

2006

FCAT

Florida Comprehensive Assessment Test

Student Name _____

SCIENCE SAMPLE TEST BOOK

SCIENCE



GRADE
5

FCAT Sample Test Materials

These sample test materials are designed to help you prepare to answer FCAT questions. These materials introduce you to the kinds of questions you will answer when you take FCAT and include hints for responding to the different kinds of FCAT questions. The FCAT Science sample test materials for Grade 5 are composed of the books described below:

- Sample Test Book**
Includes a science sample test and instructions for completing the sample test. (Copies are available for all students in the tested grade.)
 - Sample Answer Key**
Includes answers and explanations for the questions in the sample test. (Copies are available for classroom teachers only.)
- = This book

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FCAT Science Sample Test Book



Taking the FCAT Science Sample Test Page 3

This section introduces the FCAT Science Sample Test. It includes a description of the different kinds of questions on the FCAT, hints for answering FCAT science questions, and an estimate of the time required to complete the sample test.

FCAT Science Sample Test Page 5

The Science Sample Test consists of 15 practice questions that are similar to questions on the FCAT.

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Taking the FCAT Science Sample Test

Hints for Taking the FCAT Science Test

Here are some hints to help you do your best when you take the FCAT Science test. Keep these hints in mind when you answer the sample questions.

- ✓ **Learn how to answer each kind of question.** The FCAT Science test for Grade 5 has three types of questions: multiple-choice, short-response, and extended-response.
- ✓ **Read each question carefully.**
- ✓ **Check each answer to make sure it is the best answer for the question.**
- ✓ **Answer the questions you are sure about first.** If a question seems too difficult, skip it and go back to it later.
- ✓ **Be sure to fill in the answer bubbles correctly.** Do not make any stray marks around answer spaces.
- ✓ **Think positively.** Some questions may seem hard to you, but you may be able to figure out what to do if you reread the question carefully.
- ✓ **When you have finished each question, reread it to make sure your answer is reasonable.**
- ✓ **Relax.** Some people get nervous about tests. It's natural. Just do your best.

How to Answer the “Read, Inquire, Explain” Questions

Answers to the short- and extended-response problems can receive full or partial credit. You should try to answer these questions even if you are not sure of the correct answer. If a portion of the answer is correct, you may get a portion of the points.

- ✓ Allow about 5 minutes to answer the short “Read, Inquire, Explain” questions and about 10 to 15 minutes to answer the long ones.
- ✓ Read each question carefully.
- ✓ If you do not understand the question, read it again and try to answer one part at a time.
- ✓ Be sure to answer every part of the question.
- ✓ Be sure to keep your writing or drawings inside the box.
- ✓ Reread your explanation to make sure it says what you want it to say.

Directions for Taking the Science Sample Test

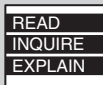
Some of the questions in this sample test are called multiple-choice questions. **A multiple-choice question is followed by several answer choices.** Read all the answer choices under each question and decide which answer is correct. For this sample test, you will fill in the bubble next to the answer choice you think is correct for each multiple-choice question.

This Sample Test contains 15 science questions. It should take about 30 to 45 minutes to answer all the questions. You will mark your answers in this book. If you don’t know how to answer a question, just ask your teacher to explain it to you. Your teacher has the answers to the sample questions.

FCAT Science Sample Test



FCAT Question Symbols



This symbol appears next to questions that require short written answers. Use about 5 minutes to answer each of these questions.

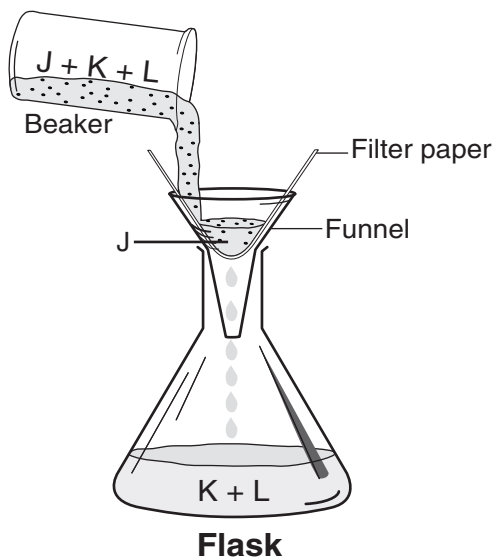
A complete and correct answer to each of these questions is worth 2 points. A partially correct answer is worth 1 point.



This symbol appears next to questions that require longer written answers. Use about 10 to 15 minutes to answer these questions.

