New York State Testing Program

English Language Arts
Book 3

Grade **8**

Sample Test 2005

Name_____

TIPS FOR TAKING THE SAMPLE TEST

Here are some suggestions to help you do your best:

- Be sure to read carefully all the directions in the test book.
- Plan your time.
- Read each question carefully and think about the answer before writing your response.

This test asks you to write about what you have listened to or read.
Your writing will NOT be scored on your personal opinions. It WILL be scored on:

- how clearly you organize and express your ideas
- how accurately and completely you answer the questions
- how well you support your ideas with examples
- how interesting and enjoyable your writing is
- how correctly you use grammar, spelling, punctuation, and paragraphs

Whenever you see this symbol, be sure to plan and check your writing.

Directions

In this part of the test, you are going to read an article called "The Calculating Countess" and an article called "John Wesley Powell." You will answer questions and write about what you have read. You may look back at the articles as often as you like.

Go On

The Calculating Countess

by Nancy Ralston

Cyberkids everywhere have Ada Byron Lovelace to thank when they log on to their computers. Lady Lovelace, a Victorian countess, was the first computer programmer. She wrote the very first computer language over 150 years ago. An amazing feat considering computers had not been built yet!

Ada Byron was born on December 10, 1815, to Lord and Lady Byron in London, England. Her father, Lord Byron, was a very famous poet. Growing up, Ada enjoyed dancing, gymnastics, and horseback riding. Playing musical instruments was very common for girls of her day, and Ada learned to play the violin, harp, and piano. But she also had another interest that was not so common. Machines fascinated her. She loved figuring out what made them work.

As a teenager, Ada became very ill and was bedridden for almost three years! But what sounds like a terrible tragedy actually turned out to be the best thing to happen to her. Rather than feeling sorry for herself and becoming bored, Ada studied instead. Her mother hired mathematicians and scientists to tutor her. Thus began her life-long love of mathematics.

When Ada married Lord William King, she became Lady Ada Lovelace. They had three children together, but Ada did not give up her love of math and science. With the support of her family, she became a mathematician—a career frowned upon by nineteenth-century society.

She was greatly influenced by Charles Babbage, an inventor. His proposed Analytical Engine captured Ada's interest. It was to have weighed two tons and be composed of gears, cranks, and rods. Like today's computer, it was intended to store a program (a sequence of instructions) as well as data (information). Unfortunately it was never built.

However, that didn't stop Lady Lovelace from creating a language that would have made the Analytical Engine work. She thought that numbers and other symbols, such as letters of the alphabet, could be "coded" as numerical data that the machine would then be able to read and process as written material. She wrote a plan describing how the Analytical Engine might calculate Bernoulli numbers. This plan is thought of as the first "computer program," an important advancement since modern computers rely on programming (instructions telling the machine what the user wants).

Ada Byron Lovelace was far ahead of her time. Not only did she come up with basic programming concepts, she also predicted the machine's future uses. She thought that some day it could be used to make music and draw pictures. Although it took more than a century for her predictions to come true, today's computers do indeed do both.

In 1979, to honor her memory and contributions, the U.S. Department of Defense commissioned a new software language and named it ADA. Based on the computer language PASCAL, it was designed to be efficient, yet easy to use. Ada once said, "I hope before I die to throw light on some of the dark things of the world." As an early pioneer in technology that has affected millions of people, Ada certainly achieved that and much more.

Go On

31 Several events in Ada Byron Lovelace's life had a strong influence on her career. Use the graphic organizer below to list **two** of these events, and explain how each one influenced her life. Use details from "The Calculating Countess" to support your answer.

	Event	How the event influenced Lovelace's life
1.		
2.		

John Wesley Powell

by Joann Mazzio

The awkward boat was called *the Emma Dean II*. In the middle of the boat was a wooden office chair tied to the deck. Seated in the chair to get a better view of the river ahead was a 38-year-old man with a bushy dark beard. His right sleeve was empty—folded and pinned out of the way. John Wesley Powell was ready to run another stretch of the Colorado River through the Grand Canyon.

It is remarkable that Powell's life led him in this direction. Born in 1834, young Wes Powell grew up in the Midwest. He worked long days on the farm, attended crude frontier schools, and explored the outdoors around him. On long wagon trips, he read any books he could find. His was a "homemade education." The schools he went to offered not one science class.

When the Civil War came, he joined the Union Army. During the battle of Shiloh, he was shot and lost his right arm. As soon as his wound healed, Powell returned to his unit and fought in many other battles. For the rest of his life, Powell refused to think that having only one arm was a handicap.

