



SCIENCE

SAMPLE TEST
2003-2005

BENCHMARK 2

Physical Science
Life Science
Earth and Space Science

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INTRODUCTION TO SCIENCE

SAMPLE TESTS and TEST KEYS

The Oregon Department of Education provides sample tests in science to demonstrate the content and types of questions students at Benchmark 2, Benchmark 3 and CIM might encounter on the Oregon Statewide Assessment administered each spring. Items on the sample test were taken from earlier years' Statewide Assessments. These items are no longer secure and have been released for public use. Science assessment items are designed to measure students' knowledge and skills about the physical and living universe in the following three categories:

- ▶ physical science;
- ▶ life science; and
- ▶ earth/space science.

WHY PROVIDE SAMPLE TESTS?

Most students feel some anxiety as they approach a test. The more confident students feel about their knowledge of the topic, the less anxious they feel. It also may help students feel comfortable if they are familiar with the test format. Teachers want to know how the state content standards are represented on these tests. Sample tests help teachers see how students' learning will be examined.

HOW TO USE THE SAMPLE TEST

The Oregon Department of Education updates sample tests periodically. Students may take this sample test as a practice activity to prepare for the actual test.

A list of test-taking tips for students follows this introduction. Teachers may use the tips to:

- ▶ generate individual and class discussion;
- ▶ call attention to helpful strategies students can use to prepare for and take the test; and

- ▶ share ideas with parents of ways to help reduce test anxiety and promote good study and health habits at home.

In addition to gaining practice in solving test questions, some students also may benefit from practice in marking bubbles on a separate answer sheet, as required on the actual test. An answer sheet for students to mark is provided at the end of each test booklet.

An answer key for each benchmark test is provided at the end of this introduction. In addition to the correct answer, the key also identifies which of the three reporting categories each question is designed to assess (physical science, life science, and earth/space science).

A table follows the answer key to show how students are likely to perform on the Statewide Assessment given their answers on the sample test. This is only a short practice test. It is a warm-up for the Statewide Assessment, not an absolute predictor of how a student will do on that longer assessment. Many students score higher on the state assessment than their practice scores suggest.

Teachers may have students take the sample test, score each item, and discuss any or all of the items and answers. Students usually benefit from analyzing both the correct and incorrect answers.

Sample tests also may be shared with parents to help them understand the types of questions their child will encounter on the test and to practice with their child. Sample test questions may be reprinted in newsletters or shared at community meetings to better understand the state assessment system. Although the sample tests are not as comprehensive as the actual tests, they do provide a sampling of the subject area content and difficulty level students will encounter as part of Oregon's academic content standards.

Test-Taking Tips

Students: Use these tips to help you prepare for the test.

Before the Test

- ▶ Develop a positive attitude. Tell yourself, “I will do my best on this test.”
- ▶ Get a good night’s sleep the night before the test.
- ▶ Get up early enough to avoid hurrying to get ready for school.
- ▶ Eat a good breakfast (and lunch, if your test is in the afternoon).

During the Test

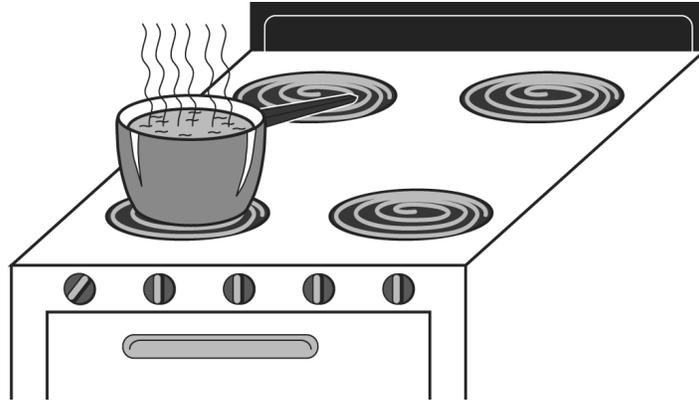
- ▶ Stay calm.
- ▶ Listen carefully to directions from the teacher.
- ▶ Ask questions if you don’t understand what to do.
- ▶ Before you read an item on the test, preview the questions that follow for tips to help you focus your reading.
- ▶ After reading an item, read the entire first question and all the answer choices. Stop and think of an answer. Look to see if one of the choices is similar to your answer.
- ▶ Read each test question and all the answer choices carefully. Try to analyze what the question is really asking.
- ▶ Pace yourself. If you come to a difficult question, it may be better to skip it and go on. Then come back and really focus on the difficult questions one at a time.

