

A Quick-Study® Program

Book

4

TEST... READY®

SCIENCE

- **REVIEWS**
Key Science Concepts
- **IMPROVES**
Science Assessment Scores
- **DEVELOPS**
Test-Taking Skills

Name: _____

 CURRICULUM ASSOCIATES®, Inc.

For the Student

TEST READY® Science is a review program that provides practice in test-taking skills. The program can be completed in twenty-two days or fewer. Your teacher will provide you with directions about how to do the lessons and how to record the answers. Your teacher will also tell you when to begin work on each lesson part and when to stop.

It is important that you read and follow all directions. When the directions tell you to STOP, go no further. Wait for your teacher to tell you what to do. While you work on the **TEST READY** lessons, you will come across **Testing Tips**. Read these helpful tips carefully. They can make you a better test taker.

When You Use This Book

- Be sure you know how much time you have to complete each lesson part.
- Read each direction carefully.
- Understand what you are expected to do before you try to complete an item.
- Read all phrases, sentences, or passages in the item carefully before choosing an answer.
- Check your answer to be sure it makes sense.
- Make sure you fill in the correct letter choices on the answer form.
- If you have time after you complete your work, go back and check your answers.

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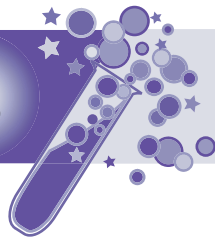
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North Billerica, MA 01862
Phone: 800 225-0248 (U.S. & Canada)
Fax: 800 366-1158 (U.S. & Canada)
E-mail: cainfo@curriculumassociates.com
Web: www.curriculumassociates.com

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Lesson 8



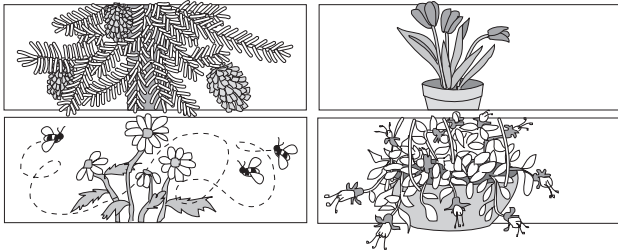
Testing Tip If you are not sure of an answer, make a check mark beside the question and go on to the next question. If you have time, go back to try to answer your checked questions.

Part One

Using Science Skills

For numbers 1–3, read the question and choose the best answer.

1. Lara gathered four plants that she wanted to group scientifically. She observed the following things about the plants. Which of her observations is accurate and will help her classify the plants?



- Ⓐ Each of the plants is different.
Ⓑ Three plants have flowers and one has cones.
Ⓒ Bees are flying around one plant.
Ⓓ Only one of the plants is pretty.
2. The students in Shawna’s art class are planning to make bird feeders to sell. Which of these would be the best material to use to hold the seeds?
- Ⓐ Soft aluminum foil
Ⓑ A cardboard box
Ⓒ Rope and leaves
Ⓓ A small plastic tub
3. Josh wanted to observe phototropism. He started a row of plants in a small rectangular pot. When the plants were growing, he cut a slit in one side of a shoe box, put the box over the plants, and set it where the sun would shine through the slit. What is phototropism?
- Ⓐ How different plants grow in the same pot
Ⓑ How a plant grows toward light
Ⓒ How a plant can be grown in a greenhouse
Ⓓ How a plant wilts when damp

Study this picture. Then answer questions 4–6.



4. Which of the following is the correct order to show how energy flows through this community?
- Ⓐ Sun → grass → snake → mouse
Ⓑ Sun → grass → mouse → snake
Ⓒ Grass → snake → mouse → sun
Ⓓ Sun → mouse → grass → snake
5. To which group of animals does a snake belong?
- Ⓐ Mammals
Ⓑ Reptiles
Ⓒ Amphibians
Ⓓ Protozoa
6. Which animal or animals in the community would be threatened if the grass became too dry?
- Ⓐ Only the mouse
Ⓑ Only the snake
Ⓒ The mouse and snake
Ⓓ None of the animals

TEACHER GUIDE

Book

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For the Teacher

What is *TEST READY® Science*?

