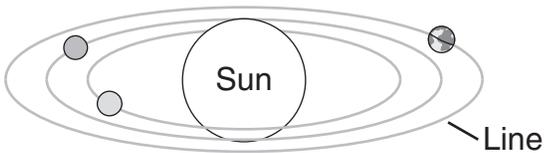
Maine Department of Education

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.

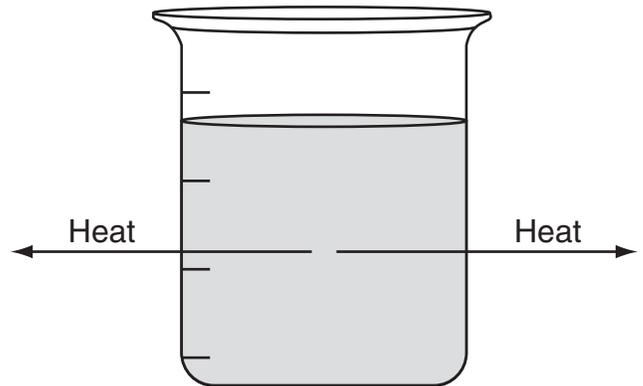
- 1 The diagram below shows three planets going around the Sun.



What do the lines in the diagram represent?

- A. path of sunlight
 - B. planets' orbits
 - C. planets' north poles
 - D. solar wind
- 2 Crabs, bears, spiders, frogs, and snakes are all animals. What makes these living things animals?
- A. They can make their own food.
 - B. They have many cells and eat other organisms.
 - C. They get their energy directly from the Sun and have many cells.
 - D. They cannot move from one place to another and have only one cell.

- 3 The diagram below shows a beaker of hot water.



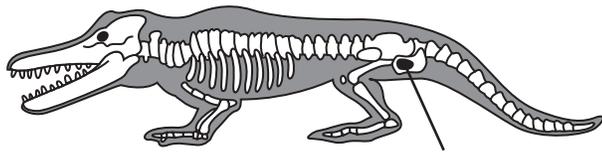
What will happen to the water if heat moves from the water to outside the beaker?

- A. The water will become cooler.
- B. The water will change into a gas.
- C. The water will start to boil.
- D. The water level will rise.

PLEASE GO ON →

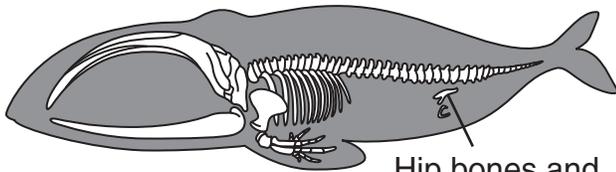
- 4 Which organism is made of many cells?
- A. amoeba
 - B. onion
 - C. bacteria
 - D. yeast

- 5 The diagram below shows the skeletons of an ancient whale (Ambulocetus) and a whale that lives today (Balaena).



Ambulocetus

Hip bones and hind limb



Balaena

Hip bones and hind limb

Based on the diagram, how were ancient whales **most likely** different from whales that live today?

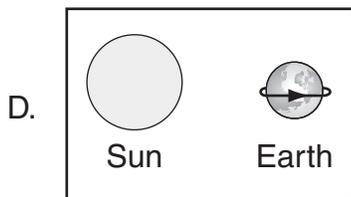
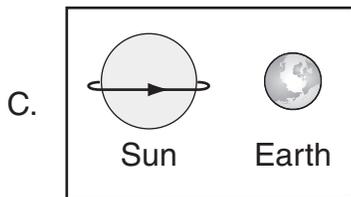
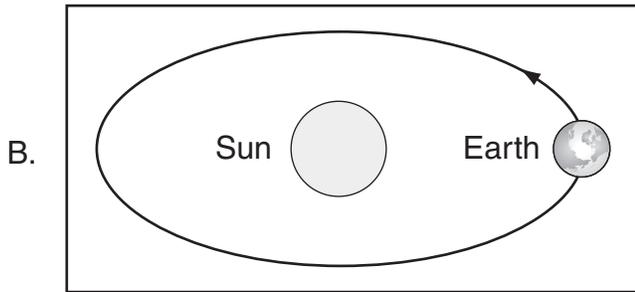
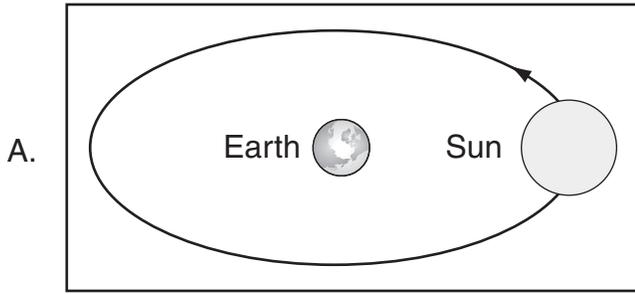
- A. Ancient whales lived on the land and in the water.
- B. Ancient whales could swim faster.
- C. Ancient whales were plant eaters.
- D. Ancient whales had no lungs.

- 6 Joe is an adult. Which statement **best** explains why Joe looks like his biological parents?
- A. Joe lived with his parents for many years.
 - B. Joe inherited traits from his parents.
 - C. Joe believed the same things as his parents.
 - D. Joe ate the same foods as his parents.

