

Ohio's State Tests

PRACTICE TEST

SPRING 2015

**GRADE 5
SCIENCE**

PART 2

Student Name

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Directions:

Today you will be taking the Ohio Grade 5 Science Practice Assessment.

There are several important things to remember:

1. Read each question carefully. Think about what is being asked. Look carefully at graphs or diagrams because they will help you understand the question. Then, choose or write the answer you think is best in your Answer Document.
2. Use only a #2 pencil to answer questions on this test.
3. For questions with bubbled responses, choose the correct answer and then fill in the circle with the appropriate letter in your Answer Document. Make sure the number of the question in this Student Test Booklet matches the number in your Answer Document. If you change your answer, make sure you erase your old answer completely. Do not cross out or make any marks on the other choices.
4. For questions with response boxes, write your answer neatly, clearly and only in the space provided in your Answer Document. Any responses written in your Student Test Booklet will not be scored. Make sure the number of the question in this Student Test Booklet matches the number in your Answer Document.
5. If you do not know the answer to a question, skip it and go on to the next question. If you have time, go back to the questions you skipped and try to answer them before turning in your Student Test Booklet and Answer Document.
6. Check over your work when you are finished.

1.

This item cannot be rendered as a paper/pencil item.

2. Which phenomenon is caused by the same force that causes objects to fall toward the surface of Earth?
- A. Earth orbits the sun.
 - B. Sunlight travels to the planets.
 - C. The tails of comets point away from the sun.
 - D. A compass needle points to the North Pole of Earth.



3. The following question has two parts. In the **Answer Document**, first, answer part A. Then, answer part B.

Part A

Plants are an important part of an ecosystem.

Which role do plants play in the flow of energy within an ecosystem?

- A. consumers
- B. decomposers
- C. herbivores
- D. producers

Part B

Select the **two** statements that explain the role of plants in an ecosystem.

- A. Plants absorb energy from water and minerals in the ground.
- B. Plants perform photosynthesis and provide the energy to the ecosystem.
- C. Plants make most of their energy during the night so that they can use it during the day.
- D. Plants make most of their energy by breaking down food that is produced by other organisms.
- E. Plants are organisms that convert the sun's energy into food used for growth and development.



Grade 5 Science

4. A student puts a penny, a box of crayons, and a bag filled with books on a table.

Which statement describes the gravitational force acting on the objects?

- A. The penny experiences the least amount of gravitational force.
- B. All of the objects experience the same amount of gravitational force.
- C. The box of crayons experiences the greatest amount of gravitational force.
- D. The bag filled with books experiences the least amount of gravitational force.

5.

This item cannot be rendered as a paper/pencil item.

6. Barnacles are small, nonswimming, hard-shelled animals that live in the ocean. They often attach their bodies to the sides of a whale. The whale is not affected by the barnacles' presence, and floating food is made available to barnacles as the whale swims.

What is the relationship between the whale and the barnacles?

- A. producer-consumer
- B. commensalism
- C. predator-prey
- D. mutualism



7. A student records the hours of darkness of certain days in the year and records the average temperature for those days in the data table.

Student Observations for a City in Ohio

Hours of Darkness	Average Temperature (°F)
11.25	68.0
11.66	62.6
12.66	57.2
12.91	50.0
13.75	48.2
14.08	42.8

Which statement explains the trend seen in the table?

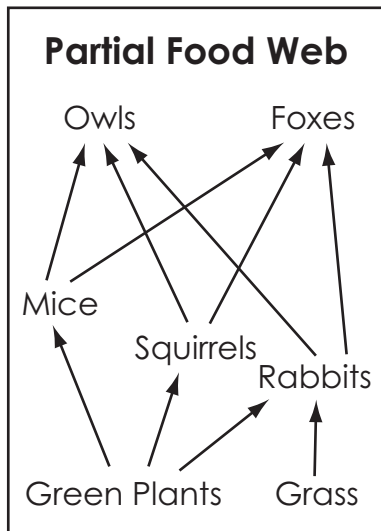
- A. The length of darkness causes warmer temperatures.
 - B. The sun rotates closer to Earth to cause warmer temperatures.
 - C. Changes in the speed of Earth's rotation cause changes in temperature.
 - D. Changes in the angle and altitude of the sun cause changes in temperature.
8. Which process makes sunlight energy available to all organisms in an ecosystem?
- A. decomposition
 - B. digestion
 - C. photosynthesis
 - D. reproduction



9.