TEST READY Science is an eight-level review program that provides practice in test-taking skills. The program promotes the learning of science by assessing knowledge of key science concepts that are commonly taught and evaluated in grades 1 through 8.

Each *TEST READY Science* student level is a 32-page book of ten lessons, a Practice Test, and an Answer Form. Each *TEST READY Science Teacher Guide* contains all the information needed to implement the program, an optional Pretest, and answers to the questions in the student book.

TEST READY Science, Book 4, reviews science skills and concepts usually introduced and developed in grade 4.

Student Book

- The lessons focus on earth and space science, life science, physical science, the human body, experiments and observations, mathematics in science, content reading, applying science skills, and interpreting pictures, charts, graphs, and diagrams. Each lesson includes ten selected-response questions and one extended-response activity. Extended-response activities require students to use scientific thinking to organize, write, draw, and/or measure.
- The Practice Test assesses the same range of concepts and skills as the lessons. It allows students to experience the test-taking process.
- The Answer Form provides students with the opportunity to record answers on a form similar to those used with most standardized assessments.

Teacher Guide

- An optional Pretest mirrors the Practice Test, assessing the same range of concepts and skills. The Pretest provides information about a student's science knowledge before he or she begins the program.
- A Scope and Sequence chart of question types provides an outline of the science areas covered in the student book.

How does *TEST READY® Science, Book 4*, correlate to major standardized assessments and proficiency assessments?

Major standardized assessments vary in content, format, and level of difficulty. *TEST READY Science* provides practice with a variety of commonly-used assessment formats and a wide range of grade-appropriate science concepts and skills that major standardized assessments and proficiency assessments evaluate.

How does *TEST READY® Science, Book 4*, correlate to the standard science curriculum?

The content of *TEST READY Science, Book 4*, supports the National Science Education Standards, which are organized into the following eight categories: unifying concepts and processes, science as inquiry, physical science, life science, earth and space science, science and technology, science in personal and social perspectives, and history and nature of science. The science topics in *TEST READY Science, Book 4*, reflect the major content and skill areas listed in the Standards for grade 4 science curriculum.

Who should use *TEST READY® Science, Book 4*?

TEST READY Science, Book 4, is appropriate for use

- with fourth-grade students preparing for standardized assessments and proficiency assessments.
- with fifth-grade students reviewing science content at the beginning of the school year in order to pinpoint mastered and unmastered concepts and skills.
- as a summer-school course of study for students who need further work with fourth-grade science content.

Scope and Sequence—TEST READY® Science, Book 4

The boldfaced number indicates the lesson number; OP = Optional Pretest and PT = Practice Test.
The numbers in parentheses indicate the question number.