- 7 How could a student **best** determine if a material is made up of different parts?
- A. weigh the material
 - B. place the material in water
 - C. measure the temperature of the material
 - D. observe the material with a hand lens

PLEASE GO ON ➡

8 Which diagram **best** shows the cycle of day and night on Earth? (The arrow in each diagram shows the direction of motion.)



9 How are all organisms that are made of many cells similar to organisms made of one cell?

- A. Both directly use sunlight.
- B. Both make their own food.
- C. Both need energy.
- D. Both live a long time.

10 The stages in the development of a frog are shown below.



Stage one



Stage two



Stage three



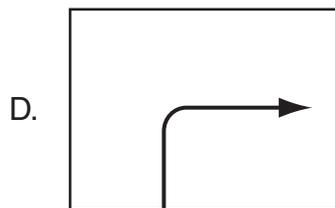
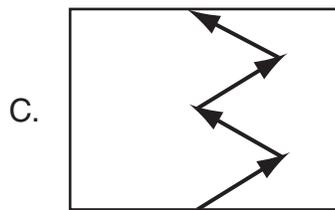
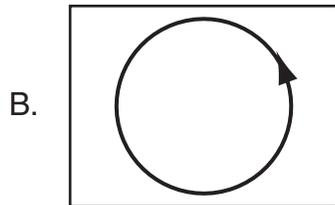
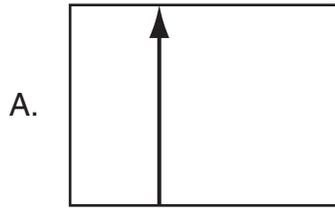
Stage four

What change occurred when the tadpole became a frog?

- A. The tadpole could swim but the frog cannot.
- B. The frog can swim but the tadpole could not.
- C. The frog can breathe with gills but the tadpole could not.
- D. The frog can breathe with lungs but the tadpole could not.

PLEASE GO ON →

- 11 A student pushes a ball once and it starts rolling across a smooth, level floor. Which picture shows the ball's path as it rolls on the floor?

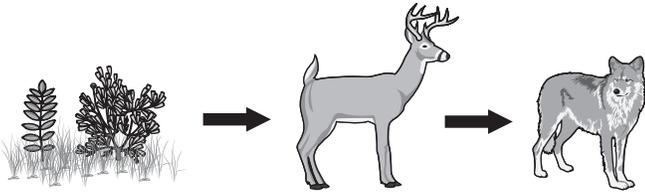


- 12 What makes the Sun similar to all stars?
- A. The Sun is close to Earth.
 - B. The Sun goes around planets.
 - C. The Sun produces heat and light.
 - D. The Sun is large and yellow.

- 13 A sugar cube dissolves in a glass of warm water. Which statement describes a change in the sugar?
- A. The sugar is easier to see after it dissolves.
 - B. The sugar is no longer sweet after it dissolves.
 - C. The particles of dissolved sugar are more spread out.
 - D. The weight of the sugar decreases after it dissolves.

PLEASE GO ON ➡

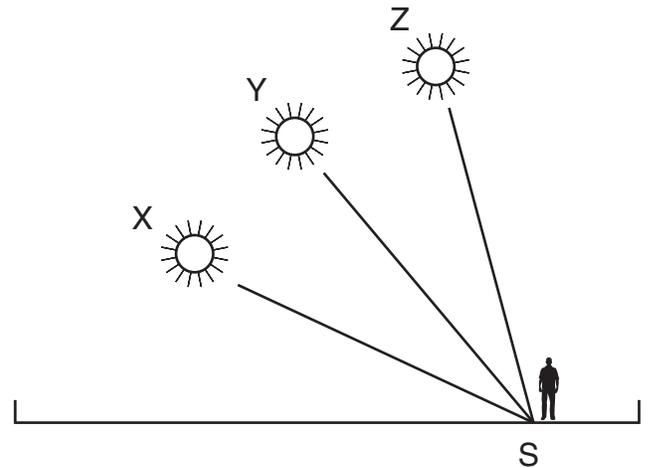
- 14 A food chain is shown below.



For three years there is very little rain. What will be the **most likely** result if less grass grows?

- A. The wolf population will get smaller.
 - B. The deer population will get bigger.
 - C. The number of deer will stay the same.
 - D. The number of wolves will stay the same.
- 15 Which statement **best** explains why kittens look similar to their parents?
- A. Kittens are raised the way their parents were raised.
 - B. Kittens eat the same types of food as their parents.
 - C. The similarities to the kittens' parents develop by chance.
 - D. The information to make kittens comes from their parents' cells.

- 16 The diagram below shows the positions of the Sun at noon for three different seasons as observed by a student at point S.



What is the order of the seasons from position X to position Z?

- A. winter, summer, spring
- B. spring, summer, winter
- C. winter, spring, summer
- D. summer, spring, winter

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 Most plants grow in soil.

- a. Identify **two** materials that form soil.
- b. Describe **two** ways that plants, animals, or other living things improve soil used for growing plants.

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

18 A food chain is shown below.

grass → grasshopper → bird → snake

- a. Explain why there has to be grass in order for the snake to survive in this ecosystem.
- b. Explain **two** ways the food chain may change if all of the birds move to another ecosystem.

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

