

# North Carolina End-of-Grade Test of Reading Comprehension—Grade 4

*What are the purposes of the NC Testing Program?*

The North Carolina End-of-Grade Tests are required by General Statute 115C-174.10 as a component of the North Carolina Annual Testing Program. As stated, the purposes of North Carolina state-mandated tests are “(i) to assure that all high school graduates possess those minimum skills and that knowledge thought necessary to function as a member of society; (ii) to provide a means of identifying strengths and weaknesses in the education process in order to improve instructional delivery; and (iii) to establish additional means for making the education system at the State, local, and school levels accountable to the public for results.” This test is one component of the end-of-grade tests, which include reading comprehension and mathematics tests in grades three through eight. Students in grade three began taking a reading comprehension and mathematics pretest in the fall of 1996.

For school, school system, and state accountability, the scores from the end-of-grade tests at the prior grade are used to estimate a student’s level of knowledge and skills at the beginning of the new grade to determine the amount of growth during the school year (calculated from the difference between the two sets of test scores).

*What is measured by the test?*

The end-of-grade reading test for grade four assesses the reading components of the grade four North Carolina *Standard Course of Study*. The test consists of eight reading selections with three to nine associated questions for each selection. Each student is asked to read five literary selections (two fiction, one nonfiction, one drama, one poem) and three informational selections (two content and one consumer). The variety of selections on each form allows for the assessment of reading for various purposes: for literary experience, to gain information, and to perform a task.

The end-of-grade tests are organized by category, with each item falling into one of four categories: cognition, interpretation, critical stance, or connections. A description of each category and the average percentage of items per form for each category are shown in the table below. Each item is also aligned to a curriculum objective from the North Carolina English Language Arts *Standard Course of Study*.

Descriptive Information for the North Carolina End-of-Grade Test of Reading Comprehension—Grade 4

| Category        | Description of Category  | Average Percentage |
|-----------------|--|--------------------|
| Cognition       | Refers to the initial strategies a reader uses to understand the selection. It is about purpose and organization of the selection. It considers the text as a whole or in a broad perspective. Cognition includes strategies like using context clues to determine meaning or summarizing to include main points | 38%                |
| Interpretation  | Requires the student to develop a more complete understanding. It may ask students to clarify, to explain the significance of, to extend, and/or to adapt ideas/concepts.  | 39%                |
| Critical Stance | Refers to tasks that ask the student to stand apart from the selection and consider it objectively. It involves processes like comparing/contrasting and understanding the impact of literary elements.  | 18%                |
| Connections     | Refers to connecting knowledge from the selection with other information and experiences. It involves the student being able to relate the selection to events beyond/outside the selection. In addition, the student will make associations outside the selection and between selections.                       | 5%                 |

*How is the test administered?* The North Carolina End-of-Grade Test of Reading Comprehension at grade four consists of 50 multiple-choice questions administered during a 115-minute block within the last three weeks of school. Three equivalent forms are administered in each classroom to provide information for curriculum evaluation and planning. The tests are scanned and scored by the local education agency with software provided by the NCDPI. Reports of student performance are produced locally. In addition, test scores are aggregated at the North Carolina Department of Public Instruction to fulfill the state and federal reporting requirements for the accountability programs.

*How was the test developed?* The reading selections were chosen by North Carolina educators to reflect the variety of reading done by students at this level in and out of school and to ensure accessibility to a majority of students. Those chosen are selections that would generally be read by students, would be interesting to the students, and have appropriate content for a reading comprehension test at this grade level. The questions for each selection were written and reviewed by trained North Carolina teachers and educators during the 2000-2001 and 2001-2002 school years and were field tested in the spring of 2002. Each field test question was administered to approximately 1,300 students from randomly selected schools across the state. The grade four reading test was implemented statewide for the first time in the spring of 2003.

*What kinds of scores do students receive on the test?* The scores on the end-of-grade reading test are reported on a developmental scale, which allows the measurement of growth in achievement across the grade levels. On the grade four reading test, the scale scores range from 223-275. The use of scale scores provides for easier and more consistent interpretations of the results from test to test. Achievement levels are also generated to provide an interpretation of student performance relative to a predetermined standard. Student scores are converted to one of the four achievement level categories shown below. In addition, student scores are reported as percentile ranks, which are generated from a statewide distribution of students who took the test during the first year the test was administered or the norming year.

Achievement Levels for the North Carolina End-of-Grade Test of Reading Comprehension—Grade 4

| Level | Description  | Scale Score Range |
|-------|--|-------------------|
| 1     | Students performing at this level do not have sufficient mastery of knowledge and skills in this subject area to be successful at the next grade level.                              | 223-235           |
| 2     | Students performing at this level demonstrate inconsistent mastery of knowledge and skills in this subject area and are minimally prepared to be successful at the next grade level. | 236-243           |
| 3     | Students performing at this level consistently demonstrate mastery of grade level subject matter and skills and are well prepared for the next grade level.                          | 244-254           |
| 4     | Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level work  | 255-275           |

*Sample Items* The following pages contain a sample selection and sample items that represent the type of material that appears on the North Carolina End-of-Grade Test of Reading Comprehension – Grade 4. The category and objective correspond to the category and curriculum objective that the item is designed to measure. The thinking skill corresponds to the level of thinking the item requires as defined by a thinking skills framework adapted from *Dimension of Thinking* by Robert J. Marzano and others. Additional samples can be found on the NCDPI web site at [www.ncpublicschools.org/accountability/testing/eog](http://www.ncpublicschools.org/accountability/testing/eog).

