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#### Abstract

The North Carolina Open-Ended Assessment for grades 5 and 8 emphasizes higher-level thinking skills. Test items commonly require the integration of knowledge and skills from more than one curricular area. Beginning in 1996-97, the North Carolina Open-Ended Assessment was administered to students in grades 5 and 8 for the second time. Because it is administered in the fall, the assessment measures skills and knowledge for grades 4 and 7. Each open-ended test is built around a reading passage or passages with test items that are loosely linked to the content of the passage. Each test contains six mathematics and six reading items. For scoring purposes, there is a general rubric for reading and another for mathematics. In November 1997, an equating study was conducted to ensure that test forms are comparable from year to year. Fifth graders in 1997-98 scored slightly higher than grade-5 students from the previous year on the total scale score, with most of the increase occurring in mathematics. The mean total scale score for all ethnic groups improved, although white students outperformed Blacks, and Asian American students outperformed Whites. In grade 8 , students slightly outperformed those of the previous year, with the gain in reading a little higher than the gain in mathematics. White and Asian American students were more likely to score in the higher achievement levels. Tables present mean scale scores for both grades in both subjects, data on average performances of students by ethnicity, disability, Title I participation, and local education agency. Frequency distributions and percentiles are presented for both grades and both subjects. Appendixes contain sample student reports and a list of the state's charter schools. (Contains 20 tables and 7 figures.) (SLD)




## The 1997-98 Report of Student Performance



## North Carolina Open-Ended Assessment



TM029242

## Grades 5 and 8



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Public Schools of North Carolina
State Board of Education
Department of Public Instruction
Division of Accountability Services/ Testing Section
Raleigh, North Carolina 27601-2825
Published May 1998

## The 1997-98

# Report of Student Performance 

North Carolina<br>Open-Ended Assessment Grades 5 and 8

Public Schools of North Carolina<br>State Board of Education<br>Department of Public Instruction<br>Division of Accountability Services/Testing Section<br>Raleigh, North Carolina 27601-2825<br>May 1998

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# 1997-1998 Report of Student Performance North Carolina Open-Ended Assessment Grades 5 and 8 

Background

The North Carolina Open-Ended Assessment Grades 5 and 8, like the North Carolina Standard Course of Study, places an emphasis on higher level thinking skills-the ability of students to access, organize, process, analyze, evaluate and apply information to solve real-world problems and make informed decisions. The assessment requires students to apply or demonstrate skills and knowledge beyond the recall level on challenging subject matter. Test items commonly require the integration of knowledge and skills from more than one curricular area. Instead of choosing from a list of provided possible answers, students are required to generate their responses and write out their thoughts. Often the quality of a student's response is judged by the level of the student's explanation.

Open-ended assessment was initially implemented in 1992-93 in North Carolina at grades 3-8. The tests contained a balanced number of questions in reading, mathematics, and social studies for a total of 10 questions. The tests were scored centrally by teachers during the summer and were designed to inform instruction. No individual student scores were provided from the earlier versions of openended assessment. In 1995 with the onset of the ABCs Plan to reform public education, a decision was made to reduce the amount of testing. Open-ended assessment was suspended during the 1995-96 school year to allow for planning and revision of the assessment to focus on more challenging subject matter. The more challenging open-ended assessment represents a higher standard that focuses on what students should know and should be able to do instead of what they know and are able to do.

Beginning in 1996-97, the North Carolina Open-Ended Assessment was administered to students at grades 5 and 8 on a designated date in November. Because it is administered in the fall, the assessment at grade 5 measures skills and knowledge for grade 4 and the assessment at grade 8 measures skills and knowledge for grade 7. The assessment focuses on the content of a passage and emphasizes reading, mathematics, and writing. Skills from the social studies and science curricula are integrated into mathematics and reading. Typically one test form is administered at each grade level. The test administration time allowed is 90 minutes.

Who is<br>administered the test?

All public school students, including charter schools committed to the ABCs accountability plan, enrolled in grades 5 and 8 participate in the open-ended assessment unless they are specifically exempted. For the first time, the state report includes performance of charter school students in the state results as well as individual charter school performance. North Carolina's first charter schools were approved by the State Board of Education in March 1997.

What is the format of the test?

How are the tests scored?

Each open-ended test is built around a reading passage or passages with test items that are loosely linked to the content of the passage. The passage or passages may include a variety of genres and writing for different purposes. Students may be directed to respond to open-ended items by:

- Constructing a response
- Writing sentences
- Designing brochures
- Explaining an author's purpose
- Solving problems
- Constructing tables, charts, or graphs
- Interpreting data
- Analyzing information
- Writing a short essay

Each test consists of 12 items-six reading and six mathematics. Students are required to respond to the items in the spaces provided in the test books. While the content of the mathematics items is linked to the reading passage, the items are not dependent on an understanding of the content of the passage. These items consistently measure the mathematics goals and strands as independent items. Social studies and science skills and content are embedded within some of the reading and mathematics items.

The reading section of the grade 5 test contains an item that requires descriptive writing; the grade 8 test contains an item that requires persuasive writing. These items allow for a three-fourths page response, and the scoring rubrics are developed to evaluate reading comprehension, composing, and applied language conventions.

Professional scorers were trained to score the open-ended assessments at grades 5 and 8. Data Recognition Corporation (Minneapolis, MN), the contractor in 199697, served as the contractor again for the 1997-98 scoring. The scorers used rubrics and scoring guides developed by an advisory group of North Carolina teachers and curriculum specialists. Group and individual student scores along with student tests were returned to the school systems in March 1998.

For scoring purposes, there is a general rubric for reading and a general rubric for mathematics. The use of a general rubric insures that the same level of expectation is maintained for all items within a content area. For example, a score point of two on one reading item should describe the same level of performance as a two on another reading item. In addition to a general rubric, each item has a specific scoring rubric that defines the levels of expectation for the particular item.

The number of score points in a rubric depends on the complexity of the item. Rubrics for items on the open-ended assessment range from two score points on a simple question that requires a convergent response to four score points for the

What are<br>the general rubrics for reading and mathematics?

How are scores reported?
more complex items that often require substantial elaboration or a more divergent response.

The general rubrics provide information regarding the scoring standards used in 1996-97 and 1997-1998. The general rubrics, which remain the same across years and forms, for reading and mathematics items follow.

## GENERAL RUBRIC

## Reading

0 Answer is unresponsive, unrelated, or inappropriate.
1 Answer deals with material on a concrete, literal level that is accurate in most dimensions.

2 Answer deals with most aspects of the question and makes correct inferences, although minor errors may exist. Comprehension is on an inferential level and the key skills are synthesis and analysis.

3 Answer addresses all aspects of the question and uses sound reasons and cites and explains appropriate examples. Uses skills of evaluation as well as analysis and synthesis.

## GENERAL RUBRIC

## Mathematics

0 Answer is unresponsive, unrelated, or inappropriate. Nothing correct.
1 Addresses item but only partially correct; something correct related to the question.

2 Answer deals correctly with most aspects of the question, but something is missing. May deal with all aspects but have minor errors.