A complete and correct answer to each of these questions is worth 4 points. A partially correct answer is worth 1, 2, or 3 points.

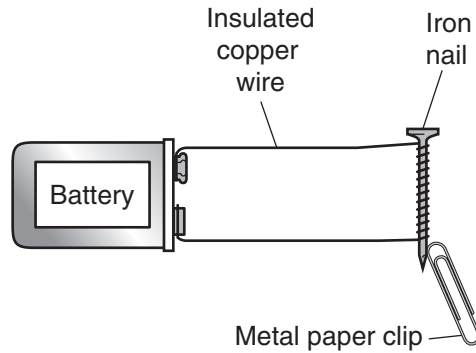
- 1 Raheem is investigating the properties of several substances. He prepared a beaker containing substances J, K, and L and filtered the contents through a funnel into a flask, as shown below.



What term **best** describes substances J, K, and L inside the beaker before Raheem poured them through the filter paper?

- (A) mixture
- (B) solution
- (C) compound
- (D) pure substance

- 2 Tanisha built the circuit in the picture below using a battery, insulated copper wire, and an iron nail. The iron nail has become magnetized by the battery and is attracting a metal paper clip.

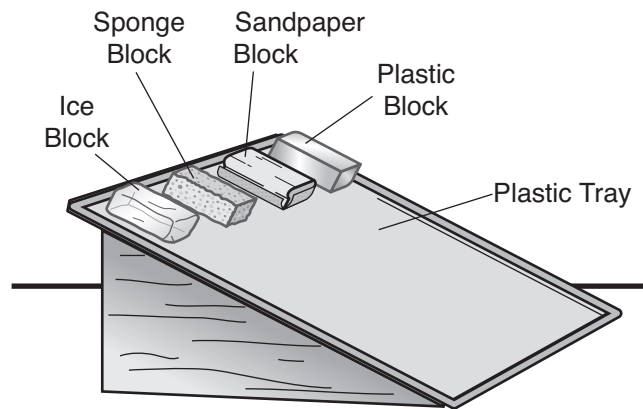


Tanisha's Circuit

Which form of energy caused this nail to become magnetized?

- Ⓕ electrical
- Ⓖ heat
- Ⓗ light
- Ⓘ mechanical

- 3 Light waves change speed as they travel from the Sun to Earth's surface. Which of the following causes **most** of this change in the speed of light waves?
- Ⓐ Earth's shape
 - Ⓑ Earth's gravity
 - Ⓒ Earth's mountains
 - Ⓓ Earth's atmosphere
- 4 Felipe and Marsha were studying friction and decided to do an experiment. They placed four equally sized blocks made of different materials on an elevated plastic tray. They watched the blocks move down the tray.



Friction Experiment

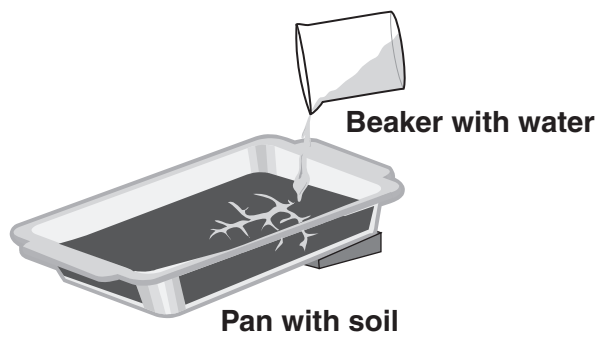
Which block would experience the **least** amount of friction as it moved down the tray?

- Ⓕ Ice Block
- Ⓖ Sponge Block
- Ⓗ Sandpaper Block
- Ⓘ Plastic Block

- 5 Florida has a limestone rock foundation. When water moving through the ground mixes with carbon dioxide (CO_2), an acid is produced. This acid can dissolve some of the limestone. Which of the following is made as a result of the dissolving limestone?
- Ⓐ sandy flatlands
 - Ⓑ offshore islands
 - Ⓒ underground caves
 - Ⓓ mangrove swamps

READ
INQUIRE
EXPLAIN

6 After a visit to the Grand Canyon in Arizona, Jamie wondered how a river could carve such a deep canyon. Her grandfather created a model to show the formation of the Grand Canyon. He took a glass pan and filled it with tightly packed soil. He raised the pan slightly at one end. Then he took a beaker filled with water and slowly began to pour it on the raised end of the pan. He filled the beaker with water several times and repeated the process. Every time he poured more water onto the soil, the water flow would form deeper gaps along its path in the soil.



Part A Describe the similarities between the formation of the Grand Canyon and Jamie’s grandfather’s model.

