

handbook

North Carolina Tests of Computer Skills Student Handbook

(For Students Who Entered
Grade 8 from 1996–1997
through 1999–2000)



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Introduction*

Competencies required of citizens in an “Information Age” have been the topic of major education initiatives, political campaigns, and presentations in the mass media. Although various groups use slightly different terms to describe them, there is general agreement that competencies for the workplace of the twenty-first century differ from those required at the end of the industrial era. As prediction after prediction for the twenty-first century has been made, the role of technology—specifically of computer systems—remains a primary focus.

In May 1991, the North Carolina State Board of Education, as part of the Quality Assurance Program, established a computer proficiency requirement for graduation that was to begin with the class of 2000. In October 1995, the Board modified the requirement by making it effective beginning with the graduating class of 2001. Students who were in the eighth grade during the 1996–1997 school year and thereafter must meet the computer proficiency requirement in order to receive a high school diploma.

For students who entered grade 8 from the 1996–1997 school year through the 1999–2000 school year, the requirement is based on the 1992 computer skills curriculum as defined in the North Carolina *Standard Course of Study*. The goal of a computer skills requirement is to foster skill development so that students have sufficient computer skills for use in high school, at home, and in the workplace.

The computer skills curriculum has three major goals. The first goal is for students to understand the important issues of a technology-based society and to exhibit ethical behavior in the use of computer technology. Second, students must demonstrate knowledge and skills in using computer technology. Finally, students should be able to use a variety of computer technologies to access, analyze, interpret, synthesize, apply, and communicate information.

The computer skills curriculum should be introduced collaboratively by classroom teachers, media coordinators, and computer resource teachers. The results of a carefully planned computer skills program will be students who are problem solvers, information seekers and users, and effective communicators. These students will be prepared for a technology-filled twenty-first century.

This handbook has been prepared as a resource for students, parents, and teachers to provide information about the computer skills proficiency requirement for graduation and its implications for students who entered grade 8 from the 1996–1997 school year through the 1999–2000 school year. In addition, this handbook provides information on what the tests are like, some test-taking strategies, and sample questions with the correct answers and notes. The information contained within this document should assist students in acquiring a better understanding of the computer skills proficiency requirement as one standard students must meet to receive a North Carolina high school diploma.

* Students with disabilities who are following the Occupational Course of Study show computer proficiency as specified in the Individualized Education Program (IEP).

Questions about the Computer Skills Requirement

What is the computer skills requirement?

Students are required to demonstrate proficiency in the skills and competencies of the K–8 computer skills curriculum for a high school diploma. This requirement is met by passing the North Carolina Tests of Computer Skills.

If you entered the eighth grade from 1996–1997 through 1999–2000, the computer skills tests will measure the goals and objectives of the 1992 computer skills curriculum as defined in the North Carolina *Standard Course of Study*.

Who has to take the tests?

Students who entered the eighth grade during the 1996–1997 school year and thereafter must demonstrate computer proficiency as a graduation requirement.

How, when, and where will I take the computer skills tests?

You will be given the opportunity to demonstrate computer skills proficiency beginning at grade eight. A guidance counselor or teacher will tell you about the test schedule. Your tests will be given at your school and will not cost money.

How do I complete the computer proficiency requirement?

The requirement is met by passing the computer skills tests independently of each other. Each student must take and pass a multiple-choice test and a performance test. The performance test requires students to demonstrate the use of a computer.

How will I know if I have passed the tests?

Your guidance counselor or teacher will tell you if you pass. You will receive an individual student report with your test scores. Each student must receive a score of 47 or higher on the multiple-choice test and a score of 49 or higher on the performance test.

What happens if I do not pass the multiple-choice test by one point?

The multiple-choice answer sheets are scored by your local school district. If a student fails the multiple-choice test by one point, the school system hand checks the answer sheet. Once you receive the test score, the school system stores the answer sheet in a secure locked location for six months. At the end of six months, the answer sheet is destroyed or recycled. You must take the multiple-choice test again if you do not pass.

What happens if I do not pass the performance test by one point?