3 All parts of the question are answered accurately and completely. All directions are followed.

The results from the open-ended assessment were returned to each school district and charter school during March 1998. Charter schools, individual LEA schools, and LEAs received class rosters, school rosters, and LEA reports. On the individual score report, students received an open-ended total scale score with subscores for reading and mathematics. The graphic for each score shows the scale score obtained with bars to the left and right indicating one standard error of measurement around the score. The length of the bar indicates that the true score will be within this range of scale scores two-thirds of the time.

Student scores provide feedback to teachers for a clearer link between instructional efforts and student performance. In addition, the original student test books and scoring guides are distributed to the teachers. Such feedback should lead to a higher level of performance in this area in the future.

Raw Scores.
The modal score on an individual reading question at both grade levels was a raw score point of one. A score point of one is assigned to responses at the concrete, literal level. Few students are reaching the higher scores of two or three. At the higher score points student answers are expected to be more complete, to have clear explanations, and to go beyond the literal level. Also at the higher score points students are expected to provide responses that demonstrate skills in analysis, interpretation, and/or evaluation of ideas and concepts.

In analyzing the mathematics questions, a significant number of students received zeros. A score point of zero is given to responses that contain no information that is correct.

Scale Scores.
The scales for the open-ended assessment were derived from the characteristics of the items when they were field tested during the 1995-96 school year. Each of the three scales for each grade (reading, mathematics, and total score) was calibrated to have a mean of 50 and a standard deviation of 10 . Table A (below) shows the state statistics for the 1996-97 and 1997-98 administrations of the tests.

Table A. North Carolina Open-Ended Assessment Descriptive Statistics


## Achievement Levels.

Achievement levels are not available for grade 5 because the test administration is scheduled to move to grade 4 in 1997-1998. The distributions of scale scores and the achievement level ranges from the 1997-1998 assessment at grade 8 are located in Table B below. These achievement level ranges were determined using valuable input from North Carolina language arts/reading and mathematics teachers who participated in the 1997-98 test administration.

Table B. 1997-1998 North Carolina Open-Ended Assessment Grade 8 Achievement Levels and Scale Scores

| Achievement <br> Level | Scale Scores |  |  |
| :--- | :---: | :---: | :---: |
|  | Reading | Mathematics | Total |
| Level I | $12-35$ | $31-36$ | $23-37$ |
| Level II | $36-44$ | $37-48$ | $38-47$ |
| Level III | $45-58$ | $49-61$ | $48-59$ |
| Level IV | $59-89$ | $62-84$ | $60-85$ |

Equating Study During the November 1997 administration of the North Carolina Open-Ended Assessment, an equating study was conducted to ensure that test forms are comparable from year to year. In order to accomplish this study, approximately one of every twenty-seven students administered the open-ended assessment received a 1996 test form.

1997-98
State-level
Open-Ended Assessment Results

This is the second year of the open-ended assessment using the new format; therefore, comparisons can be made only with last year's scores. However, scores continue to be low in comparison to typical student performance on other types of assessment. Students still have difficulty analyzing text, making inferences, and drawing conclusions from what they have read. While students are usually able to read and comprehend at a concrete level, which will give them a score point of one, they have difficulty using the text as support for analysis and evaluation. They have difficulty using the supporting details of the text to go beyond the plot to the abstract. Also, as a part of the reading section, visual or graphic problems are difficult for them.

Whether it is map reading, giving directions, or analyzing artwork, they have difficulty going beyond the literal level. This same problem is evident on the mathematics section. Students have had and continue to have difficulty with problems that require analyzing or creating charts, graphs, or tables. They appear to be unable to analyze the problems step-by-step and often do not attempt to respond. If students would break down the problems into logical parts, the problems would be more manageable, and students would be able to receive at least partial credit. Because many of the reading and mathematics items are multilevel, students need to be encouraged to read the problems carefully and to acquire an understanding of the task before they begin to respond to or to give up attempting a problem.

Grade Five Students in grade 5 in 1997-98 scored slightly higher than grade 5 students in 1996-97 ( 2.3 scale score points on average) on the total scale score. Most of the increase occurred in mathematics. The mean mathematics scale score was 53.3 in 1997-98 compared to 49.8 in 1996-97. The increase in the mean reading scale score from 1996-97 to 1997-98 was 1.2 scale score points (from 45.2 to 46.4).

Performance of Subgroups at Grade Five

Gender. The mean total scale score for females and males improved from 199697 to 1997-98 by 2.5 points for females and 2.0 points for males. The 1997-98 mean total scale score for females is 50.7 , and the mean total scale score for males is 48.9 . On the average, females scored 48.4 , while males averaged 44.4 on the reading items. In 1997-98 the difference between females and males on reading was 4.0 points compared to 2.4 in 1996-97. On mathematics items the difference between the average scale score for females and males in 1996-97 and 1997-98 was less than one-half point.

Ethnicity. The mean total scale score for all ethnic groups improved from 199697 to 1997-98. The mean total scale score for White students is 52.1 compared to 45.0 for Black students, 46.4 for Hispanic students, 45.6 for American Indian students, 52.7 for Asian students, 49.7 for Multi-racial students, and 49.4 for Other students. Compared to $1996-97$ results, Asian students had the most gain (3.4 points on average) of any ethnic group in 1997-98.

The average reading scale score for White students is 48.0 while Black students scored 43.1, Hispanic students scored 43.3. American Indian students scored 41.9, Asian students scored 48.5, Multi-racial students scored 46.4, and Other students scored 45.5.

The mean for White students on mathematics is 56.2 compared to 47.0 for Black students, 49.5 for Hispanic students, 49.4 for American Indian students, 56.8 for Asian students, 53.1 for Multi-racial students, and 53.4 for Other students.

Figure 1 depicts the total scale score at grade 5 by ethnicity and gender. Figure 3 illustrates the mean reading scale score at grade 5 by ethnicity and gender; Figure 5 illustrates the mean mathematics scale score at grade 5 by ethnicity and gender.

Exceptionality. The total mean scale score for all students was 49.8. Academically gifted students scored significantly above the average with a total mean scale score of 61.0 . Students with disabilities scored from 2.5 to 14.1 points below the total mean scale score for all students. Section 504 (44.8) and Limited English Proficient (42.7) students also scored below the average for all students.

Table 3 provides detailed results for exceptional, Section 504, and Limited English Proficient students.

Modifications. Most students receiving modifications scored 2.5 to 7.7 points below the total mean scale score of 49.8 for all students. Students receiving the use of a typewriter or word processor modification, however, scored (49.9) just above the total mean scale score for all students.

## Table 4 provides detailed results for students receiving modifications.

Title I. The mean total scale score for students not in a Title I program was 51.1 compared to 47.4 for students in a schoolwide Title I program, 44.2 for students in a target assistance Title I program, and 42.6 for students in a migrant Title I program.

Table 5 provides detailed results for students participating in Title I programs.
Grade Eight Students in grade 8 in 1997-98 scored slightly higher than grade 8 students in 1996-97 ( 1.2 scale score points on average) on the total scale score. The gain in reading scores ( 2.2 scale score points) was slightly higher than the gain in mathematics scores ( 1.8 scale score points).

