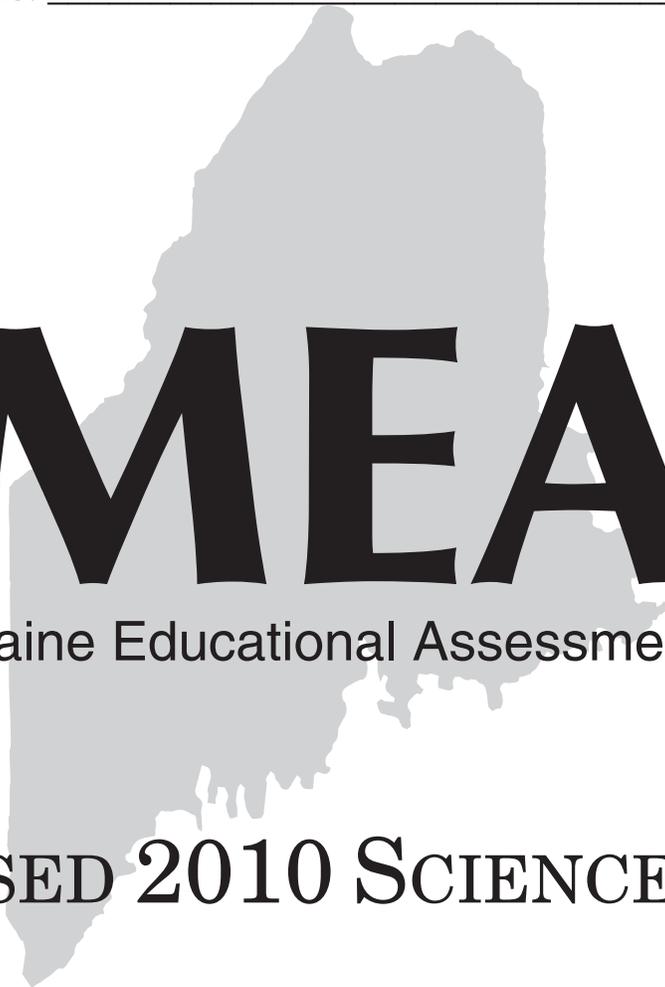


GRADE 5

STUDENT PRACTICE TEST BOOKLET

Student Name: _____



MEA

Maine Educational Assessment

RELEASED 2010 SCIENCE ITEMS

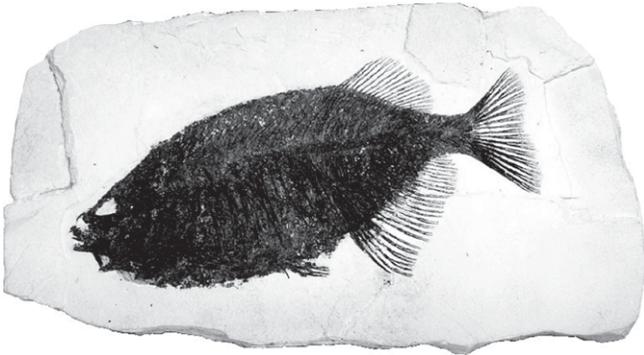
Maine Department of Education

SCIENCE PRACTICE TEST

This practice session has sixteen multiple-choice 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. Multiple-choice questions are worth 1 point each.

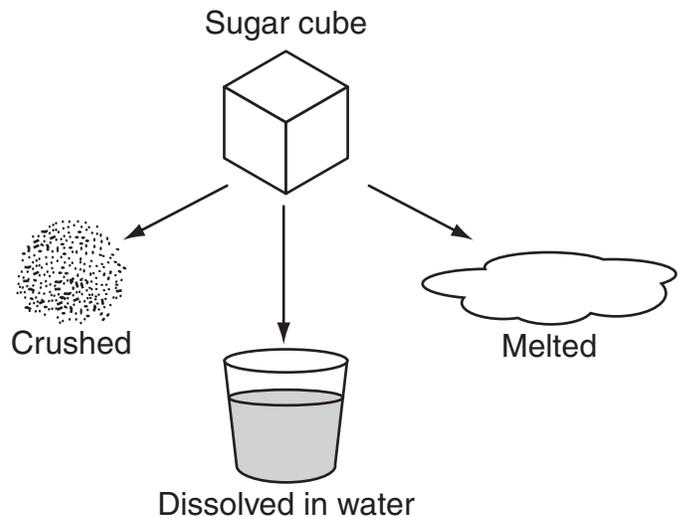
- 1 The picture below shows a fossil.



What makes this fossil similar to a fish?