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10. A partial food web and a table of the changes in the population of squirrels are shown.



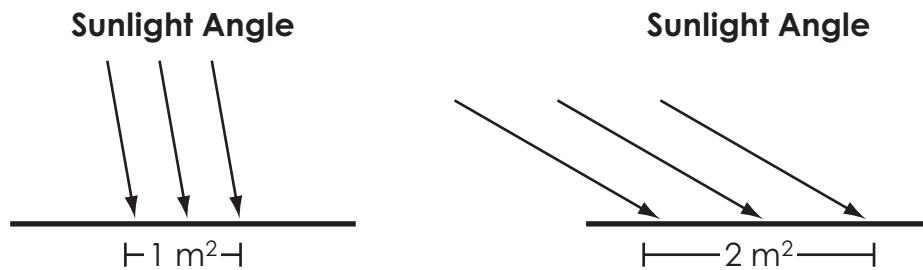
Estimated Number of Squirrels

Years	Number of Squirrels
1	270
2	290
3	360
4	500

In the **Answer Document**, select the **two** effects caused by the change in the squirrel population between Years 1 and 4.

- A. The number of mice will increase.
- B. The population of foxes will decrease.
- C. The number of green plants will decrease.
- D. The populations of foxes and owls will increase.
- E. The amount of green plants rabbits eat will increase.
- F. The competition between owls and foxes will increase.
- G. The populations of grass and green plants will stay the same.

11. Which list shows what can happen to the motion of an object when only one force is acting on the object?
- A. the object speeds up, slows down, sits at rest
 - B. the object changes direction, speeds up, slows down
 - C. the object moves at a constant speed, speeds up, slows down
 - D. the object moves at a constant speed, changes direction, speeds up
12. In Ohio, the angle of the sun's rays changes throughout the year. The changes in the angle result in the rays covering more area.



During which season does the angle result in the greatest area covered by the rays?

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

13.

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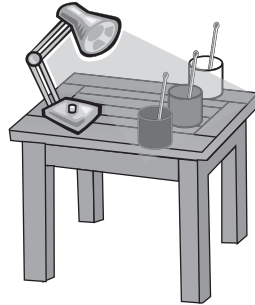
14. Which statement explains why Mars and Jupiter are classified as planets and Pluto is classified as a dwarf planet?

- A. Pluto is too small to qualify as a planet.
- B. Pluto is too far away to qualify as a planet.
- C. Pluto has too few satellites to qualify as a planet.
- D. Pluto has too many objects in its orbit to qualify as a planet.



15. A student is investigating how light can change the temperature of water in cups. She shines a red light on a white, a red and a black cup, each filled with water, and measures the temperature changes of the water in each cup after two hours.

Experiment



The results of her experiment are shown in the table.

Experimental Results

Cup Color	Temperature Before (°C)	Temperature After (°C)
White	24	24
Red	24	24
Black	24	26

Using evidence from the experiment, explain why there is **no** change in the temperature of the water in the red cup or in the water in the white cup.

Write your answer in the **Answer Document**.

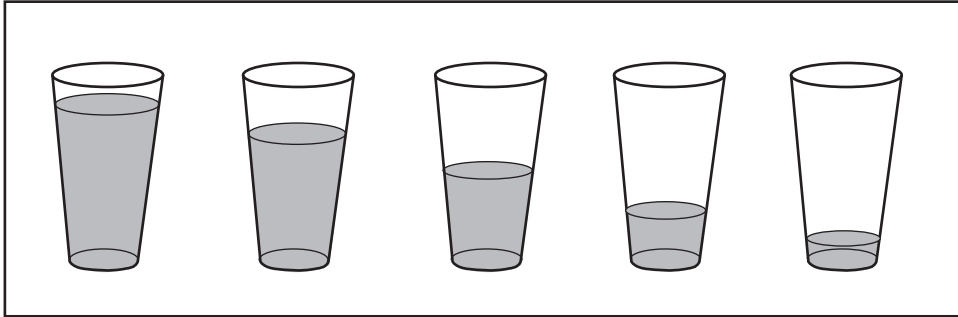
16.

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Grade 5 Science

17. A teacher fills five glasses with different amounts of water. The teacher lightly taps each glass, and sound is made by the vibrations. The rate of vibration of each glass varies depending on the amount of water in the glass.



Which property of the sound varies from glass to glass?

- A. the pitch of the sound
- B. the echo of the sound
- C. the speed of the sound
- D. the loudness of the sound