- ▶ This is *not* a timed test. If you need more time to finish the test, tell your teacher.
- ▶ If you are not sure of an answer to a question, try these tips:
- ▶ Get rid of the answers you know are not correct and choose among the rest.
- ▶ Read through all the answers very carefully, and then go back to the question. Sometimes you can pick up clues just by thinking about the different answers you have been given to choose from.
- ▶ If you get stuck on a question, skip it and come back later.
- ▶ It is OK to guess on this test. Try to make your best guess, but make sure you answer all questions.

After the test

- ▶ Before you turn your test in, check it over. Change an answer only if you have a good reason. Generally, it is better to stick with your first choice.
- ▶ Make sure you have marked an answer for every question, even if you had to guess.
- ▶ Make sure your answer sheet is clearly marked with dark pencil. Erase any stray marks.
- ▶ Don’t worry about the test once it is finished. Go on to do your best work on your other school assignments.

CHANGING STATES

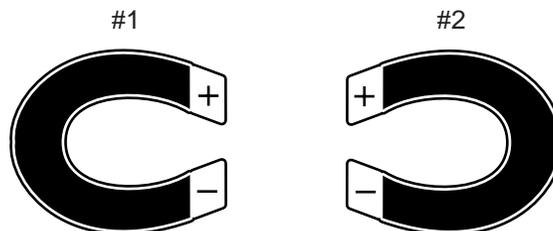
**1**

What change of state is shown?

- A. Liquid to gas
 - B. Solid to gas
 - C. Gas to liquid
 - D. Solid to liquid
-

2

The two magnets were placed near each other on a table top. Which statement about the magnetic force of these two magnets is true?

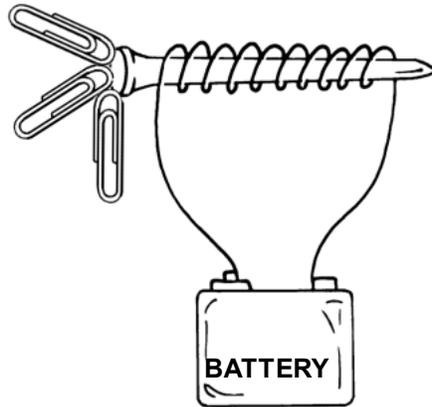
Magnets

- A. The two magnets will be attracted to each other.
 - B. The two magnets will repel each other.
 - C. There will be no force between the magnets.
 - D. The magnetic force will change the magnets.
-

▼ Science

PAPER CLIP ELECTROMAGNETS

Rachel made four electromagnets by winding coils of copper wire around a nail. She connected each end of the wire to a battery to form an electromagnet which she used to pick up paper clips.



3

In this experiment, what kind of energy is changed directly into magnetic energy?

- A. Heat energy
 - B. Electrical energy
 - C. Chemical energy
 - D. Light energy
-

4

Leshawna used the same force in the same way to push on three boxes. The boxes weighed 3 kg, 5 kg, and 10 kg. Which box moved most quickly, and which moved most slowly?

- A. The 10 kg box moved most quickly; the 3 kg box moved most slowly.
 - B. The 5 kg box moved most quickly; the 10 kg box moved most slowly.
 - C. The 10 kg box moved most quickly; the 5 kg box moved most slowly.
 - D. The 3 kg box moved most quickly; the 10 kg box moved most slowly.
-

WALKING FIELD TRIP

Mrs. Baker's class went on a walking field trip to a river near the school. They stopped at four places along the way and collected samples of earth materials. Here is a table of what they found. From the information in the table, answer the questions that follow.

SAMPLE NUMBER	DESCRIPTION OF SAMPLE	WHERE FOUND
1	reddish material that felt "slimy" and stuck to the hands, made a tight ball when squeezed	in a pile near a sign reading "AJAX CLAY PIT"
2	shiny black hard chunks the size of a fist, seemed less dense than most rocks	near a train filled with coal in open-topped cars
3	clean mixture of sand, gravel and small pebbles	in the river bottom
4	dark brown mixture of sand, clay, and decaying plants, moist enough to make a ball when squeezed together	in a flat area near the walking path

5

Which sample of material might be used for energy to make electricity?

- A. 1 B. 2 C. 3 D. 4

6

Which material would be part of the ingredients used to make cement sidewalks?

- A. 1 B. 2 C. 3 D. 4

▼ Science

7

How can police detectives use the dirt on a suspect's shoes as evidence that the suspect was in a certain location?