- A. the body and fins
 - B. the eyes and length
 - C. the bones and size
 - D. the color and mouth
- 2 A female bear has two male cubs. The first cub grows into a large and aggressive adult bear. The second cub grows to a smaller size and it is not as aggressive as its brother. What problem might the second cub have as an adult?
- A. It might not be able to swim.
 - B. It might not be able to hear as well as the larger bear.
 - C. It might spend more time with the mother bear.
 - D. It might have a hard time protecting its territory.

- 3 The diagram below shows three different ways that a sugar cube can undergo a physical change.

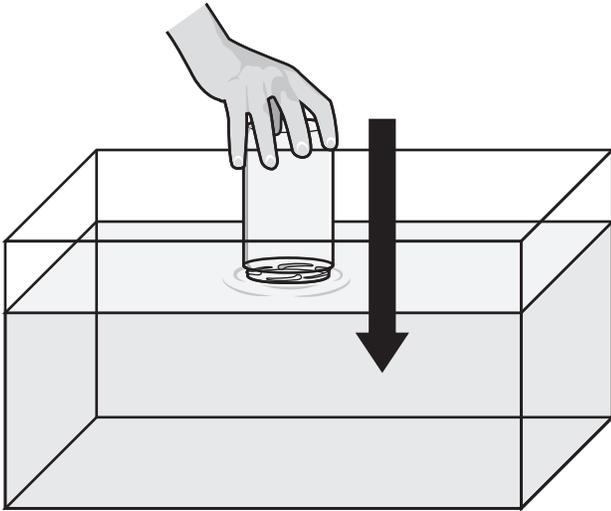


Which characteristic of the sugar cube does not change?

- A. shape
 - B. state
 - C. weight
 - D. texture
- 4 An organism is green and gets energy from the Sun. Which of the following is **most** similar to this organism?
- A. mold
 - B. frog
 - C. grass
 - D. mushroom

PLEASE GO ON →

- 5 A student is putting a glass jar upside down into a tank of water.



What happens when the student pushes the glass jar straight down into the water?

- A. The jar cracks.
 - B. The jar fills with water.
 - C. Air leaves the jar.
 - D. Air prevents the jar from filling with water.
- 6 On which date is there the **least** amount of daylight in Maine?
- A. March 21
 - B. June 21
 - C. September 21
 - D. December 21

- 7 The table below shows the rise and fall of the deer population in Arizona between 1905 and 1935.

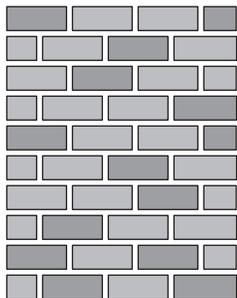
Year	Number of Deer per 1000 Acres
1905	5.7
1915	35.7
1920	142.9
1925	85.7
1935	25.7

What **most likely** caused the deer population to change between 1915 and 1920?

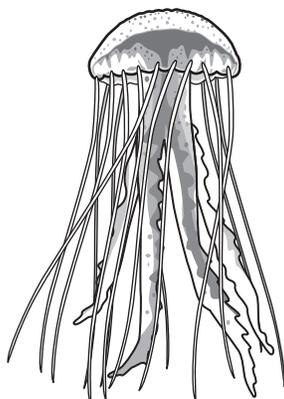
- A. very little rainfall
 - B. many deer starving
 - C. removal of predators
 - D. more deer being hunted
- 8 Students observe rain falling outside. Three hours later, the students observe snow falling. What **most likely** caused the rain to change to snow?
- A. The air temperature became cooler.
 - B. The clouds became darker.
 - C. The wind became stronger.
 - D. The sunlight became stronger.

PLEASE GO ON →

- 9 A wall and a jellyfish are shown below.



Wall



Jellyfish

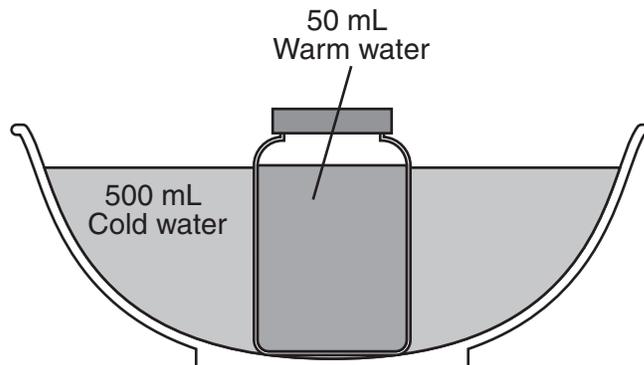
A wall is made of bricks. What is a jellyfish made of?

- A. skin
 - B. bacteria
 - C. muscles
 - D. cells
- 10 Listed below are five different kinds of precipitation.
- snow
 - hail
 - sleet
 - rain
 - drizzle

Which statement is true for all of these?

- A. They are made of different substances.
- B. They are made of the same substance.
- C. They have the same properties.
- D. They form at the same temperature.