Performance of
Subgroups at Grade Eight

The average mathematics scale score for White students is 55.0 compared to 44.9 for Black students, 47.2 for Hispanic students, 46.2 for American Indian students, 53.3 for Asian students, 50.8 for Multi-racial students, and 50.6 for Other students.

Figure 2 illustrates the total scale score at grade eight by ethnicity and gender. Figures 4 and 6 depict the mean reading and mathematics scale scores respectively at grade eight by ethnicity and gender. Figure 7 and Table 1 show the percent of students at each achievement level by ethnicity.

Exceptionality. The total mean scale score for all students was 49.7. Academically gifted students scored significantly above the average with a total mean scale score of 62.0. Students with disabilities scored from 3.7 to 17.4 points below the total mean scale score for all students. Section 504 (44.9) and Limited English Proficient (39.7) students also scored below the average for all students.

Table 3 provides detailed results for exceptional, Section 504, and Limited English Proficient students.

Modifications. Students receiving modifications scored 3.7 to 12.2 points below the total mean scale score of 49.7 for all students. Of these students, those receiving the use of a typewriter or word processor modification, scored the highest (46.0).

Table 4 provides detailed results for students receiving modifications.
Title I. The mean total scale score for students not in a Title I program was 50.2 compared to 46.5 for students in a schoolwide Title I program, 41.5 for students in a target assistance Title I program, and 40.1 for students in a migrant Title I program.

Table 5 provides detailed results for students participating in Title I programs.

Figure 1. 1996-97 to 1997-98 North Carolina Open-Ended Assessment Total Mean Scale Scores

Grade 5
Results by Ethnic Group



State*
1996-97 1997-98

Female
N Tested $=43,928$
N Tested $=45,085$

Male
N Tested $=45,334$
N Tested $=45,892$

Figure 2. 1996-97 to 1997-98 North Carolina Open-Ended Assessment Total Mean Scale Scores

Grade 8

## Results by Ethnic Group




State includes all public school systems (LEA) and charter schools.

Figure 3. 1996-97 to 1997-98 North Carolina Open-Ended Assessment Reading Mean S cale S cores

Grade 5
Results by Ethnic Group



I ate includes all public school systems (LEA) and chatter schools.

Nimerivrain 7 A8

Figure 4. 1996-97 to 1997-98 North Carolina Open-Ended Assessment Reading Mean Scale Scores

Grade 8

Results by Ethnic Group



State*
1996-97
1997-98

Female
N Tested $=42,692$
N Tested $=43,087$

Male
N Tested $=43,680$
N Tested $=44,335$

Figure 5. 1996-97 to 1997-98 North Carolina Open-Ended Assessment Mathematics Mean Scale Scores

## Grade 5

Results by Ethnic Group



1996-97
1997-98

N Tested $=89,353$
N Tested $=91,295$

Results by Gender

Figure 6. 1996-97 to 1997-98 North Carolina Open-Ended Assessment Mathematics Mean Scale S cores

Grade 8

Results by Ethnic Group



| 層 1996-97 |  |
| :---: | :---: |

Figure 7. 1997-98 North Carolina Open-Ended Assessment Percent of Students at Each Achie vement Level

Total Mean Scale Scores


Grade 8 by Ethnicity


Multi-Racia

| 10.7\% | $33.1 \%$ | $\text { 索 } 42.6 \% \text {, }$ | 13.6\% |
| :---: | :---: | :---: | :---: |

White



Note: Achievement levels for each ethnicity category may not add to $100 \%$ due to rounding.
NCDPITOPSBR798

# Table 1. 1997-98 North Carolina Open-Ended Assessment <br> Percent of Students at Each Achievement Level <br> Total Mean Scale Scores <br> Grade 8 by Ethnicity 

| All Students | N | \% |
| :---: | :---: | :---: |
| Achievement Level I | 10,779 | 12.3 |
| Achievement Level II | 25,408 | 29.0 |
| Achievement Level III | 36,028 | 41.1 |
| Achievement Level IV | 15,448 | 17.6 |
| \% Students at III or IV | 51,476 | 587 |
| American Indian | N | \% |
| Achievement Level I | 360 | 25.2 |
| Achievement Level II | 527 | 36.9 |
| Achievement Level III | 451 | 31.6 |
| Achievement Level IV | 89 | 6.2 |
| \% Students at III or IV | 540 | 37.8 |
| Asian | N | \% |
| Achievement Level I | 160 | 12.4 |
| Achievement Level II | 361 | 27.9 |
| Achievement Level III | 470 | 36.3 |
| Achievement Level IV | 302 | 23.4 |
| \% Students at III or IV | 772 | 59.7 |
| Black | N | \% |
| Achievement Level I | 5,787 | 23.9 |
| Achievement Level II | 9,947 | 41.1 |
| Achievement Level III | 7,431 | 30.7 |
| Achievement Level IV | 1,021 | 4.2 |
| \% Students at III or IV | 8,452 | 34.9 |


| Hispanic | N | \% |
| :---: | :---: | :---: |
| Achievement Level I | 377 | 21.4 |
| Achievement Level II | 639 | 36.3 |
| Achievement Level III | 608 | 34.6 |
| Achievement Level IV | 135 | 7.7 |
| \% Students at III or IV | 743 | 42.2 |
| Multi-Racial | N | \% |
| Achievement Level I | 141 | 10.7 |
| Achievement Level II | 436 | 33.1 |
| Achievement Level III | 562 | 42.6 |
| Achievement Level IV | 179 | 13.6 |
| \% Students at III or IV | 741 | 56.2 \% |
| White | N | \% |
| Achievement Level I | 3,854 | 6.7 |
| Achievement Level II | 13,344 | 23.4 |
| Achievement Level III | 26,280 | 46.0 |
| Achievement Level IV | 13,648 | 23.9 |
| \% Students at III or IV | 39,928 | 69.9 |
| Other | N | \% |
| Achievement Level I | 65 | 16.1 |
| Achievement Level II | 115 | 28.5 |
| Achievement Level III | 165 | 40.8 |
| Achievement Level IV | 59 | 14.6 |
| \% Students at III or IV | 224 | 55.4 |


|  | N | \% |
| :--- | ---: | ---: |
| All Students | 87,663 | 100.0 |
| American Indian | 1,427 | 1.6 |
| Asian | 1,293 | 1.5 |
| Black | 24,186 | 27.6 |
| Hispanic | 1,759 | 2.0 |
| Multi-Racial | 1,318 | 1.5 |
| White | 57,126 | 65.2 |
| Other | 404 | 0.5 |

[^0]All percents are calculated based on actual N -counts and are not summed.
When summed, the ethnic categories may not be equal to "All Students" because some students may not have coded in an ethnic category.

Figure 8. 1997-98 North Carolina Open-Ended Assessment

## Percent of Students at Each Achievement Level <br> Total Mean Scale Scores <br> Grade 8 by Disability



Note: Achievement levels for each ethnicity category may not add to $100 \%$ due to rounding.