Skill	Lesson and Question Number
Earth and Space Science	Focus of Lesson 1
earth's surface and interior	1 (6, 7, 10); 6 (5)
weather and climate	1 (2, 3); 6 (4, 6); 8 (10); 10 (6, 7, 8, 9, 10); OP & PT (1, 3, 4, 5, 22, 33, 34, 35)
rocks and minerals	1 (1, 5, 8)
solar system	1 (4, 9); 6 (3); OP & PT (23)
science and other terms	7 (1, 7, 9)
Life Science	Focus of Lesson 2
structure and function of plants and animals	2 (1, 2, 3, 4, 5, 6, 8, 9); 6 (10); 7 (3, 4, 6, 8); 9 (5, 7); OP & PT (8, 9, 17, 19, 38, 39, 40)
food chain	8 (4); 9 (3, 4)
life cycle	2 (10); 10 (4); OP & PT (16)
classification	8 (5); 10 (3, 5); OP & PT (37)
adaptation	4 (7)
ecology and ecosystems	2 (7); 8 (6); 9 (1, 2, 6); OP & PT (10, 11, 20)
Physical Science	Focus of Lesson 3
matter	3 (6, 9, 10); 6 (7, 8, 9); 10 (1); OP & PT (12, 13, 31, 32)
physical or chemical change	3 (5, 8); 9 (8); OP & PT (14)
electricity and magnetism	3 (1, 3); 9 (9, 10); OP & PT (6)
light	3 (7)
machines and work	3 (4); OP & PT (15)
sound	OP & PT (27, 28, 29)
energy	3 (2); OP & PT (2, 21)
The Human Body	Focus of Lesson 4
organs	4 (1, 5, 9)
nutrition	4 (3, 10)
systems	4 (2, 4)
organisms, cells, and genetics	4 (6, 8); 7 (1, 2)
Experiments and Observations	Focus of Lesson 5
science process and observations	5 (5, 6, 9, 10); 7 (2, 3); 8 (1, 3); OP & PT (18, 25)
interpreting data	6 (1, 2); 7 (4, 5, 10); 8 (7, 8); 10 (2, 6, 7); OP & PT (36)
predicting	5 (4); 8 (9)
controlling variables	5 (3, 7)
communicating data	5 (1, 2, 8); 8 (2); OP & PT (7, 24, 26, 30)
Using Math and Science	Cross Referenced in all Lessons, OP, and PT
computation	6 (4, 5, 6, 8, 9); 8 (7, 8, 9); 10 (1, 8, 9, 10); OP & PT (28, 29, 34)
measurement	6 (1, 2, 3); 6 (7); 10 (2)
algebra	6 (10)

Lesson 4 Part Two page 8

Answers will vary. Sample answer:

The human body is a system because it is made up of living parts that work together. The body has organs, such as the heart and lungs, which each do their own job. The organs are made up of smaller living things called cells. The body system has a skeletal system of bones and muscles that gives the body shape, lets it move, and protects the organs. The largest organ, the skin, covers and protects the whole body. Veins and arteries circulate blood through the body, providing food and oxygen and removing wastes to keep the body cells healthy. Each of these body parts is vitally important to the whole.

Lesson 5 Part Two page 10

Answers will vary. Sample answer:

I would set up a test for strength and a test to see if the string tangles too easily. For the first test, I would get 2–3 objects of different weights. I would tie 2 feet of string to each object and hold the end firmly as I drop the object. I would test each string this way with each object and record the results. For the second test, I would cut 5 feet of each string. One at a time, I would put each length of string in a paper bag and shake it for 30 seconds. I would observe whether the string tangled, snarled, or knotted.

Lesson 6 Part Two page 12

Answers will vary.

Students' answers will depend upon the measurements they have taken or the estimates they have made. To calculate the range in temperature, they should subtract the lowest temperature from the highest temperature. Their proposed change of temperature range should be realistic based on the time of year and your location.

Lesson 7 Part Two page 14

Answers will vary. Sample answer:

Carl Linnaeus meant that nature, or living things, do not make rapid changes. "Leaps and bounds" would be quick changes, but plants and animals change very slowly over time. For example, it took millions of years for the horse to become as we know it today. Long ago, it was a very small mammal, about one-half meter long, with padded toes on its feet. Today, the horse is much larger with only one hoof.

Lesson 8 Part Two page 16

Answers will vary. Sample answer:

My plan is to take a shoe box and cut a round opening in the cover. The opening would be about 4 inches across. I'd tape the cover onto the box and wrap an elastic around the length of the box and over the hole. When I hit the elastic, it will vibrate and make a sound. To change the sound, I would add a smaller elastic. This would vibrate faster to make a higher sound. One conclusion would be that the speed of vibration changes the pitch of the sound.

Lesson 9 Part Two page 19

Answers will vary.

Students should draw and label a diagram that shows any land-building force or process, such as folding, faulting, volcanoes or other volcanic activity, sedimentation, and so on.

Sample answer:

This land was formed when layers of rock were pressed up as two plates collided.

Students should draw and label a diagram that shows any type of evidence of weathering or erosion, such as sinkholes, freezing, running water, wind abrasion, oxidation, and so on.

Sample answer:

This rock is being scraped away by a glacier moving over its surface.