- A. Shoes react differently to different types of soils.
 - B. Footprints are often left in the soft dirt.
 - C. Each shoe leaves a unique footprint.
 - D. Soils differ from place to place in color and texture.
-

8

Which statement best describes Earth's movement in relation to the sun?

- A. The sun goes around the Earth.
 - B. The sun and Earth go around each other.
 - C. The Earth goes around the sun.
 - D. The sun and Earth go around other planets.
-

9

If all green plants died, would lions survive?

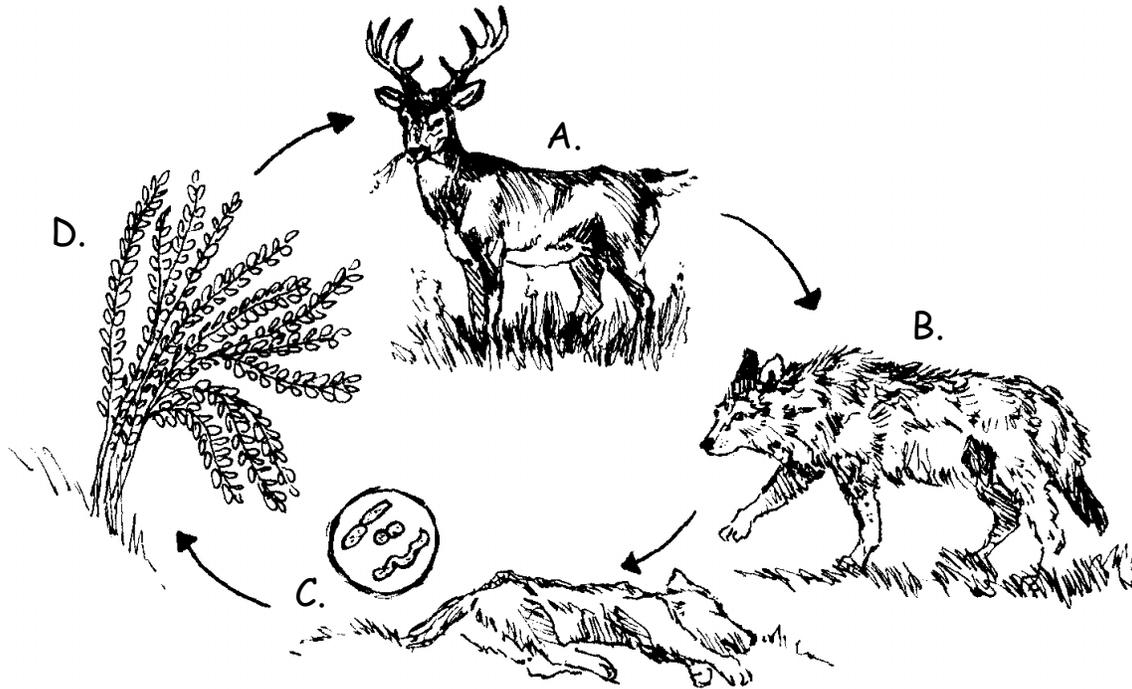
- A. Yes, lions do not eat green plants.
 - B. Yes, lions could still eat other animals.
 - C. No, the animals that lions eat need to eat green plants.
 - D. No, they would have no more plants to eat.
-

10

Animals have adaptations that help them in survival. One example of this is the giraffe's long neck. What primary purpose does this adaptation serve?

- A. Protection from heat
 - B. Gathering of food
 - C. Protection from predators
 - D. Increased speed
-

FOOD CYCLE



11

Which picture represents a decomposer?

- A. A B. B C. C D. D

12

Which picture represents a producer?

- A. A B. B C. C D. D
-

13

A frog is a vertebrate that can also be classified as

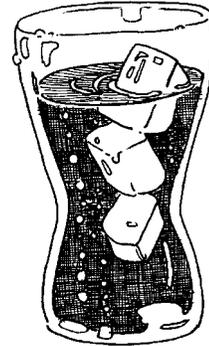
- A. an amphibian.
 - B. a fish.
 - C. a reptile.
 - D. an arthropod.
-

▼ Science

14

Eduardo pours himself a glass of cola with ice in it. Identify which objects are solid, liquid, and gas.

- A. The cola is the solid, the ice is the liquid, and the bubbles are the gas.
- B. The ice is the solid, the bubbles are the liquids, and the cola is the gas.
- C. The bubbles are the solids, the cola is the liquid, and the ice is the gas.
- D. The ice is the solid, the cola is the liquid, and the bubbles are the gas.