When the war was over, Powell taught geology, but the West called to him. In 1867, he led a group of mostly amateurs to the Rocky Mountains to study the land and collect samples of plants and rocks.

Two years later, with the support of the United States government, Powell began his series of explorations of the Grand Canyon and the Rocky Mountain region. By giving names to the places he saw—names such as Dirty Devil River, Bright Angel Creek, and the Canyon of Lodore—Powell and his party filled in the great empty spaces on the maps of the West.

Beginning in 1869, Powell and his small party made two river trips through the canyon. They were the first explorers to do so. Some days, they used ropes to lower their boats inch by inch over pounding waterfalls. The next day found them plunging in heart-stopping rushes through mile after mile of the narrow canyon with walls so high the men could hardly see the sky.

For weeks, they had little food except spoiled bacon and dirty flour. At night, they often wrapped themselves in wet blankets to sleep on narrow ledges. Any movement meant a tumble into the swift river. At times, they were thought to be lost—dashed to death in the unknown canyon.

Wherever the twisting river took them, Powell made observations. Using the stars and the shadows of the canyon walls, he climbed to the top.
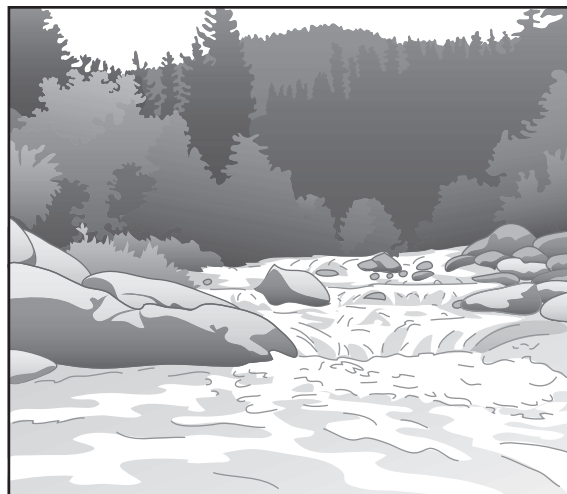
Go On

Once, in a climb up the vertical side, Powell became trapped and could not move up or sideways. A crew member, having no rope, dangled part of his clothing for Powell to grasp. With his good hand, Powell let go of the knob to which he clung and grabbed at the clothing. He was thus helped to the top. There he surveyed the land and made notes about the geology.

Because of his exploration of the Grand Canyon, the name John Wesley Powell is forever linked to his daring exploits in the untamed Colorado River. But Powell was much more than a daredevil explorer. He and his crew lived through the river voyages because Powell observed, measured, and thought things out carefully before taking action. This is the scientific method, and Powell was a leader in the study of science in this country.

Through his explorations, Powell became interested in the Native Americans who lived on the high plateaus of the Rocky Mountains. He learned the languages and customs of the Utes, Paiutes, and Hopi. He recorded all he learned. The science that analyzes and compares human culture is now called ethnology. Powell's studies led to the founding of the U.S. Bureau of American Ethnology, which he headed for many years. His surveys of the geology of the Rocky Mountains led to the beginnings of the U.S. Geological Survey.

Not only was Powell a pioneer scientist, but he was also skilled in appealing to political institutions. In Washington, D.C., he persuaded the United States Congress and several presidents for assistance in undertaking scientific research. Because of Powell, the government today directs and pays for many kinds of research, such as medical research, underwater exploration, and research in space.

By the time of his death in 1902, Powell, in his various offices, and by writing and lecturing, had convinced most people of the value of having the government sponsor scientific studies that benefit the citizens of the country.

32 Explain how the "scientific method" described in the article "John Wesley Powell" helped Powell and his crew survive their river voyages. Use details from the article to support your answer.

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33 The article refers to John Wesley Powell as a "daredevil explorer." Explain why this is an appropriate description. Use details from the article to support your answer.

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Go On

Planning Page

You may PLAN your writing for question 34 here if you wish, but do NOT write your final answer on this page. Your writing on this Planning Page will NOT count toward your final score. Write your final answer on Pages 9 and 10.

Answer ➡

34 Ada Byron Lovelace and John Wesley Powell had very different training for their careers in science. Write an essay in which you explain how their professional preparation differed and how both approaches led to successful careers. Use details from **both** articles to support your answer.

In your response, be sure to
- describe the training each person received
- explain how each approach led to successful careers
- use details from both articles to support your answer

Check your writing for correct spelling, grammar, and punctuation.

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Go On

STOP

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