

Name: _____



**Grade 8
Practice Test**

English Language Arts
Mathematics
Science
Social Studies

February 2002

Louisiana Department of Education
Cecil J. Picard, Superintendent





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Introduction to Students

This is a Practice Test to show you what each part or “session” of the real LEAP 21 (Louisiana Educational Assessment Program for the 21st Century) is like. The Practice Test looks similar to the real test.

You may use the Practice Test at home or at school to become familiar with what the real test is like. This can help you feel more relaxed when you take the real test.

On the real test, you will write your answers in an “answer document,” and some test sessions are in the answer document. However, on this Practice Test, all of the test sessions are in this test booklet, where you may write your answers.

Some sessions of the Practice Test are shorter than those on the real test. After each session, look for the “NOTE” that tells you the number of questions that are on the real test.

In March, you will take the LEAP 21, a test that will measure your skills in English language arts, mathematics, science, and social studies. The LEAP 21 will help to determine whether you have the skills and knowledge you need to succeed in the next grade.

Answers to the questions for the Practice Test are in the back of this booklet.

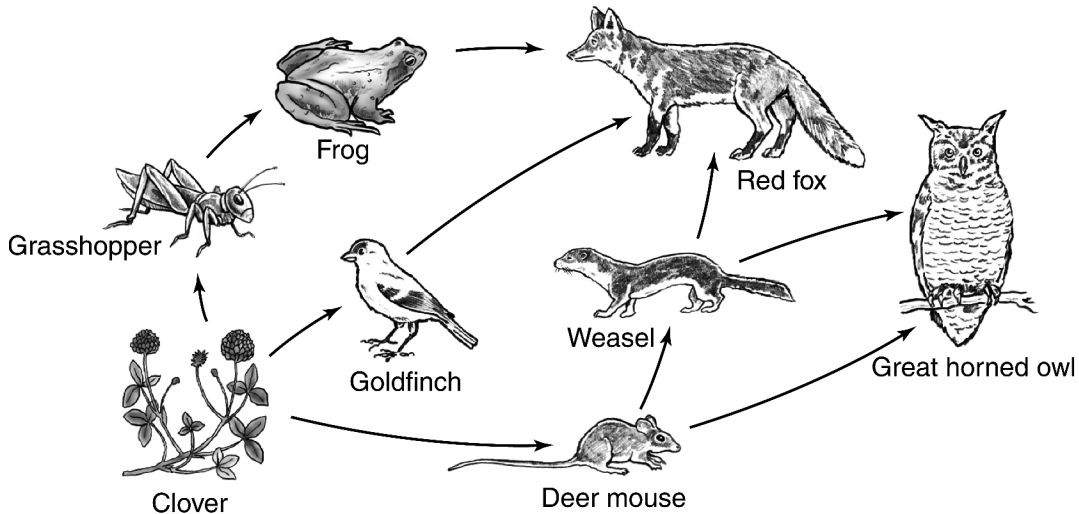
For more information regarding the LEAP 21, go to www.louisianaschools.net, and click on “The Tests.”

**Science
Grade 8
Practice Test**

Session 1 — Multiple-Choice Questions

Please mark your answers for questions 1 through 8 in the circles provided to the left of each answer choice. Mark only one answer for each question.

Use the food web below to answer question 1.