Part B The Grand Canyon was shaped by other factors not demonstrated in the model. Identify and describe two of these factors.

7

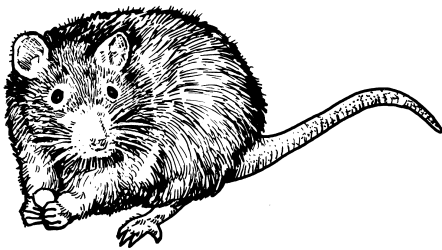
Seasons in North America change as Earth moves around the Sun. Draw a diagram showing Earth's position around the Sun during each of the four seasons in North America. Be sure to label the North Pole and the seasons for each of your drawings.

READ
INQUIRE
EXPLAIN

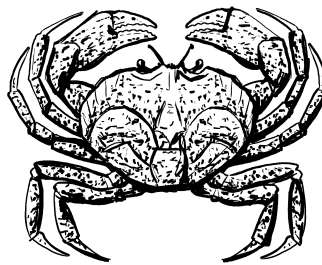
8 Earth appears to be the only planet that can support life as we know it. Which of the following gives Earth the conditions needed to support life?

- Ⓕ the shape of the orbit
- Ⓖ the closeness of Mars
- Ⓗ the presence of a moon
- Ⓘ the distance from the Sun

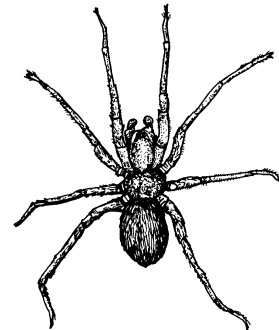
9 Rats, crabs, and spiders are organisms that have some similar structures.



Rat



Crab



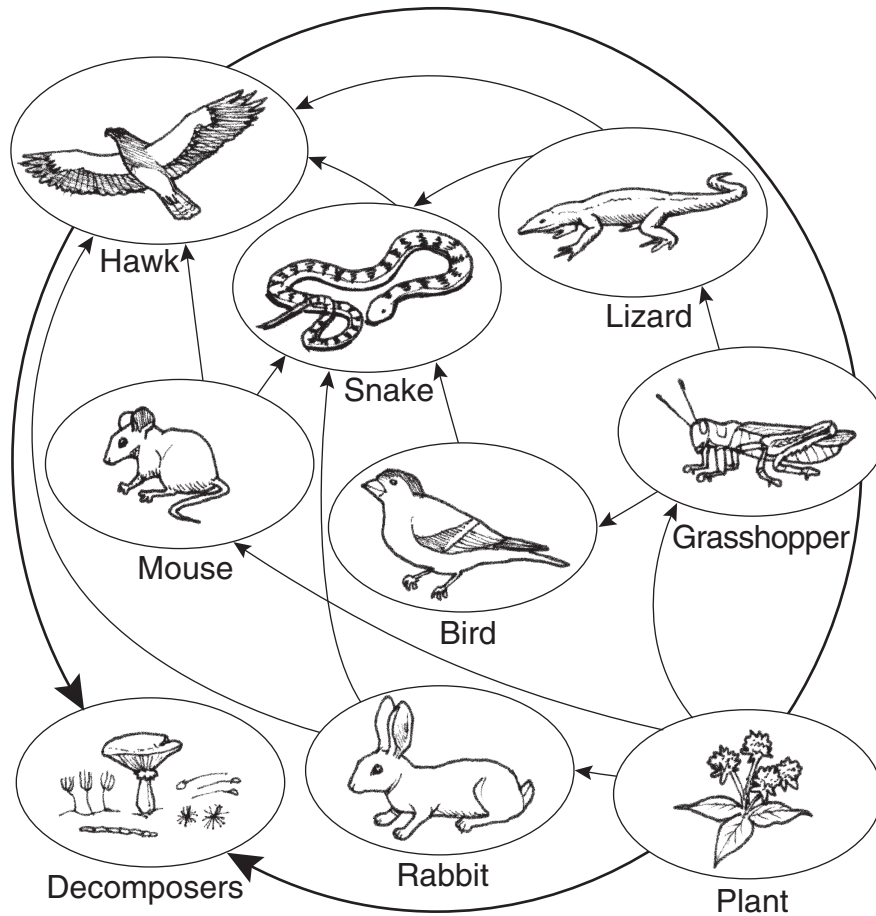
Spider

Which of the following structures is found in all three of these organisms?