- 11 The diagram below shows a small sealed jar containing 50 mL of warm water that is put into a bowl containing 500 mL of cold water.

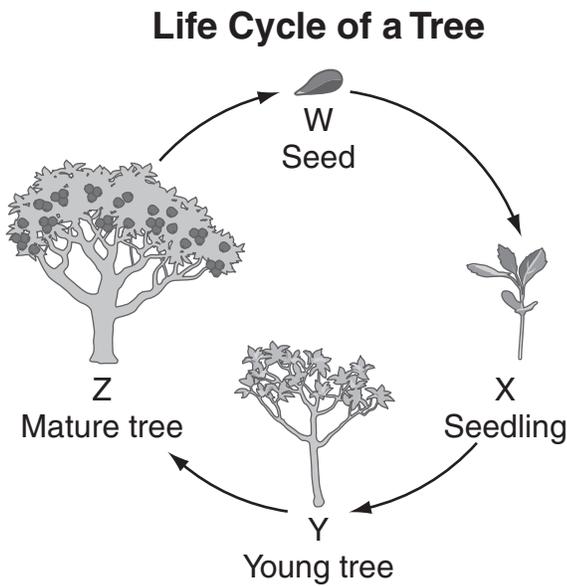


Which statement describes what happens to the temperature of the water in the jar and in the bowl?

- A. The temperature of the water in the jar increases, and the temperature of the water in the bowl decreases.
 - B. The temperature of the water in the jar decreases, and the temperature of the water in the bowl increases.
 - C. The temperature of the water in both the jar and the bowl increases.
 - D. The temperature of the water in both the jar and the bowl decreases.
- 12 How many hours does it take for Earth to rotate on its axis?
- A. 12 hours
 - B. 24 hours
 - C. 36 hours
 - D. 48 hours

PLEASE GO ON →

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



During what stage in this life cycle are seeds produced?

- A. stage W
B. stage X
C. stage Y
D. stage Z
- 14 Where does the energy that heats **most** of Earth's surface come from?
- A. melted rock in the center of Earth
B. hot rocks from new volcanoes
C. sunlight entering Earth's atmosphere
D. plants making food energy for animals

- 15 Beavers cut down some trees in a forest and build dams in streams to make ponds. What is the **greatest** change for other plants and animals when beavers make dams?

- A. More ferns grow next to the beaver ponds.
B. Deer do not find food where the trees were.
C. Woodpeckers have more homes in trees that are cut down.
D. Trees die from flooding where the ponds form.

- 16 The table shown below describes an organism.

Process	Description of Organism
Food/Energy	Organism uses photosynthesis
Movement	Offspring cannot move itself and floats on water

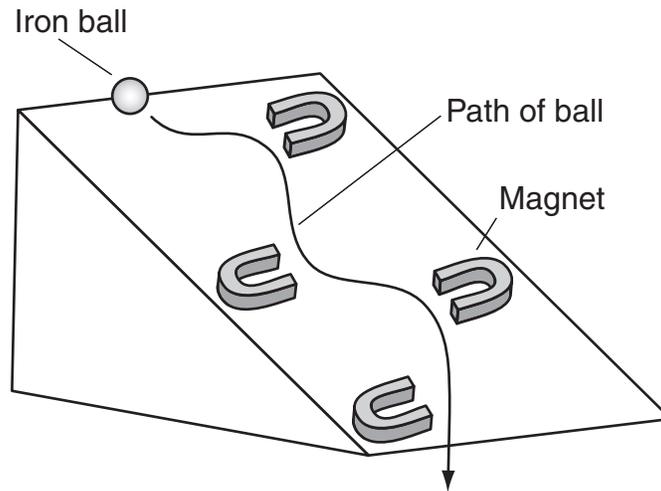
Which organism is described in the table?

- A. algae
B. fish
C. human
D. mushroom

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 (a, b, c, etc.) of the question. Constructed-response questions are worth up to 4 points each.

- 17 The diagram below shows an iron ball and a ramp with several magnets on it. The ball does not stick to any magnet, but the magnets are close enough to affect the motion of the ball. The ball rolls slowly down the ramp, following a curved path.



- Explain why the ball does not roll straight down the ramp.
- Describe a change that would make the ball roll more slowly down the ramp.
- Describe a change that would make the ball roll more quickly down the ramp.

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

PLEASE GO ON ➡

18 The list below can be used to describe humans.

- Color blindness (not able to see some colors)
- Smoker or nonsmoker
- Clothing color
- Eye color
- Hair color
- Honesty
- Height

a. Draw the T-chart shown below, including the labels, in your answer booklet. Place each characteristic from the list into one of the two groups.

Inherited	Not Inherited

b. Choose two characteristics from the list and explain why they are **not** inherited.

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