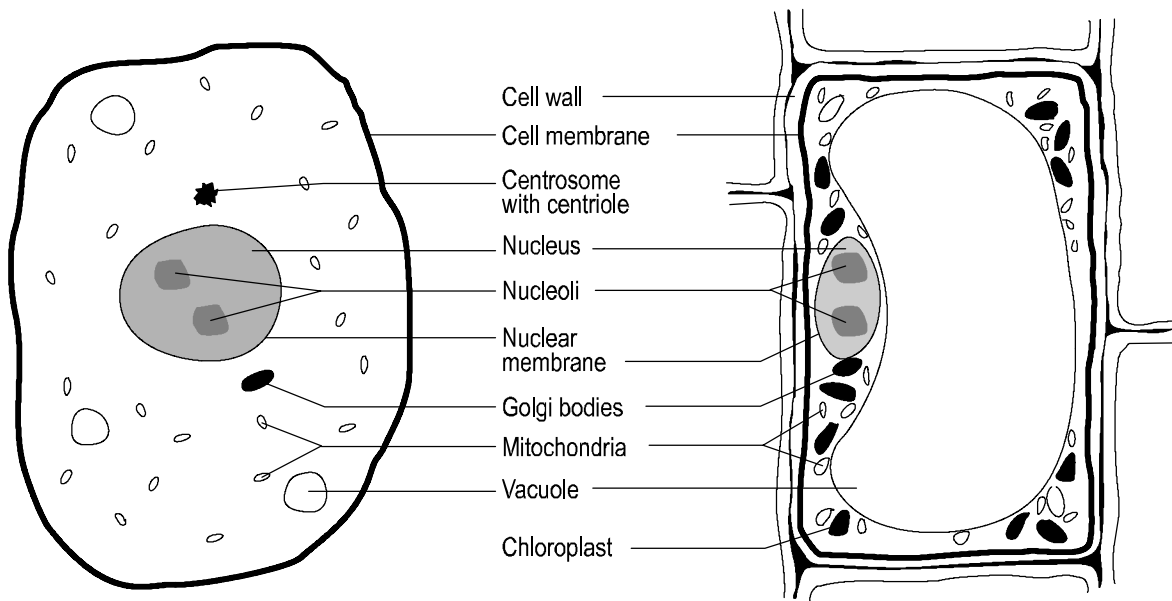
- Which of these are **not** represented in the food web?
 - A. producers
 - B. primary consumers
 - C. secondary consumers
 - D. decomposers
- Which of these **best** defines the term “pollutant”?
 - A. anything humans add to the atmosphere and oceans
 - B. any substance that is harmful to the environment
 - C. any substance that is a waste product of industry
 - D. a substance that does not break down over time
- Jerry threw a ball into the air. It followed a curved path and soon fell to the ground because
 - A. air friction stopped the ball.
 - B. gravity changed the ball’s direction.
 - C. the ball was not thrown hard enough.
 - D. the ball was not thrown straight up.

4. El Cajon Pass in California is becoming higher than the land around it at a rate of nearly one centimeter each year. Which statement is true about the area?
- A. Erosion is slower than uplift at El Cajon Pass.
 - B. Plates are separating at El Cajon Pass.
 - C. Mountain building is slower than erosion at El Cajon Pass.
 - D. Erosion and uplift are balanced at El Cajon Pass.
5. Jo Anne took a large beaker of clean water and carefully added one drop of blue food coloring to the edge of the water's surface. She did not touch or move the beaker. At first, she saw blue streaks as the food coloring sank into the water, but gradually the color of the entire beaker of water became evenly blue. What caused the blue food coloring to be mixed throughout the water?
- A. Water molecules hitting the food coloring molecules caused the mixing.
 - B. Light shining on the surface of the water caused the mixing.
 - C. A chemical reaction between the water and the food coloring formed a new, light blue compound.
 - D. The water interacted with the food coloring, causing the blue color to fade.
6. Many scientists accept the theory that excess emission of carbon dioxide from cars and industry causes a layer of gas in the upper atmosphere that traps heat. This, in turn, causes the average temperature on Earth to rise. Which of the following observations supports that theory?
- A. The summer of 1998 was one of the hottest summer seasons on record.
 - B. Carbon dioxide gas from cars and industry is a product of burning that produces heat.
 - C. Carbon dioxide in the upper atmosphere reflects heat radiated from Earth's surface.
 - D. Radiation on Earth's surface is increasing because of a hole in the ozone layer.

7. Which statement is the **best** description of what happens in the rock cycle?

- A. Rocks on old mountains are gradually weathered away while mountain building and volcanism form new mountains.
- B. Once formed, rocks stay in place until rocks above them are weathered away, and they reach the surface.
- C. As sedimentary rocks are buried deep below other rocks, they are changed by heat and pressure, eventually return to the surface, and are weathered again.
- D. Younger sedimentary rocks are always deposited on top of older metamorphic or igneous rocks.

Use the pictures below of an animal cell and a plant cell to answer question 8.