A contractor is used to score the performance test. Two independent readers score each performance test. If a student fails the performance test by one point, a third person scores the test. You must take the performance test again if you do not pass.

May I take both tests on the same day?

It is not recommended that both tests be given on the same day. The multiple-choice test takes about 105 minutes to complete; the performance test takes about 90 minutes to complete.

Why do we have a computer skills requirement?

We want to be sure that each student has sufficient computer skills to use at school and for personal use.

What if I don't pass the tests in the eighth grade?

You will be given at least one opportunity each year to take the test or tests that you do not pass. Your school will provide you with the opportunity to receive extra help to develop your computer skills.

What if I pass one test but not the other?

You will need to re-take only the test that you did not pass.

Will the same test be given every session?

No. Different forms of the tests will be given. The objectives measured and the difficulty levels of the different forms will be the same.

What type of computer may I use to take the performance test?

You will use the equipment in your school. With appropriate software, the test diskettes will work with Macintosh, DOS, or Windows-based microcomputers.

How can I prepare for the tests?

Take the sample test in this handbook and check your answers. Contact your guidance counselor or teacher if you have questions.

Are there other testing requirements for graduation?

Yes. Each student must meet the competency standard in reading and mathematics.¹ In addition, you must meet other state and local requirements. Check with your school guidance counselor when planning your high school courses to find out what the local and state graduation requirements are.

¹ The first opportunity to meet this requirement is at the eighth grade. Contact your guidance counselor for more information.

If I am a student who speaks English as a second language, may I receive extra time to take the test?

Students who speak English as a second language may be able to have accommodations, including extra time. The accommodation must be used routinely during instruction and similar classroom tests. Your school counselor can provide you with more information about accommodations.

If I am a student receiving special services, may I receive extra time to take the test?

Students with disabilities may be able to have accommodations, including extra time. The accommodation must be used routinely during instruction and similar classroom tests. Your Individualized Education Program (IEP) or Written Accommodation Plan will note which accommodations you will be able to use when taking the computer skills tests.

If I have an Individualized Education Program (IEP), is there another way that I can meet the computer skills proficiency requirement?

Some students with disabilities may show computer proficiency with the state portfolio accommodation instead of taking the computer skills test(s) if stated in the Individualized Education Program (IEP). IEP Teams decide if students will use the portfolio accommodations. Students may use the computer skills portfolio accommodation if they cannot take the tests or portions of the tests (a) under standard conditions or (b) with accommodations. When the portfolio is scored “at standard” the computer skills proficiency requirement for graduation is met.










Students with disabilities who are following the Occupational Course of Study show computer proficiency as specified in their IEPs.

II. Contents of the Computer Skills Test

There are two computer skills tests, a multiple-choice test and a performance test. The multiple-choice test will take about 105 minutes to complete; the performance test will take about 90 minutes to complete. To meet the graduation requirements, you must pass both tests.






The Multiple-Choice Test

The North Carolina Test of Computer Skills—Multiple-Choice will be given the way other multiple-choice tests are given (such as reading or mathematics). Students will use an answer sheet that will be machine scored. There will be 70 questions on the test. The test is based on the nine major areas of the computer skills curriculum. These areas are:

-  keyboarding
-  word processing/desktop publishing
-  telecomputing
-  database
-  spreadsheet
-  societal issues
-  ethics
-  computer terms, operation and care
-  independent use of curriculum software

The Performance Test

The North Carolina Test of Computer Skills—Performance requires students to solve problems using software and a computer. Keyboarding, word processing, database, and spreadsheet skills are assessed on the performance test. Each section is timed.

-  To assess keyboarding skills, students will be required to key a short passage, making as few errors as possible.
-  The word processing section requires students to retrieve a file and to edit an existing passage.
-  Students will use a prepared database and spreadsheet to answer questions. In some cases, students will need to describe how they found an answer.
-  You should be able to use a database to search for information using more than one criteria.
-  You should be able to use a spreadsheet to answer “What if” questions.

III. How to Take the Computer Skills Test

Before the Tests: Practice Test

The best way to prepare for these tests is to pay attention in class and learn all you can about how to use a computer. In addition, you should learn all that you can about the tests before you take them. Careful reading of this handbook will provide you with information about the tests. You can become familiar with the types of test questions by trying the sample questions in this handbook. Plan ahead so that you will feel prepared.