- Ⓐ bones
- Ⓑ ears
- Ⓒ heart
- Ⓓ lungs

- 10 In some parts of the Florida Everglades, sawgrass can grow thick enough to block the flow of water. Alligators make nests out of the sawgrass and also make travel lanes through the grass. This helps the water flow easily. It also keeps the sawgrass from being completely underwater, which can damage the sawgrass. What relationship is demonstrated by the alligators and sawgrass in the Everglades?
- Ⓕ Alligators destroy sawgrass.
 - Ⓖ Alligators feed on sawgrass.
 - Ⓗ Sawgrass helps the alligators travel.
 - Ⓘ Sawgrass and alligators depend on each other.
- 11 Photosynthesis must occur in plants in order for them to survive. Which of the following is the major product of photosynthesis that helps the plants survive?
- Ⓐ carbon dioxide (CO_2)
 - Ⓑ chloroplast
 - Ⓒ sugar
 - Ⓓ sunlight

12 A diagram of a meadow food web is shown below.

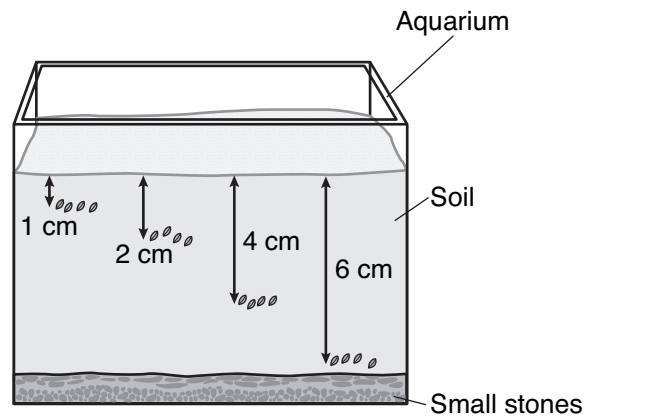


Meadow Food Web

According to this food web, which of the following organisms gets its energy from the bird?

- Ⓕ grasshopper
- Ⓖ hawk
- Ⓗ mouse
- Ⓘ rabbit

- 13 Hannah's mother wants to plant a garden in the spring and needs to know how deep to plant pea seeds. To help her mother, Hannah designed an experiment. She layered small stones and soil in an aquarium. She then planted four pea seeds at four different depths in the soil. She placed the seeds at depths of 1.0 centimeter (cm), 2.0 cm, 4.0 cm, and 6.0 cm below the surface of the soil. Hannah watered the seeds and put the aquarium in a sunny location.



Hannah's Experimental Setup

Not to Scale

What should Hannah do next in order to have useful information for her mother?

- (A) Record when the seeds sprout and begin to grow.
- (B) Make sure the seeds have enough sunlight.
- (C) Predict which seeds will sprout.
- (D) Plant more seeds.

- 14** Mrs. Patterson’s class is growing red oak seedlings to transplant into a nearby park. Mrs. Patterson divided the class into groups and asked them to decide the best way to record how fast the seedlings grew. The data tables from the different groups are given below.

Which data table would be the **most helpful** in verifying how fast the seedlings grew?

Seedling Data Table #1

Ⓕ

Time	Height (in cm)
Monday, June 18	10
Mid-July	22
Wednesday in August	32

Seedling Data Table #3

Ⓗ

Time	Height (in cm)
June 18	12
July 22	25
August 20	36

Seedling Data Table #2

Ⓒ

Time	Height (in cm)
June	15
July	18
August	22

Seedling Data Table #4

Ⓙ

Time	Height (in cm)
Spring	14
Summer	20
Fall	29

- 15 Alejandro wants to find out whether mealworms prefer apples or pears. He places an apple slice at one end of a cardboard box and a pear slice at the other end. He then places 20 mealworms in the center of the box, about 15 centimeters (cm) from each piece of fruit. After several hours, he counts the mealworms on or under the apple, the mealworms on or under the pear, and the mealworms not touching either the apple or the pear. Alejandro repeated his experiment four times. The data are recorded in the table shown below.

MEALWORM EXPERIMENTS

Experiment Number	Mealworms On or Under the Apple	Mealworms On or Under the Pear	Mealworms Not On Either the Apple or the Pear
Experiment 1	14	4	2
Experiment 2	12	5	3
Experiment 3	15	4	1
Experiment 4	15	5	0

Which of the following is the **best** conclusion that Alejandro can make from these data?

- (A) Mealworms prefer pears.
- (B) Mealworms prefer apples.
- (C) Mealworms do not prefer apples or pears.
- (D) Mealworms do not go near apples or pears.



This is the end of the Science Sample Test.
Until time is called, go back and check your work or answer questions you did not complete. When you have finished, close your Sample Test Book.

Notes



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