8. Features of plant cells that clearly make them different from animal cells are

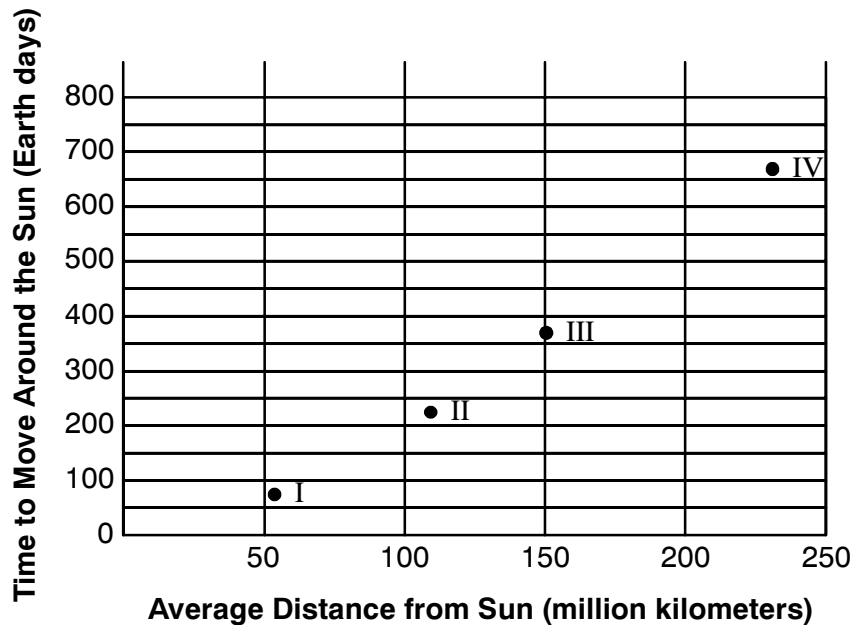
- A. a larger nucleus and fewer chromosomes.
- B. a rigid cell wall and chloroplasts.
- C. more cytoplasm and smaller vacuoles.
- D. a changing size and indefinite shape.

NOTE: On the real test, this session has 40 questions.

Session 2 — Science Short-Answer Questions

Please write your answers to questions 9 and 10 on the lines or spaces provided. Write your answers clearly. The questions have more than one part. Even if you cannot answer all parts, answer as many as you can. On the real test, you can still get points for answering part of the question.

9. The planets move at different speeds and require different amounts of time to circle the Sun. The following graph shows the number of Earth days it takes for each of the four planets to move around the Sun once.



I Mercury III Earth
II Venus IV Mars

Using information from the graph, name each planet that has a year that is shorter than a year on Earth. Explain how you arrived at your answer.

10. When a population of mice is infected with parasites, many of the mice die from the parasitic infection, but some mice appear as healthy as they were before being infected. Some people are considering using these parasites to control the mouse population in people's homes.

Give one advantage and one disadvantage of using these parasites instead of mouse traps or poisons to limit the population of mice.

Advantage:

Disadvantage:

NOTE: On the real test, this session has four questions.

Session 3 — Science Task

Please write your answers for questions 11 through 14 on the lines or in the spaces provided. Write your answers clearly. Some of the questions have more than one part. Even if you cannot answer all parts, answer as many as you can. On the real test, you can still get points for answering part of the question.

TASK DESCRIPTION

When heat moves quickly through a material, the material is said to be a good conductor. When heat moves slowly through a material, the material is called a good insulator. The students in an eighth-grade class were studying how well different materials conduct heat.