Be sure that you are familiar with the computer, operating system, and software that you will use to take the performance part of the test. Software used for the test includes *Clarisworks*, *Microsoft Works*, or *Microsoft Office*. Ask your teacher or guidance counselor about the software and computer that you will be using.

- Read this handbook.
- Do the sample items.
- Ask your teacher or counselor questions about parts you don't understand.

Preparation for testing is a mental and physical activity. Along with becoming familiar with the skills measured by the tests, you should try to feel your best. To be alert and energetic at test time, you should get a good night's rest and eat a good, typical breakfast on the day of the test.

Before the Tests: Preparation

Plan ahead so that you will feel comfortable when you take your tests. Remember to bring your materials.

- Plan ahead so you don't have to rush.
 - Wear comfortable clothing.
 - Bring two No. 2 pencils.
 - Ask your teacher or guidance counselor about other materials that you should bring.
-

During the Tests:

The person giving the tests (test administrator) will try to make the testing situation comfortable and free of distraction.

- ☞ Concentrate on the tests. Do not allow yourself to be distracted. For example, do not let noises bother you.
 - ☞ Do the best that you can on your tests.
 - ☞ You should try to answer each question.
 - ☞ Schedule your time, follow directions, and use good test-taking strategies.
-

During the Tests: Scheduling Your Time









- ☞ Arrive on time so that you will be able to get organized before each test.
 - ☞ Make sure that you understand the time restrictions for your tests.
 - ☞ Keep working until you have finished the test. Some students may finish before you do.
 - ☞ Avoid unnecessary clock-watching. It breaks concentration and causes anxiety.
 - ☞ If you finish before others, check your work.
-

During the Tests: Following Directions

- ☞ Pay close attention to the sample exercises. These exercises are to help you understand what the items will be like. You will also learn how to mark your answers on the answer sheet.
 - ☞ For multiple-choice questions, mark only within the answer circle.
 - ☞ Erase all changed answers carefully. For multiple-choice questions, if the circle disappears, do not redraw it. Redrawn circles may be scored as your answer.
 - ☞ Erase all stray answers on your answer sheet. Stray marks may cause answers to be scored incorrectly.
-

IV. Test-Taking Strategies

General Strategies

-  Follow all directions.
-  Read the whole question. Think about what the question asks before choosing your answer.
-  Try to answer every question before turning in your test booklet and answer sheet.
-  Don't spend too much time on any one question. Answer the easier questions first but be sure to note the questions you skip.
-  Come back to difficult questions. Try to eliminate some of the choices. Choose the best answer.
-  When you mark the multiple-choice answer sheet, make sure that the number on the answer sheet matches the number of the question you are answering.
-  Check your answers for mistakes.
-  Go back and recheck your answers if you finish before the testing session ends.

V. Sample Test Questions

Multiple-Choice Test

This test consists of 70 questions that ask you about the use of computers in society, hardware and software components, keyboarding, and how to use specific software applications—word processing, database, spreadsheet, and telecomputing.

Directions: To answer a question, first decide which is the *best* answer choice for a particular question. Then, find the question number on your answer grid (below) and make a mark in the circle containing the letter of the correct answer. Remember to mark only one answer for each question.

1	(A)	(B)	(C)	(D)
2	(A)	(B)	(C)	(D)
3	(A)	(B)	(C)	(D)
4	(A)	(B)	(C)	(D)
5	(A)	(B)	(C)	(D)
6	(A)	(B)	(C)	(D)
7	(A)	(B)	(C)	(D)
8	(A)	(B)	(C)	(D)

Performance Test

This test consists of four parts—Keyboarding Techniques, Word Processing/Editing, Database Use, and Spreadsheet Use—that assess how well you can use software to perform specific functions. (The sample performance questions in this handbook, as well as the electronic files, are located on the Internet at www.ncpublicschools.org/accountability/testing/computerskills/handbook.* These will provide you with a chance to practice the questions using actual keyboarding, word processing/editing, database, and spreadsheet files. If you need help, talk to your teacher.)