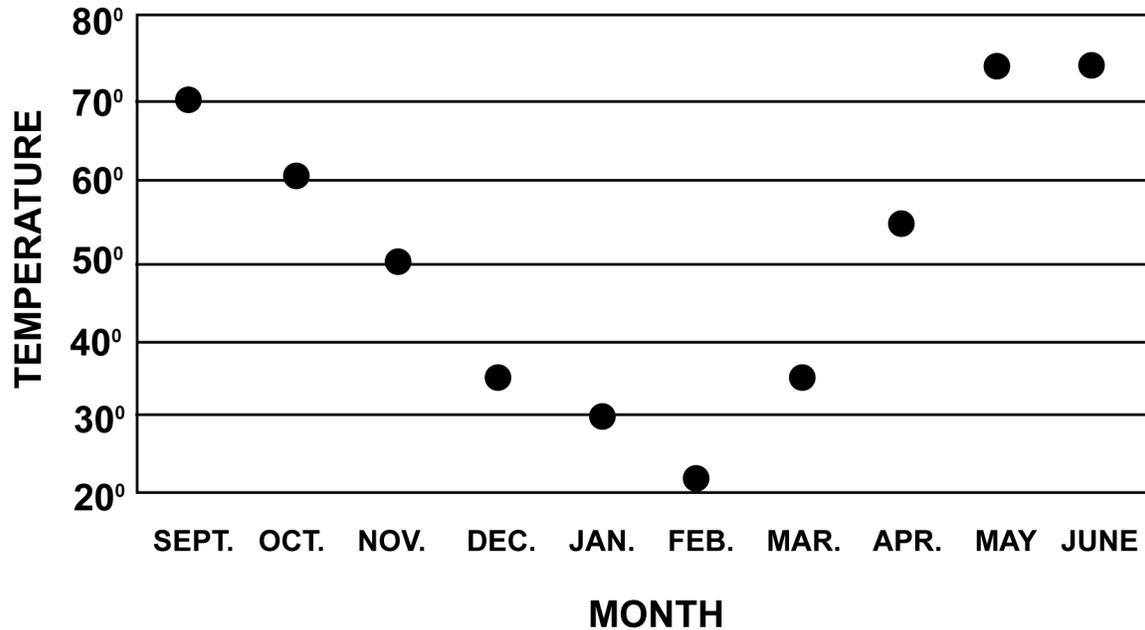
15

When you hook up a battery to a complete circuit, what flows through the wires from one pole of the battery to the other?

- A. Heat
 - B. Electricity
 - C. Light
 - D. Sound
-

TEMPERATURE CHART

A class recorded the outdoor temperatures at noon on the first day of the month all year. They made this chart.



16

What was the temperature on the first day of March?

- A. 30°
- B. 75°
- C. 35°
- D. 40°

17

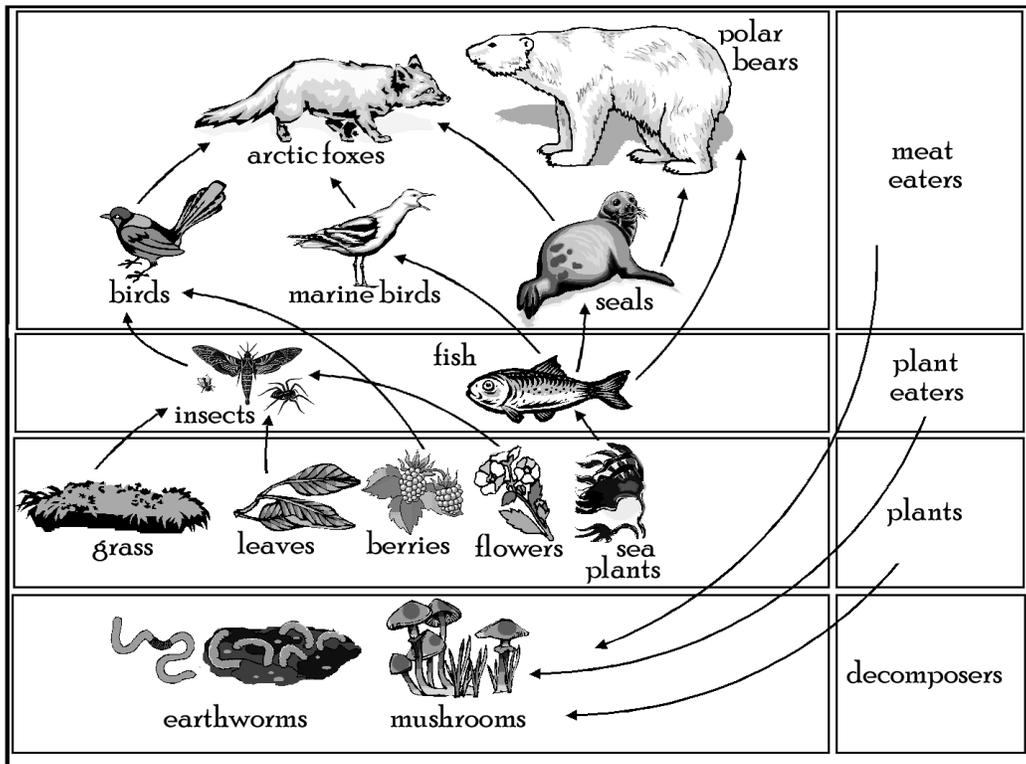
If you compared the temperature on the first day of October with the first day of January, you would find the temperature