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Read this story about Becky Schroeder who invented something when she was 10 years old and answer the questions that follow.

## Becky Schroeder

by Catherine Thimmesh

A person has to be sixteen to drive, seventeen to see certain movies, and eighteen to vote. People can get terrific discounts on all sorts of stuff—provided they're over sixty-five. Everywhere we look there are age limits that define what people can and can't do. But creativity has no boundaries, no limitations. Anyone can invent. And they do. Inventors are popping up at the youngest of ages.

Sitting in the car waiting for her mom to return from shopping, Becky decided she might as well try to finish her math homework. But it was growing dark and getting hard to see the paper.

③ *"I didn't have a flashlight, and I didn't want to open the car door because then the whole car would light up," recalled Becky. "So I thought it would be neat to have my paper light up somehow, and that's when the idea came to me."*

It isn't every day that a ten-year-old invents a product eagerly sought by several businesses, but that's exactly what Becky Schroeder did when she created a tool that enabled people to write in the dark. Her invention? The Glo-sheet.

⑤ That night Becky went home trying to imagine different ways of making her paper glow in the dark. She remembered all sorts of glow-in-the-dark toys—like balls and Frisbees™—and wondered how they were made. She was determined to find a solution. So the very next day, Becky's dad took her on an outing to the hardware store. They returned with a pail of phosphorescent paint. She took the paint and stacks of paper into the darkest room in the house—the bathroom. There, she experimented.

⑥ *"I'd turn on the light, turn it off, turn it on," said Becky. "My parents remember me running out of the room saying 'It works, it works! I'm writing in the dark!'"*

She used an acrylic board and coated it with a specific amount of phosphorescent paint. She took a complicated idea and made it work rather simply. When the coated clipboard is exposed to light, it glows. The glowing board then illuminates, or lights up, the paper that has been placed on top. Two years after her initial inspiration, in 1974, Becky became the youngest female ever to receive a U.S. patent.

⑧ She didn't actively market her Glo-sheet. She didn't need to. The *New York Times* wrote an article about an incredible invention—patented by a twelve-year-old—and the inquiries and orders streamed in. Professionals who needed to write in the dark started ordering her Glo-sheet: photographers for their darkrooms, critics who took notes in darkened theaters, emergency medical people for use in ambulances.

⑨ *"Some of the Glo-sheets I was hand-making and some I had a company manufacture for me," Becky explained. "There were more expensive versions and less expensive ones—electric-operated and light-activated models."*

Several large companies offered to buy her patent rights, but Becky and her father decided to sell the Glo-Sheet on their own. What began as a personal project, just for fun, blossomed into a business, with Becky as the president of the company. Proof that success can come at any age with a good idea and a little imagination.

"Becky Schroeder" from *Girls Think of Everything: Stories of Ingenious Inventions by Women* by Catherine Thimmesh; illustrated by Melissa Sweet. Text copyright © 2000 by Catherine Thimmesh. Reprinted by permission of Houghton Mifflin Company. All rights reserved.

1. What caused Becky to invent Glo-sheet?
  - A She was having trouble with math problems.
  - B She was trying to do homework when it got dark.
  - C She was trying to earn money.
  - D She was working on a school project.
  
2. Why are paragraphs 3, 6, and 9 written in italics?
  - A so the reader will know there is new vocabulary
  - B so the reader will read with more expression
  - C to show that Becky is speaking
  - D to set off difficult paragraphs
  
3. In paragraph 5, Becky and her dad returned from the hardware store with a bucket of phosphorescent paint. What is *phosphorescent paint*?
  - A paint that glows in the dark
  - B paint that acts as glue
  - C paint that covers marks
  - D paint that becomes hard
  
4. In paragraph 8, what does it mean that Becky “didn’t actively market her Glo-sheet”?
  - A She kept the original one for her own use.
  - B Other people came to her to get the Glo-sheet.
  - C Becky’s father tried to sell the Glo-sheet.
  - D She gave away samples to her friends.
  
5. With which statement would Becky Schroeder *most likely* agree ?
  - A Experience is needed to be a good inventor.
  - B Only invent things you know other people want.
  - C You never know what you can do unless you try.
  - D Always try to sell patent rights to large companies.

6. Who would *most likely* need Becky's invention?
- A a doctor giving instructions in a hospital
  - B students doing work in their classrooms during school hours
  - C a librarian who checks out books at the front desk
  - D a scientist taking notes about animals being observed at night

## End of Set

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## *Answers to Grade 4 Reading Comprehension Sample Items*

| <b>Passage Title</b> | <b>Question Number</b> | <b>Correct Answer</b> | <b>Category</b> | <b>Thinking Skill</b> | <b>Objective Number</b> |
|----------------------|------------------------|-----------------------|-----------------|-----------------------|-------------------------|
| Becky Schroeder      | 1                      | B                     | Cognition       | Analyzing             | 2.02                    |
| Becky Schroeder      | 2                      | C                     | Critical Stance | Analyzing             | 3.03                    |
| Becky Schroeder      | 3                      | A                     | Cognition       | Analyzing             | 1.03                    |
| Becky Schroeder      | 4                      | B                     | Interpretation  | Analyzing             | 2.04                    |
| Becky Schroeder      | 5                      | C                     | Critical Stance | Generating            | 3.01                    |
| Becky Schroeder      | 6                      | D                     | Connections     | Applying              | 2.02                    |