Directions: Read the directions at the beginning of each part. Then complete the task or questions. Either you or the teacher giving the test must print out your work for Keyboarding Techniques and Word Processing/Editing. For the Database Use and Spreadsheet Use parts you should mark your answers in the space provided next to each question.

*The electronic files for state computer skills performance tests on the Internet are available in the software packages (PC and Macintosh platforms) that are supported by the North Carolina Department of Public Instruction.

Multiple-Choice Test

1. Doing research by using an online database instead of a printed set of similar information offers which advantage?
 - A more current information
 - B better charts
 - C easier to understand tables
 - D more legible diagrams

2. Upon walking into Mr. Johnson's workroom, Daryl saw a test that would be given the next day on the computer screen. Which of the following can Daryl ethically do?
 - A Correct obvious errors on the test to help Mr. Johnson avoid embarrassment.
 - B Read the questions as a study guide.
 - C Add a few well-chosen questions that Mr. Johnson left out.
 - D Leave the room without reading the test questions.

3. What is the function of a disk drive?
 - A to print sheets of paper
 - B to read from or write information to a floppy disk
 - C to display information or pictures on a screen
 - D to calculate numbers

4. For a social studies report, Fred needs to illustrate the products of North Carolina with pictures and comparison graphs. He would **most likely** use which software programs?
 - A spreadsheet and statistical
 - B spreadsheet and database
 - C graphing and clip art
 - D clip art and drawing

5. For correct keyboarding, what is the recommended placement of fingers on the home row keys?
 - A fingers of the left hand on A-S-D-F and fingers on the right hand on J-K-L-;
 - B fingers of the right hand on A-S-D-F and fingers on the left hand on J-K-L-;
 - C fingers of the left hand on A-S-E-F and fingers on the right hand on J-K-O-P
 - D fingers of the left hand on Q-W-E-R and fingers on the right hand on U-I-O-P

6. Jim is typing a song on his word processor. The song has four verses, and the chorus is repeated after each verse. What would be the **most efficient** way to enter the song, making sure the chorus is repeated after each verse?
- A Type the chorus four times.
 - B Copy the chorus on a copy machine and then cut and paste it into the document.
 - C Use the Copy and Paste Commands on the word processor.
 - D Highlight the text and change it to **Bold**.
7. Which is **not** an advantage of using computerized spreadsheets?
- A speed of calculation
 - B flexibility of moving entries
 - C cost of initial set-up
 - D ability to generate tables
8. Using an electronic bulletin board, Andy can do all of the following **except** which one?
- A send private messages to a friend
 - B send a public message to friends interested in one topic
 - C send pictures to a friend
 - D send a package to a friend

Performance Test

Part I: Keyboarding Techniques

Directions:

1. Key, as accurately as possible, the title and paragraphs below. Remember to use correct keyboarding techniques. Note: Do not worry about any differences in word wrap between what you type and how the paragraphs appear on this page.
2. When you have finished keying the title and paragraphs, print your work.

OUR WEEKLY ASSEMBLY MEETING

Every Wednesday morning the students at Smith Middle School meet in the auditorium for assembly. The program may include

speakers,
musicians,
plays,
or movies.

Most of the students like assembly because we never know what to expect.

Sometimes at the end of the program, the principal tells us about special upcoming events. Every spring my math club makes a presentation. Last spring I explained how a computer does math.

Performance Test Part II: Word Processing/Editing

Directions:

1. Edit the title and paragraph below. You may use the “Edit Symbol Reference Table” provided below if you need assistance.
2. When you have finished editing the title and paragraph, print your work.

Edit Symbol Reference Table

≡	capitalize	}]	center
c	lower case]]	indent
/	delete	^	insert
—	replace word	↻	move
#	insert space	sp ○	spell out
¶	new paragraph		

] NORTH CAROLINA AND WORLD WAR II [

Last summer I read a book on the contributions of ^{North} Carolina to World War II. ≡ out of a total population of some 3,600,000 people in the state, about 355,000 men and 7,000 women joined the military forces. They participated in all the major battles in Europe and Asia.