Table 2. 1997-98 North Carolina Open-Ended Assessment

## Grade 8

| Not Exceptional | N | \% |
| :---: | :---: | :---: |
| Achievement Level I | 6,768 | 10.3 |
| Achievement Level II | 21,801 | 33.1 |
| Achievement Level III | 30,094 | 45.7 |
| Achievement Level IV | 7,224 | 11.0 |
| \% Students at III or IV | 37,318 |  |
| Behaviorally-Emotionally Handicapped | N | \% |
| Achievement Level I | 512 | 56.7 |
| Achievement Level II | 290 | 32.1 |
| Achievement Level III | 97 | 10.7 |
| Achievement Level IV | 4 | 0.4 |
| \% Students at III or IV | 101 | 11.2 |
| Hearing Impaired | N | \% |
| Achievement Level I | 37 | 39.8 |
| Achievement Level II | 28 | 30.1 |
| Achievement Level III | 22 | 23.7 |
| Achievement Level IV | 6 | 6.5 |
| \% Students at III or IV | 28 | 30.1 |
| Educable Mentally Handicapped | N | \% |
| Achievement Level I | 866 | 80.6 |
| Achievement Level II | 189 | 17.6 |
| Achievement Level III | 18 | 1.7 |
| Achievement Level IV | 1 | 0.1 |
| \% Students at III or IV |  | 1.8 |
| Specific Learning Disabled | N | \% |
| Achievement Level I | 2,045 | 36.8 |
| Achievement Level II | 2,195 | 39.5 |
| Achievement Level III | 1,189 | 21.4 |
| Achievement Level IV | 126 | 2.3 |
| \% Students at III or IV | 1,315 | 23.7 |
| Speech-Language Disabled | N | \% |
| Achievement Level I | 50 | 39.7 |
| Achievement Level II | 41 | 32.5 |
| Achievement Level III | 27 | 21.4 |
| Achievement Level IV | 8 | 6.3 |
| \% Students at III or IV | 35 | 27.8 |
| Visually Impaired | N | \% |
| Achievement Level I | 11 | 20.4 |
| Achievement Level II | 18 | 33.3 |
| Achievement Level III | 22 | 40.7 |
| Achievement Level IV | 3 | 5.6 |
| \% Students at III or IV | 25 | 46.3 |

[^1]
# Table 3. 1997-98 North Carolina Open-Ended Assessment <br> Average Performance of Students with Disabilities or Limited English Proficiency <br> Grade 5 



## Grade 8

| Category | Number <br> Tested | Percent ${ }^{1}$ | Mean <br> Reading | Mean <br> Mathematics | Mean Total ${ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| All Students | 87,663 | 100.0 | 47.4 | 51.8 | 49.7 |
| Not Exceptional | 65,887 | 75.8 | 46.8 | 50.5 | 48.7 |
| Academically Gifted | 12,322. | 14.2 | 58.2 | 65.8 | 62.0 |
| Students with Disabilities | 8,749 | 10.1 |  |  |  |
| Behaviorally-Emotionally Handicapped | 903 | 1.0 | 34.1 | 39.8 | 37.0 |
| Hearing Impaired | 93 | 0.1 | 38.9 | 45.0 | 42.1 |
| Educable Mentally Handicapped | 1,074 | 1.2 | 29.6 | 35.0 | -32.3 |
| Specific Learning Disabled | 5,555 | 6.4 | 38.6 | 43.4 | 41.1 |
| Speech-Language Impaired | 126 | 0.1 | 39.1 | 43.3 | 41.3 |
| Visually Impaired | 54 | 0.1 | 42.7 |  | 46.0 |
| Other Health Impaired | 648 | 0.7 | 38.5 | 42.6 | 40.6 |
| Orthopedically Impaired | 43 | 0.0 | 40.0 | 43.0 | 41.7 |
| Traumatic Brain Injured | 15 | 0.0 | * | * | $\stackrel{*}{*}$ |
| Other Exceptional Classifications | 238 | 0.3 | 42.9 | 48.4 | 45.7 |
| Temporary Disability : | 25 | 0.0 | * | * | $\cdots$ |
| Section 504 | 702 | 0.8 | 43.0 | 46.7 | 44.9 |
| Limited English Proficient | 696 | 0.8 | 37.0 | 42.4 | 39.7 |

Notes: *No scores are reported for groups with less than thirty students.
"Percent for "Not Exceptional" through "Other Exceptional Classifications" is based on the sum of the students in those categories. Percent for "Temporary Disability", "Limited English Proficient" and "Section 504" are based on the number tested in the "All Students" category. ${ }^{2 n}$ Mean Total" is the mean scale score in reading and mathematics combined.
The "All Students" and "Not Exceptional" categories are added for the purpose of comparison. All data are rounded to the nearest tenth, therefore exceptional categories may not sum to $100 \%$.

# Table 4. 1997-98 North Carolina Open-Ended Assessment Average Performance of Students Taking Modified Tests 

## Grade 5

| Category | Number Tested | Percent ${ }^{1}$ | Mean <br> Reading | Mean <br> Mathematics | Mean <br> Total ${ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| All Students | 91,295 | 100.0 | 46.4 | 53.3 | 49.8 |
| Braille Edition | 1 | 0.0 | * | * | * |
| Large Print. | 39. | 0.2 | $\therefore 41.2$ | 49.3 | $45.3{ }^{\circ}$ |
| Assistive Technology | 8 | 0.0 | ${ }^{*}$ | * |  |
| Braille Writer |  | 0.0 |  |  |  |
| Cranmer Abacus | 0 | 0.0 | * |  | * |
| Dictation to Scribe | 757 | 3.5 | 44.8 | 49.8 | 47:3 |
| Interpreter Signs Test | 19 | 0.1 | * | * | * |
| Magnification Devices | 5 | 0.0 | * | ** | * |
| Student Marks in Text Book | 2,034 | 9.3 | 38.7 | 46.2 | 42.4 |
| Test Ädministrator Reads Test Aloud | 5,387. | 24.7 | 38.2 | 46.0 | 42.1 |
| Use of Typewriter or Word Processor | 36 | 0.2 | 45.8 | 54.2 | 49.9 |
| Hospital/HomeTesting ? | 7 | 0.0 |  |  |  |
| Multiple Test Sessions | 675 | 3.1 | 38.2 | 46.9 | 42.5 |
| Scheduled Extended Time | 5,969 | 27.3 | 38.7 | 46.8 | 42.7 |
| Testing in a Separate Room | 6.803 | 31.2 | 38.3 | 46.4 | 42.3 |
| English/Native Language Dictionary/Electronic Tran | 53 | 0.2 | 39.5 | 46.1 | 42.9 |
| Other | 34 | 0.2 | 38.9 | 47.8 | 43.3 |