- A. went down.
- B. stayed the same.
- C. rose slightly.
- D. rose a lot.

▼ Science

FOOD WEB

Look at the figure below. It shows some of the animals that live on an island.



The arrows show the source of energy for these living creatures. For example, the arrow pointing from the fish to the seal shows that the seals eat fish as a source of energy.

18

What do marine birds eat as a source of energy?

- A. Berries B. Fish C. Leaves D. Mushrooms

19

According to this diagram, what do insects and fish eat as a source of energy?

- A. Meat eaters B. Plant eaters C. Plants D. Decomposers

20

For a source of energy, arctic foxes eat

- A. grass. B. flowers. C. insects. D. seals.

Oregon Science Sample Test

Use number 2 pencil.
Do NOT use ink or ball point pen.
Make heavy dark marks that completely fill the circle.
Erase completely any marks you wish to change.

Name of Student

Name of Teacher

Name of School

- | | | | | | | | | | |
|----|-----|-----|-----|-----|----|-----|-----|-----|-----|
| 1 | (A) | (B) | (C) | (D) | 12 | (A) | (B) | (C) | (D) |
| 2 | (A) | (B) | (C) | (D) | 13 | (A) | (B) | (C) | (D) |
| 3 | (A) | (B) | (C) | (D) | 14 | (A) | (B) | (C) | (D) |
| 4 | (A) | (B) | (C) | (D) | 15 | (A) | (B) | (C) | (D) |
| 5 | (A) | (B) | (C) | (D) | 16 | (A) | (B) | (C) | (D) |
| 6 | (A) | (B) | (C) | (D) | 17 | (A) | (B) | (C) | (D) |
| 7 | (A) | (B) | (C) | (D) | 18 | (A) | (B) | (C) | (D) |
| 8 | (A) | (B) | (C) | (D) | 19 | (A) | (B) | (C) | (D) |
| 9 | (A) | (B) | (C) | (D) | 20 | (A) | (B) | (C) | (D) |
| 10 | (A) | (B) | (C) | (D) | | | | | |
| 11 | (A) | (B) | (C) | (D) | | | | | |

**BENCHMARK 2 (GRADE 5) SCIENCE
SAMPLE TEST KEY, 2003-2005**

Item	Key	Score Reporting Category
1	A	Physical Science
2	B	Physical Science
3	B	Physical Science
4	D	Physical Science
5	B	Earth and Space Science
6	C	Earth and Space Science
7	D	Earth and Space Science
8	C	Earth and Space Science
9	C	Life Science
10	B	Life Science
11	C	Life Science
12	D	Life Science
13	A	Life Science
14	D	Physical Science
15	B	Physical Science
16	C	Earth and Space Science
17	A	Earth and Space Science
18	B	Life Science
19	C	Life Science
20	D	Life Science

CONVERTING TO A RIT SCORE

Number Correct	RIT Score	Number Correct	RIT Score
1	179	11	216
2	187	12	218
3	192	13	221
4	196	14	224*
5	199	15	227
6	203	16	231
7	205	17	235
8	208	18	240**
9	211	19	249
10	213	20	257

* Likely to meet 5th grade standard

** Likely to exceed 5th grade standard

Note: This sample test is for practice only; scores may not be substituted for the Oregon Statewide Assessment.

Oregon Department of Education

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