Performance Test Part III: Database Use

Directions: Use your database program and the file called **MAGAZDB**.

1. Read the *scenario*.
2. Use the database file to respond to the questions below.
3. When asked to “describe the steps you took to find your answer,” use appropriate database terms. For example, “Sorted Ad Cost per pg in descending order” or “Searched the Ad Cost per pg for all records greater than 1,000.”

Scenario:

Your school is selling magazines to raise money for class trips. Using the database MAGAZDB, your job is to answer questions asked by your classmates who are selling the magazines and other classmates who are handling records of sales.

Sample Record from MAGAZDB Database.*

TITLE:	American Health
CITY PUBLISHED:	New York
STATE PUBLISHED:	New York
PUBLISHED BY:	Reader’s Digest Association, Inc.
TYPE OF MAG:	Health
#PUB PER YEAR:	10
AD COST PER PG:	\$34,500
AD COST BCK COV:	\$44,800
COST PER COPY:	\$1.95

1. What is the name of the magazine that has the largest circulation?
2. What is the name of the magazine published 6 times per year (# PUB PER YEAR) that has an advertisement cost per page (AD COST PER PG) of \$4,045?

Explanation: Use database terms to describe the steps you took to find your answer.

*NOTE: This example does not contain all fields of the database. It is not representative of a complete record.

Performance Test Part IV: Spreadsheet Use

Directions: Use your spreadsheet program and the file called **SSDRYCL**.

1. Read the *scenario*.
2. Use the spreadsheet file to respond to the questions below.

Scenario:

The owners of a new dry cleaning business have pledged to donate 1% of their profit to purchase books for the library at your school. Your Computer Skills class has created the spreadsheet SSDRYCL to help the owners keep accurate records. On assignment at the dry cleaner's, you test the spreadsheet in the following situations.

NOTE: The spreadsheet automatically calculates 6% tax.

Excerpt from SSDRYCL Spreadsheet

Amount of money available to spend:				\$0.00		
						Cost of
					Cost of	Specific
			Number	Cost Per	Specific	Item Plus
			Items	Item	Items	Tax
Shirts:			0	\$1.55	\$0.00	\$0.00
Blouses:			0	\$1.60	\$0.00	\$0.00
Men's Suits:			0	\$5.50	\$0.00	\$0.00
Women's			0	\$5.25	\$0.00	\$0.00
Sweaters:			0	\$2.75	\$0.00	\$0.00
Overcoats:			0	\$8.25	\$0.00	\$0.00
			Total Cost of Dry Cleaning:			\$0.00
			Amount of money Remaining:			\$0.00

1. Franco has \$25.00 to pay for cleaning two sweaters and two overcoats. How much change should he get back?
2. Colleen paid \$8.48 for having a number of blouses cleaned. How many blouses did she have cleaned in all?

Answers to Sample Questions and Notes

Multiple-Choice Test

1. The correct answer is A. This question measures how well you understand how computers are used as a tool for accessing information.
2. The correct answer is D. This question measures how well you understand the ethical use of computers and respect the computer-generated work of others.
3. The correct answer is B. This question measures your understanding of the components of a computer—hardware and software. You may also be asked about other physical components of a computer, their function, and use.
4. The correct answer is C. This question measures your knowledge of the use of software in various subjects to solve problems. You may also be asked about other types of software, e.g., probeware used in science, database programs used in social studies.
5. The correct answer is A. This question measures your knowledge of correct keyboarding skills and finger placement on the home row keys.
6. The correct answer is C. This question measures your ability to use the Copy and Paste functions while word processing. You may also be asked about other functions (e.g., Move, Print) and utilities (e.g., spell checker, grammar checker), and about producing desktop published documents.
7. The correct answer is C. This question measures your understanding of the advantages (or disadvantages) of using a computerized spreadsheet versus a printed spreadsheet. You may also be asked to use a spreadsheet to test simple “What if” statements.
8. The correct answer is D. This question measures your understanding of how an electronic bulletin board works.