## Grade 8

| Category | Number <br> Tested | Percent ${ }^{1}$ | Mean <br> Reading | Mean <br> Mathematics | Mean <br> Total ${ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| All Students | 87,663 | 100.0 | 47:4 | 51.8 | 49.7 |
| Braille Edition | 8 | 0.1 | * | * | * |
| Large Print | 38 | 0.3 | 41.4 | 47.4 | 44.6 |
| Assistive Technology | 11 | 0.1 | * | * |  |
| Braill Writer | 3 | 0.0 |  |  |  |
| Cranmer Abacus | 2 | 0.0 | * | * |  |
| Dictation to Scribe | 169 | 1.2 | 42.3 | 47.9 | 45.2 |
| Interpreter Signs Test | 12 | 0.1 | * | * | * |
| Magnification Devices | 9 | 0.1 | * | * |  |
| Student Marks in Text Book | 738 | 5.4 | 35.9 | 40.9 | 38.4 |
| Test Adminittrator Reads Test Aloud | 3,221 | 23.4 | 35:3 | 403 | 37.9 |
| Use of Typewriter or Word Processor | 70 | 0.5 | 44.1 | 48.0 | 46.0 |
| Hospita/Home Testing | 10 | 0.1 | $\cdots$ | $\pm$ | $\cdots$ |
| Multiple Test Sessions | 244 | 1.8 | 34.9 | 40.1 | 37.5 |
| Scheduled Extended Time | 4,609 | 33.5 | 367 | 41.5 | 39.1 |
| Testing in a Separate Room | 4,426 | 32.2 | 35.9 | 40.8 | 38.4 |
| English/Native Language Dictionary/Electronic Tran | 147 | 1.1 | 36.0 | 40.2 | 38.1 |
| Other | 45 | 0.3 | 37.7 | 41.0 | 39.4 |
|  |  |  | B\% ${ }_{\text {PT }}$ | COPY AVAI | ABLE |

Notes: *No scores are reported for groups with less than thirty students.
${ }^{1}$ Percents are based on the sum of the students in the modification categories.
${ }^{2 n}$ Mean Total" is the mean scale score in reading and mathematics combined.
Modifications are available for students with disabilities, limited English proficiency, or temporary disabilities.
All data are rounded to the nearest tenth, therefore modification categories may not sum to $100 \%$.

# Table 5. 1997-98 North Carolina Open-Ended Assessment Average Performance of Students Participating in a Title I Program 

## Grade 5

| Category | Number |  | Mean <br> Reading | Mean <br> Mathematics | Mean <br> Total ${ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Tested | Percent ${ }^{1}$ |  |  |  |
| All Students | 91,295 | 100.0 | 46.4 | 53.3 | 49.8 |
| Not in Title I Program | 61,281 | 67.1 | 47.4 | 54.8 | 51.1 |
| Schoolwide Program. | 28,449 | 31.2 | 44.5: | 50.4 | 47.4 |
| Targeted Assistance Progr | 2.682 | 2.9 | 41.5 | 47.1 | 44.2 |
| MigrantProgram | 193 | 0 | 39.5 | 45.6 | 42.6 |

## Grade 8

| Category | Number Tested | Percent ${ }^{1}$ | Mean <br> Reading | Mean <br> Mathematics | Mean Total ${ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| All Students | 87,663 | 100.0 | 47.4 | 51.8 | 49.7 |
| Not in Title I Program | 75,908 | 86.6 | 47.8 | 52.4 | 50.2 |
| Schoolwide Program | 10,950 | 12.5 | 44.7 | 48.1 | $\therefore 46.5$ |
| Targeted Assistance Program | 865 | 1.0 | 39.9 | 42.9 . | 41.5 |
| Migrant Program | 135 | 02 | $\bigcirc 37.0$ | 43.0 | 40.1 |

## $\mathbb{B E S T} \mathbb{C O P Y}$ AVAILABHE

${ }^{2}$ "Mean Total" is the mean scale score in reading and mathematics combined.

# LEA and Charter School Performance by Region 

## Open-Ended Assessment

## Grades 5 and 8

Tables 6-11 provide the number of students tested, total mean scale scores, and the mean scale scores in reading and mathematics for each of the LEAs and charter schools by region. Charter schools are listed below the county in which they are located. Statistics are provided for grades 5 and 8.
Table 6. 1997-98 North Carolina Open-Ended Assessment Mean Scale Scores Grade 5
Region by LEA and Charter School

## Northwest Region




[^2]Table 7. 1997-98 North Carolina Open-Ended Assessment Mean Scale Scores
Grade 5
Region by LEA and Ch

| Northeast Region |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number Tested | Reading Scale Score | $\begin{gathered} \text { Mathematics } \\ \text { Scale } \\ \text { Score } \end{gathered}$ | $\begin{aligned} & \hline \text { Total* } \\ & \text { Scale } \\ & \text { Score } \end{aligned}$ |
| State | 91,295 | 46.4 | 53.3 | 49.8 |
| Northeast Region | 6,332 | 45.2 | 50.8 | 48.0 |
| Beaufort | 510 | 45.9 | 52.1 | 49.0 |
| Bertie | 298 | 46.0 | 47.5 | 46.7 |
| Camden | 88 | 49.8 | - 52.8 | 51.3 |
| Chowan | 190 | 45.4 | 52.5 | 48.9 |
| Curituck | - 222 | 47.6 | - 52.4 | 50.0 |
| Dare | 358 | 46.9 | 56.2 | 51.5 |
| Edgecombe | 570 | 42.4 | 848:2 | 45.3 |
| Gates | 138 | 44.3 | 48.9 | 46.6 |
| Halifax | 403 | 47.2 | 50.3 | 48.8 |
| Roanoke Rapids City | 234 | 46.2 | 51.6 | 48.9 |
| Weldon City | - 69 | 46.0 | 47.4 | 46.7 |
| Hertford | 297 | 43.2 | 48.2 | 45.7 |
| Hyde | $\checkmark 55$ | 49.0 | 49.8 | 49.4 |
| Martin | 366 | 43.0 | 50.1 | 46.5 |
| Northampton | -256 | 45.9 | 50.0 | 48.0 |
| Pasquotank | 489 | 46.6 | 51.8 | 49.2 |
| Perguimans | 147 | 40.5 | 50.7 | 45.6 |
| Pitt | 1,396 | 45.1 | 51.5 | 48.3 |
| Tyrrell | 75 | 46.5 | -449.0 | 47.7 |
| Washington | 171 | 41.8 | 47.2 | $\begin{array}{r} 44.5 \\ 31 \end{array}$ |

*"Total Scale Score" is the mean scale score in reading and mathematics combined. Data were deleted where numbers tested were five or less.
${ }^{\dagger}$ Denotes a charter school. For reporting purposes the charter school name has been abbreviated. The complete charter school name can be found in the appendix.
Table 8. 1997-98 North Carolina Open-Ended Assessment
Region by LEA and Charter School

