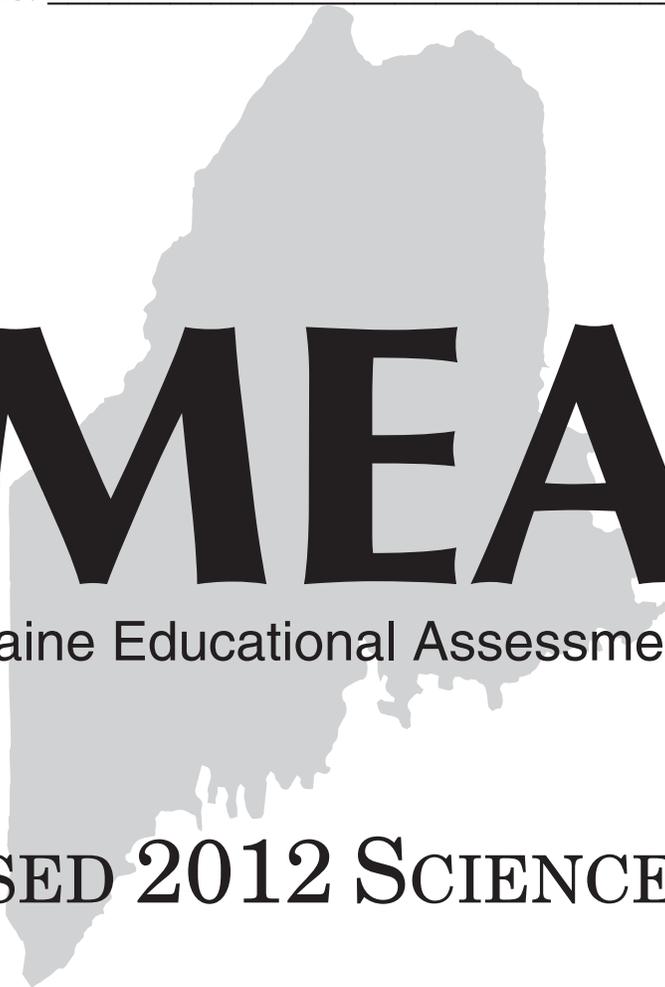


GRADE 5

STUDENT PRACTICE TEST BOOKLET

Student Name: _____



MEA

Maine Educational Assessment

RELEASED 2012 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 During the summer in Maine, fog sometimes forms. Fog is **best** described as

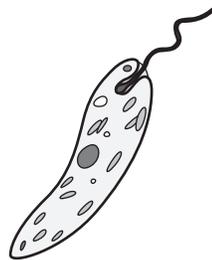
- A. ice crystals.
- B. rain.
- C. snow.
- D. water droplets.

2 Which of the following is **most** important to determine whether two magnets will attract each other?

- A. size of magnets
- B. weight of magnets
- C. size of the magnets' poles
- D. position of the magnets' poles

3 Which organism is made of one cell?

A.



B.



C.

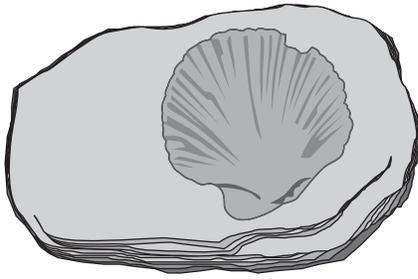


D.



PLEASE GO ON →

- 4 The picture below shows a fossil of an animal.

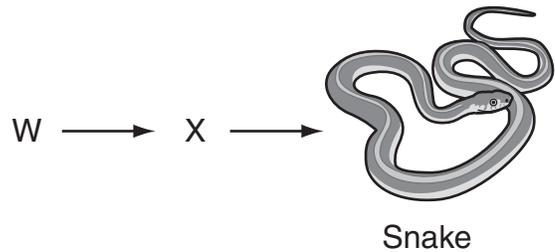


Where did this animal live?

- A. in the ground
 - B. in the trees
 - C. in the desert
 - D. in the ocean
- 5 What is a difference between a seedling and a mature tree in a life cycle of a tree?
- A. A seedling can grow fruit while a mature tree cannot.
 - B. A seedling has fewer leaves than a mature tree.
 - C. A mature tree has fewer roots than a seedling.
 - D. A mature tree grows faster than a seedling.

- 6 The Sun appears to move across the sky each day. What causes this?
- A. the spinning of Earth on its axis
 - B. the path of the Sun around Earth
 - C. the production of nuclear energy by the Sun
 - D. the tilt of Earth on its axis

- 7 The diagram below shows a food chain.

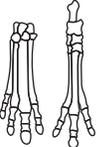
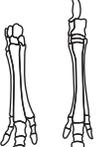
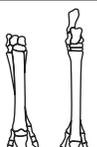


Which organism is the **best** choice for W in the food chain?