Scoring

The local school system scores the computer skills multiple-choice tests using a computer. Each multiple-choice test question is scored 0 (incorrect) or 1 (correct). The student responses are added together to produce a total raw score (or total number of test questions answered correctly). The total raw score is then converted to a scale score. Individual scores are reported as scale scores on a scale that ranges from 20 to 80. The passing score for the computer skills multiple-choice test is a scale score of 47 or higher.

Answers to Sample Questions and Notes Performance Test

Scoring the Performance Sample Test Questions

The computer skills performance test questions are hand-scored by at least two scorers to make sure that the scores are accurate. The scorers use a standard raw score scale that is called a rubric. The rubrics differ for each test question and are determined by the difficulty of the question.

Each performance test question is given a raw score point using the scoring rubrics. The raw score points for each section are then added together and converted to a scale score for the section. The scale scores for each section are then combined to create an overall weighted raw score for the test. This score is then converted into the final scale score. Individual scores are reported as scale scores on scales that range from 18-82. The passing score for the computer skills performance test is a scale score of 49 or higher.

The scoring rubrics for the performance sample test questions in this handbook provide teachers and students the opportunity to see how an individual test question is awarded a specific raw point using a scoring rubric. A specific scale and criteria is used to determine the raw score point for each test question. Some test questions may only have a scale of 0 to 1, whereas others may be able to receive a score as high as 2, 3, or 4. Each score point for the test question has a description of the criteria that must be met in order to receive its appropriate score point. Test questions that are scored on a 0 to 1 score scale, usually are identified as either correct or incorrect. Other test questions, which may have the possibility of receiving a score higher than 1, have more detailed descriptions for each score point criteria (for example, 2 out of 3 things must be correct, etc.). In many ways, this is like giving partial credit to a student for work that has been completed but is not totally correct.

Scoring rubrics are created to most accurately measure a student's ability to successfully complete the requirements of the individual task without compromising the validity of the test question.

Information is provided below about the rubrics used to score the performance sample questions located in this handbook.

Part I: Keyboarding Techniques. This task is scored for typing accuracy, spacing, and length.

Typing Accuracy (includes errors in spelling, punctuation, capitalization, and omitted/added words).

Score Point 1: contains five or more errors

Score Point 2: contains two, three, or four errors

Score Point 3: contains zero or one error(s)

Spacing (errors include failure to indent, center title, space between paragraphs, etc.)

Score Point 1: contains three or more errors

Score Point 2: contains one or two errors

Score Point 3: contains no errors

Length (the amount of document typed)

Score Point 1: Some portion of the document is typed.

Score Point 2: The document is typed through the first paragraph.

Score Point 3: The document is typed to the end.

Part II: Word Processing/Editing. This task is scored for the number of correct edits and if other errors are made while editing.

Required Edits (Center, Insert, Capitalize)

Score Point 0: The correction (edit) is made incorrectly or not made at all.

Score Point 1: The correction (edit) is made correctly.

Other (additional errors not relating to editing changes above)

Score Point 0: One or more additional errors appear in the text.

Score Point 1: No additional errors appear in the text.

Part III: Database Use.

1. The correct answer is “Reader’s Digest.” This question measures your ability to sort a database.

Score Point 0: Answer is incorrect or missing.

Score Point 1: Answer is correct.

2. The correct answer is “American Scientist.” Your answer is also scored for how well you explain how you determined your answer to the question (“I searched the field # PUB PER YEAR=6 and searched the field AD COST PER YEAR=\$4,045). This question measures your ability to search a database using more than one criterion to solve a problem.

Score Point 0: Answer is incorrect or missing and the explanation is either incorrect or not attempted.

Score Point 1: Answer given is correct, but the explanation is either incorrect or not attempted; or the explanation is correct, but the answer is either incorrect or not attempted.

Score Point 2: Both the answer and the explanation are correct.

Part IV: Spreadsheet Use.

- 1. The correct answer is \$1.68. This question measures your ability to use a spreadsheet to test simple “What if” statements.**

Score Point 0: Answer is incorrect or missing.

Score Point 1: Answer is correct.

- 2. The correct answer is 5. This question also measures your ability to use a spreadsheet to test simple “What if” statements.**

Score Point 0: Answer is incorrect or missing.

Score Point 1: Answer is correct