# Southeast Region 

| Southeast Region |  |  |  |  | Number Tested |  | Region |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number Tested | Reading Scale Score | Mathematics <br> Scale <br> Score | Total * Scale Score |  |  | Reading Scale Score | Mathematics <br> Scale <br> Score | Total * <br> Scale <br> Score |
| State | 91,295 | 46.4 | 53.3 | 49.8 | State | 91,295 | 46.4 | 53.3 | 49.8 |
| Southeast Region | 16,781 | 45.3 | 52.0 | 48.6 | Central Region | 27,396 | 46.7 | 54.1 | 50.4 |
| Bladen | 391 | 43.8 | 51.3 | 47.5 | Alamance | -1,511 | 45.4 : | 54.5 | 49.9 |
| Brunswick | 695 | 45.3 | 51.2 | 48.2 | Caswell | 262 | 44.5 | 51.5 | 47.9 |
| Carteret | 636 | 46.4 | 52.6 | 49.4 | Chatham | 513 | 47.0 : | 53.9 | 50.4 |
| Columbus | 528 | 44.2 | 50.1 | 47.1 | Chatham Charter ${ }^{\dagger}$ | 11 | 36.0 | 49.5 | 42.8 |
| Whiteville City | 221 | 45.6 | 52.3 | 48.9 | Durham | 2,098 | $45.8{ }^{\prime}$ | $\bigcirc 52.3$ | 49.0 |
| Craven | 1,114 | 46.0 | 54.2 | 50.1 | Franklin | 560 | 42.7 | 49.6 | 46.1 |
| Cumberland | 3,892 | 45.9 | 51.8 | 48.8 | Granville | 537 | 47.7 | - 50.7 | 49.2 |
| Duplin | 608 | 44.5 | 52.4 | 48.4 | Guilford | 4,517 | 46.2 | 53.5 | 49.9 |
| Greene | 181 | 44.9 | 48.3 | 46.6 | Harnett | - 1,162 | 45.5 | 51.6 | $\therefore 48.5$ |
| Jones | 111 | 48.5 | 53.5 | 51.0 | Johnston | 1,361 | 48.6 | 54.1 | 51.4 |
| Lenoir | 729 | 46.8 | 51.2 | 49.0 | Lee | 666 | 44.7 | 52.3 | $\because 48.5$ |
| New Hanover | 1,570 | 47.9 | 55.9 | 51.9 | Nash/Rocky Moun | 1,262 | 45.5 | 51.5 | 48.5 |
| Onslow | 1,580 | 46.1 | $\therefore 53.9$ | 50.0 | , Charter Public Sch | -82 | 39.2 | 48.8 | 43.9 |
| Pamlico | 119 | 44.5 | 52.1 | 48.3 | Orange | 495 | 45.9 | 53.8 | 49.8 |
| Arapahoe Charter ${ }^{\text { }}$ | -30 | 45.4 | 54.9 | 50.1 | Orange Charter ${ }^{\dagger}$ | 16 | 49.3 | 60.6 | 55.1 |
| Pender | 431 | 47.4 | 51.3 | 49.3 | Chapel Hill City | 632 | 52.0 | 61.7 | 56.8 |
| Robeson | 1,818 | 40.0 | . 48.3 | 44.1 | Village Charter ${ }^{\dagger}$ | 19 | 44.0 | 52.7 | 48.4 |
| Sampson | 526 | 46.2 | 50.8 | 48.5 | Person | 450 | 44.5 | 50.5 | 47.5 |
| Clinton City | 172 | . 47.9 | 53.5 | 50.8 | Randolph | 1,206 | 48.1 | 54.6 | 51.4 |
| Wayne | 1,418 | 44.9 | 50.8 | 47.9 | Asheboro City | 335 | 49.3 | 56.1 | 52.7 |
| Bright Horizons C | -11 | 39.4 | 45.3 | 42.2 | Rockingham | 1,101 | 46.9 | . 52.5 | 49.7 |
|  |  |  |  |  | Vance | 540 | 43.2 | 48.4 | 45.8 |
|  |  |  |  |  | Wake | 6,899 | 48.0 | 57.4 | 52.7 |
|  |  |  |  |  | Bonner Academy ${ }^{\dagger}$ |  |  |  | * |
|  |  |  |  |  | Magellan Charter |  | 60.8 | 70.1 | 65.5 |
|  |  |  |  |  | Sterling Montessor |  | 46.2 | 62.8 | 54.2 |
|  |  |  |  |  | Warren | - 225 | 42.7 | 49.2 | 45.9 |
| *"Total Scale Score" is the mean scale score in reading and mathematics combined. |  |  |  |  | Wilson <br> S:B.Howard Chart | $\begin{array}{r} 844 \\ \quad 21 \end{array}$ | $\begin{aligned} & 45.1 \\ & 37.2 \end{aligned}$ | $\begin{aligned} & 50.0 \\ & 43.7 \end{aligned}$ | $\begin{aligned} & 47.6 \\ & 40.4 \end{aligned}$ | Data were deleted where numbers tested were five or less.

'Denotes a charter school. For reporting purposes the charter school name has been abbreviated. The complete charter school name can be found in the appendix.

Region by LEA and Charter School

Denotes a charter school. For reporting purposes the charter school name has been abbreviated. The complete charter school name can be found in the appendix
Region by LEA and Charter School

Table 11. 1997-98 North Carolina Open-Ended Assessment Mean Scale Scores
Region by LEA and Charter School
Southeast Region


## Mean LEA and Charter School Performance

## Open-Ended Assessment

## Grades 5 and 8

Tables 12 and 13 provide stem and leaf plots that depict the total mean scale score performance for each of the LEAs and individual charter schools rounded up to the nearest two-tenths of a point. Statistics are provided for grades 5 and 8.

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Table 12. 1997-98 North Carolina Open-Ended Assessment Grade 5 Total Mean Scale Scores*

By LEA and Charter School

\begin{tabular}{|c|c|c|}
\hline State \& \& 1997-98 LEA Performance <br>
\hline \multirow{32}{*}{1997-98 State} \& 65.6 \& Magellan Charter ${ }^{\dagger}$ <br>
\hline \& 6.

... \& Chapel Hill <br>
\hline \& 55.2 \& A very, Orange Charter ${ }^{\dagger}$ <br>
\hline \& 54.8 \& Polk <br>
\hline \& 54.4 \& Watauga <br>
\hline \& 54.2 \& Sterling Montessori ${ }^{\dagger}$ <br>
\hline \& 53.4 \& Elkin <br>
\hline \& - 53.0 \& The Learning. Center ${ }^{\dagger}$, Transylvania <br>
\hline \& 52.8 \& Asheboro, Union, Wake <br>
\hline \& 52.6
52.4 \& Buncombe, Cabarrus, Haywood, Surry Swain <br>
\hline \& 52.2 \& Mast ${ }^{\dagger}$ <br>
\hline \& 52.0 \& Burke, Mooresville, New Hanover <br>
\hline \& 51.8 \& Henderson, Wilkes <br>
\hline \& 51.6 \& Dare, Newton-Conover <br>
\hline \& 51.4 \& Camden, Johnston, Randolph, Stokes <br>
\hline \& 51.2 \& Alleghany, Mount Airy <br>
\hline \& 51.0 \& Davie, Forsyth, Jones, Mitchell, Yadkin <br>
\hline \& 50.8 \& Catawba, Clinton, Francine Delany ${ }^{\dagger}$, Graham <br>
\hline \& 50.6 \& Caldwell, Cherokee, Macon, McDowell, Summit Charter' <br>
\hline \& 50.4 \& Chatham, Hickory, Rutherford, Stanly <br>
\hline \& 50.2 \& Arapahoe Charter', Craven, Lincoln <br>
\hline \& 50.0 \& Alamance, Asheville, Currituck, Guilford, Onslow <br>
\hline \& 49.8 \& Cleveland, Davidson, Jackson, Orange, Rockingham <br>
\hline \& 49.6 \& Clay <br>
\hline \& 49.4 \& Carteret, Hyde, Mecklenburg, Pender <br>
\hline \& 49.2 \& Alexander, Granville, Kings Mountain, Pasquotank <br>
\hline \& 49.0 \& Ashe, Beaufort, Chowan, Durham, Lenoir, Moore, Roanoke Rapids, Whiteville <br>
\hline \& 48.8 \& Cumberland, Halifax, Iredell-Statesville, Rowan, Shelby <br>