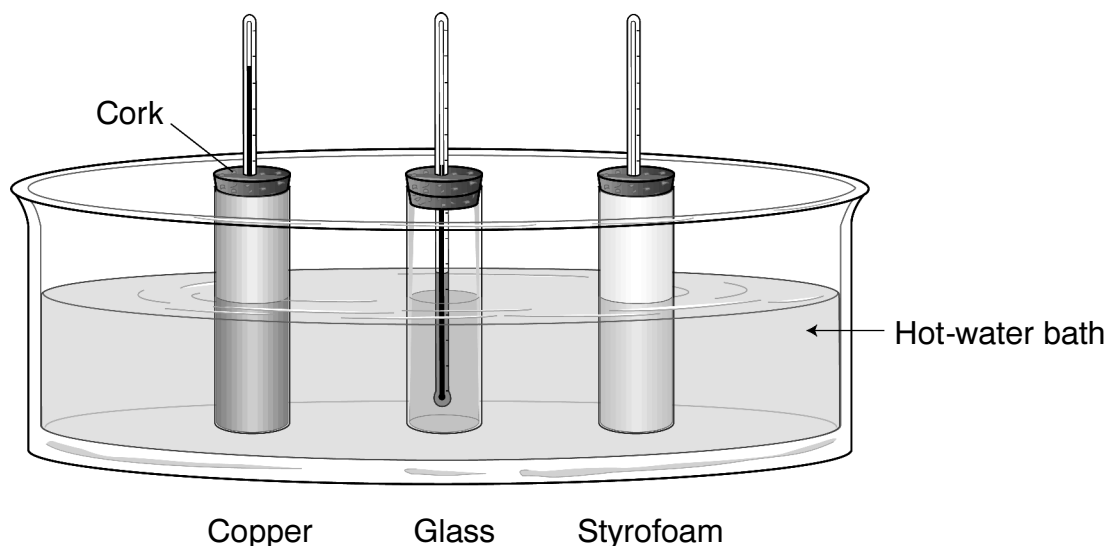
They used the following procedure:

1. Students were given three cylinders of equal size and thickness. One was copper, one glass, and one Styrofoam.
2. An equal amount of room-temperature water was measured into each cylinder.
3. The cylinders were sealed with large corks.
4. Thermometers were inserted through holes in the corks.
5. The cylinders were placed in a hot-water bath with a starting temperature of 65°C (about the same as a hot drink).
6. Five minutes later, the students read the temperature of the water in each cylinder. Their results are recorded in Table A, as follows.

TABLE A
Class's Results

Cylinder Material	Initial Temperature	Temperature after 5 Minutes
Copper	22°C	58°C
Glass	22°C	48°C
Styrofoam	22°C	27°C

Their experimental design is shown in the picture below.



11. A. According to the results in Table A, which of these materials is the **best** conductor of heat?

- B. How do you know?

Use the picture and the table below to answer question 12.

Roy repeated the experiment at home using a Styrofoam cup, but his results differed from those obtained in class. His experimental set-up and his results are shown below.

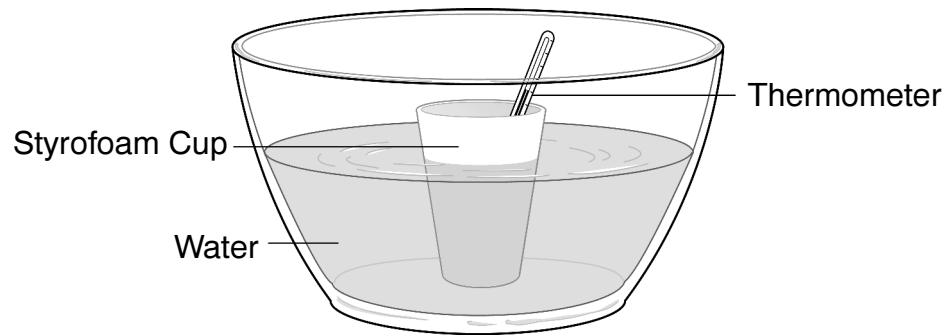


TABLE B
Roy's Results

Cup Material	Initial Temperature	Temperature after 5 Minutes
Styrofoam	22°C	25°C

12. Describe **two** things that could have caused Roy's results to differ from those of the class.

Use the information and the table below to answer question 13.

One of the students wanted to see how temperature changed with time inside one of the cylinders. He recorded the temperature inside the glass cylinder every minute for five minutes. His results are shown in the table below.

**Temperature Change Inside
the Glass Cylinder**

Time (minutes)	Temperature ($^{\circ}\text{C}$)
0	22
1	32
2	40
3	44
4	46
5	48

- 13.** Use the grid below to create a line graph showing the results noted in the table above. First, label the axes, and plot the six points. Then connect the points to show how temperature changed with time.