- A. bacteria
- B. grass
- C. mouse
- D. fox

PLEASE GO ON ➡

- 8 Using the fossil foot bones of horses, scientists found that the feet of horses became longer and lost toes over a long period of time, as shown in the pictures below.

Foot Bones	When Horses Lived
	Oldest fossils (55–45 million years ago)
	(33–29 million years ago)
	(17–11 million years ago)
	Youngest fossils (5 million years ago)

Which conclusion **most likely** explains why the horses' feet changed?

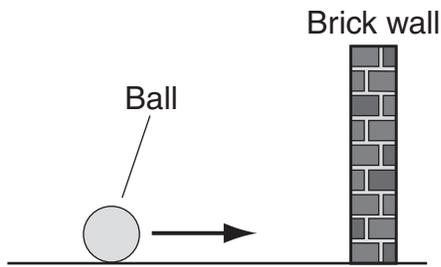
- A. to allow horses to run faster than their predators
- B. to allow horses to swim faster than their ancestors
- C. to allow horses to eat more grass
- D. to allow horses to have more offspring

- 9 A car travels 300 kilometers in three hours. What is the speed of the car?
- A. 100 km/h
 - B. 297 km/h
 - C. 303 km/h
 - D. 900 km/h

- 10 A flower depends on another organism to carry its pollen to other flowers. Which organism **most likely** carries pollen?
- A. chickadee
 - B. bee
 - C. raccoon
 - D. grasshopper

PLEASE GO ON →

- 11 The diagram below shows a rubber ball rolling rapidly toward a brick wall.



The ball hits the wall. Which sentence explains what happens next?

- A. The ball moves away from the wall.
 - B. The ball goes through the wall.
 - C. The ball moves up the wall.
 - D. The ball sticks to the wall.
- 12 The mass of a rock is 80 g. A hammer is used to break the rock into 12 smaller pieces. All the smaller pieces of rock are weighed together. What is their total weight?
- A. 92 g
 - B. 80 g
 - C. 79 g
 - D. 68 g

- 13 Why does the air temperature in Maine usually decrease after 5 P.M.?

- A. The Sun is higher in the sky.
- B. The Sun is lower in the sky.
- C. The Moon reflects sunlight.
- D. The Moon blocks sunlight.

- 14 The diagram below shows the same grain of sand moving up the side of a desert sand dune.

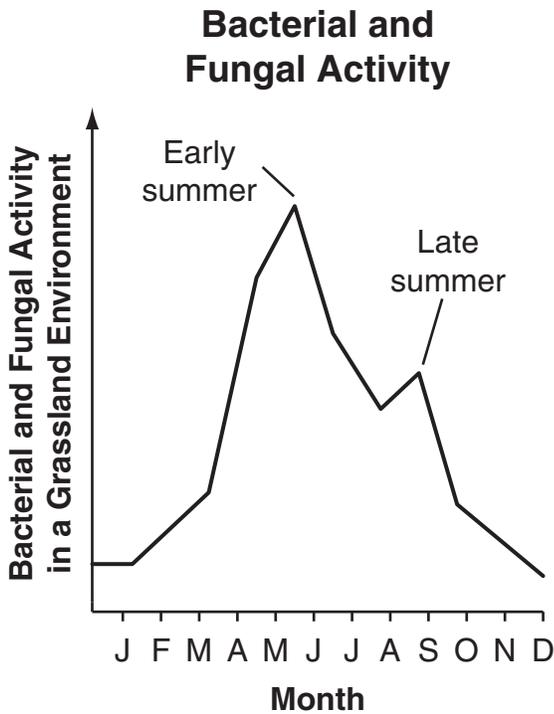


What causes the grain of sand to move in this pattern?

- A. earthquakes
- B. volcanoes
- C. water
- D. wind

PLEASE GO ON ➡

- 15 Bacteria and fungi are responsible for recycling nutrients from dead plants and animals. The graph below shows bacterial and fungal activity in a grassland environment for one year.



During which month will the **most** nutrients be ready for growing plants to use?

- A. February
- B. March
- C. June
- D. August

- 16 A list of four organisms is below.

- Coyote
- Eagle
- Fish
- Human

Which behavior do all these organisms have in common?

- A. They use legs to move.
- B. They live on land.
- C. They eat other organisms.
- D. They lay eggs.

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 places an ice cube on a black paved road on a hot summer day.
- Describe how the ice cube changes in **five minutes**. Be sure to use “heat energy” in your description.
 - Describe how the ice cube changes in **five hours**. Be sure to use “heat energy” in your description.

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

- 18 A farmer breeds the two chickens shown below.



- Describe two physical characteristics an offspring of the chickens could inherit from its parents. Be sure to explain why these characteristics are inherited.
- Describe two physical characteristics an offspring of the chickens could **not** inherit from its parents. Be sure to explain why these characteristics are not inherited.

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