\hline \& $$
\begin{aligned}
& 48.6 \\
& 48.4
\end{aligned}
$$ \& Harnett, Kannapolis, Lee, Nash/Rocky Mount, Sampson, Thomasville Duplin, Pamlico, Pitt, Village Charter ${ }^{\dagger}$ <br>

\hline \& 48.2 \& Brunswick, Scotland <br>
\hline \& 48.0 \& Caswell, Madison, Northampton, Wayne <br>
\hline \& 47.8 \& Tyrrell, Yancey <br>
\hline \multirow[t]{23}{*}{1996-97 State} \& 47.6 \& Bladen, Person, Wilson <br>
\hline \& 47.4 \& Gaston <br>
\hline \& 47.2 \& Columbus <br>

\hline \& $$
46.8
$$ \& <br>

\hline \& $$
46.6
$$ \& Anson, Gates, Greene, Martin, Richmond <br>

\hline \& \[
$$
\begin{aligned}
& 46.4 \\
& 46.2
\end{aligned}
$$

\] \& | Lexington |
| :--- |
| Bridges Charter ${ }^{\dagger}$, Franklin | <br>

\hline \& 46.0 \& Warren <br>
\hline \& 45.8 \& Hertford, Hoke, Vance <br>
\hline \& 45.6 \& Perquimans <br>
\hline \& 45.4 \& Edgecombe <br>
\hline \& 44.8 \& Engelmann ${ }^{\dagger}$ <br>
\hline \& 44.6 \& Washington <br>
\hline \& 44.2 \& Robeson <br>
\hline \& 44.0 \& Charter Public School ${ }^{\text { }}$ <br>
\hline \& 43.8 \& Community Charter ${ }^{\dagger}$ <br>
\hline \& 42.8 \& Chatham Charter' <br>
\hline \& $\ldots$
42.2
$\ldots$ \& Bright Horizons Charter' <br>
\hline \& 41.8 \& Nguzo Saba Charter ${ }^{\text {' }}$ <br>
\hline \& 41.6 \& C.G. Woodson ${ }^{\dagger}$ <br>
\hline \& 41.0 \& Bonner Academy ${ }^{\dagger}$ <br>
\hline \& . 40.4 \& S.B. Howard Charter ${ }^{\dagger}$ <br>
\hline \& 3 l \& Grandfather Academy ${ }^{\dagger}$ <br>
\hline \& 3
33.8 \& United Children Ability Nook' <br>
\hline
\end{tabular}

Scale scores are rounded up to the nearest two-tenths of a point.
in- tes a charter school. For reporting purposes the charter school name has been abbreviated. The complete charter school name can be found in the appendix.

Table 13. 1997-98 North Carolina Open-Ended Assessment Grade 8 Total Mean Scale Scores*

By LEA and Charter School


- Scale scores are rounded up to the nearest two-tenths of a point.
'Denotes a charter school. For reporting purposes the charter school name has been abbreviated. The complete charter school name can be found in the appendix.


# State-Level Summary Statistics And Frequency Distributions 

## Open-Ended Assessment

Grades 5 and 8

Tables 14-19 provide state-level summary statistics including frequency distributions. The number tested at each grade level, the number of students achieving each of the possible scale scores, and the standard deviations. Summary statistics are provided for reading, mathematics, and the total score for grades 5 and 8.

Table 14. 1997-98 North Carolina Open-Ended Assessment Grade 5 Reading Frequency Report


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Table 14. 1997-98 North Carolina Open-Ended Assessment
Grade 5 Reading Frequency Report (continued)

| SCALE |  | CUMULATIVE |  | CUMULATIVE |
| :---: | :---: | :---: | :---: | :---: |
| SCORE | FREQUENCY | FREQUENCY | PERCENT | PERCENT |
| 39 | 16306 | 29993 | 17.86 | 32.85 |
| 38 | 0 | 13687 | 0.00 | 14.99 |
| 37 | 0 | 13687 | 0.00 | 14.99 |
| 36 | 0 | 13687 | 0.00 | 14.99 |
| 35 | 0 | 13687 | 0.00 | 14.99 |
| 34 | 7532 | 13687 | 8.25 | 14.99 |
| 33 | 227 | 6155 | 0.25 | 6.74 |
| 32 | 0 | 5928 | 0.00 | 6.49 |
| 31 | 0 | 5928 | 0.00 | 6.49 |
| 30 | 0 | 5928 | 0.00 | 6.49 |
| 29 | 3086 | 5928 | 3.38 | 6.49 |
| 28 | 132 | 2842 | 0.14 | 3.11 |
| 27 | 0 | 2710 | 0.00 | 2.97 |
| 26 | 0 | 2710 | 0.00 | 2.97 |
| 25 | 0 | 2710 | 0.00 | 2.97 |
| 24 | 66 | 2710 | 1.35 | 2.97 |
| 23 | 0 | 1473 | 0.07 | 1.61 |
| 22 | 0 | 1407 | 0.00 | 1.54 |
| 21 | 0 | 1407 | 0.00 | 1.54 |
| 20 | 0 | 1407 | 0.00 | 1.54 |
| 19 | 0 | 1407 | 0.69 | 1.54 |
| 18 | 0 | 777 | 0.00 | 0.85 |
| 17 | 0 | 777 | 0.00 | 0.85 |
| 16 | 0 | 777 | 0.00 | 0.85 |
| 15 | 0 | 777 | 0.03 | 0.85 |
| 14 | 0 | 353 | 0.44 | 0.82 |
| 13 | 0 | 354 | 0.00 | 0.39 |
| 12 | 0 | 354 | 0.00 | 0.39 |
| 11 | 0 | 354 | 0.00 | 0.39 |
| 10 | 0 |  | 0.39 | 0.39 |
| 9 | 0 |  |  |  |

Table 15. 1997-98 North Carolina Open-Ended Assessment Grade 5 Mathematics Frequency Report

| NUMBER OF |  | HIGH SCORE | 93 |
| :--- | :---: | :---: | :---: |
| STUDENTS | 91,295 | LOW SCORE | 36 |
|  |  |  |  |
| MEAN | 53.3 | LOCAL | SCALE |
|  |  | PERCENTILES | SCORE |
| STANDARD | 11.5 | 90 | 68.34 |
| DEVIATION |  | 75 | 60.37 |
|  | 131.6 | 50 (MEDIAN) | 52.05 |
| VARIANCE |  | 25 | 46.69 |
|  | FREQUENCY DISTRIBUTION | 10 | 37.97 |


| SCALE |  | CUMULATIVE |  | CUMULATIVE |
| :---: | :---: | :---: | :---: | :---: |
| SCORE | FREQUENCY | FREQUENCY | PERCENT | PERCENT |
| 93 | 36 | 91295 | 0.04 | 100.00 |
| 92 | 0 | 91259 | 0.00 | 99.96 |
| 91 | 81 | 91259 | 0.09 | 99.96 |
| 90 | 0 | 91178 | 0.00 | 99.87 |
| 89 | 0 | 91178 | 0.00 | 99.87 |
| 88 | 0 | 91178 | 0.00 | 99.87 |
| 87 | 222 | 91178 | 0.24 | 99.87 |
| 86 | 0 | 90956 | 0.00 | 99.63 |
| 85 | 0 | 90956 | 0.00 | 99.63 |
| 84 | 383 | 90956 | 0.42 | 99.63 |
| 83 | 0 | 90573 | 0.00 | 99.21 |
| 82 | 0 | 90573 | 0.00 | 99.21 |
| 81 | 653 | 90573 | 0.72 | 99.21 |
| 80 | 0 | 89920 | 0.00 | 98.49 |
| 79 | 1083 | 89920 | 1.19 | 98.49 |
| 78 | 0 | 88837 | 0.00 | 97.31 |
| 77 | 17 | 88837 | 0.02 | 97.31 |
| 76 | 1395 | 88820 | 1.53 | 97.29 |
| 75 | 0 | 87425 | 0.00 | 95.76 |
| 74 | 2010 | 87425 | 2.20 | 95.76 |
| 73 | 0 | 85415 | 0.00 | 93.56 |
| 72 | 0 | 85415 | 0.00 | 93.56 |
| 71 | 2649 | 85415 | 2.90 | 93.56 |
| 70 | 0 | 82766 | 0.00 | 90.66 |
| 69 | 85 | 82766 | 0.09 | 90.66 |
| 68 | 3253 | 82681 | 3.56 | 90.56 |
| 67 | 106 | 79428 | 0.12 | 87.00 |
| 66 | 4086 | 79322 | 4.48 | 86.89 |
| 65 | 151 | 75236 | 0.17 | 82.41 |
| 64 | 0 | 75085 | 0.00 | 82.24 |
| 63 | 5508 | 75085 | 6.03 | 82.24 |
| 62 | 163 | 69577 | 0.18 | 76.21 |
| 61 | 0 | 69414 | 0.00 | 76.03 |
| 60 | 7185 | 69414 | 7.87 | 76.03 |
| 59 | 0 | 62229 | 0.00 | 68.16 |
| 58 | 222 | 62229 | 0.24 | 68.16 |
| 57 | 0 | 62007 | 0.00 | 67.92 |
| 56 | 9909 | 62007 | 10.85 | 67.92 |
| 55 | 0 | 52098 | 0.00 | 57.07 |
| 54 | 0 | 52098 | 0.00 | 57.07 |
| 53 | 268 | 52098 | 0.29 | 57.07 |
| 52 | 13733 | 51830 | 15.04 | 56.77 |
| 51 | 297 | 38097 | 0.33 | 41.73 |
| 50 | 0 | 37800 | 0.00 | 41.40 |
| 49 | 0 | 37800 | 0.00 | 41.40 |
| 48 | 282 | 37800 | 0.31 | 41.40 |
| 47 | 18115 | 37518 | 19.84 | 41.10 |
| 46 | 0 | 19403 | 0.00 | 21.25 |
| 45 | 282 | 19403 | 0.31 | 21.25 |
| 44 | 0 | 19121 | 0.00 | 20.94 |
| 43 | 0 | 19121 | 0.00 | 20.94 |
| 42 | 321 | 19121 | 0.35 | 20.94 |
| 41 | 0 | 18800 | 0.00 | 20.59 |
| 40 | 0 | 18800 | 0.00 | 20.59 |
| 39 | 0 | 18800 | 0.00 | 20.59 |
| 38 | 18401 | 18800 | 20.16 | 20.59 |
| 37 | 0 | 399 | 0.00 | 0.44 |
| 36 | 399 | 399 | 0.44 | 0.44 |

Table 16. 1997-98 North Carolina Open-Ended Assessment Grade 5 Total Frequency Report


Table 17. 1997-98 North Carolina Open-Ended Assessment Grade 8 Reading Frequency Report

| NUMBER OF STUDENTS | 87,663 |  | HIGH SCORE | 89 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | LOW SCORE | 12 |
| MEAN | 47.4 |  | LOCAL | SCALE |
|  |  |  | PERCENTILES | SCORE |
| STANDARD |  |  | 90 | 62.79 |
| DEVIATION | 11.1 |  | 75 | 54.14 |
|  |  |  | 50 (MEDIAN) | 45.37 |
| VARIANCE | 122.8 |  | 25 | 40.85 |
|  |  |  | 10 | 35.54 |
|  | FREQUENCY DISTRIBUTION |  |  |  |
| SCALE SCORE |  | CUMULATIVE |  | CUMULATIVE |
|  | FREQUENCY | FREQUENCY | PERCENT | PERCENT |
| 89 | 10 | 87663 | 0.01 | 100.00 |
| 88 | 0 | 87653 | 0.00 | 99.99 |
| 87 | 0 | 87653 | 0.00 | 99.99 |
| 86 | 47 | 87653 | 0.05 | 99.99 |
| 85 | 0 | 87606 | 0.00 | 99.93 |
| 84 | 0 | 87606 | 0.00 | 99.93 |
| 83 | 0 | 87606 | 0.00 | 99.93 |
| 82 | 122 | 87606 | 0.14 | 99.93 |
| 81 | 0 | 87484 | 0.00 | 99.80 |
| 80 | 0 | 87484 | 0.00 | 99.80 |
| 79 | 2 | 87484 | 0.00 | 99.80 |
| 78 | 286 | 87482 | 0.33 | 99.79 |
| 77 | 0 | 87196 | 0.00 | 99.47 |
| 76 | 0 | 87196 | 0.00 | 99.47 |
| 75 | 12 | 87196 | 0.01 | 99.47 |
| 74 | 646 | 87184 | 0.74 | 99.45 |
| 73 | 0 | 86538 | 0.00 | 98.72 |
| 72 | 25 | 86538 | 0.03 | 98.72 |
| 71 | 0 | 86513 | 0.00 | 98.69 |
| 70 | 1375 | 86513 | 1.57 | 98.69 |
| 69 | 59 | 85138 | 0.07 | 97.12 |
| 68 | 0 | 85079 | 0.00 | 97.05 |
| 67 | 0 | 85079 | 0.00 | 97.05 |
| 66 | 2742 | 85079 | 3.13 | 97.05 |
| 65 | 0 | 82337 | 0.00 | 93.92 |
| 64 | 0 | 82337 | 0.00 | 93.92 |
| 63 | 4868 | 82337 | 5.55 | 93.92 |
| 62 | 0 | 77469 | 0.00 | 88.37 |
| 61 | 0 | 77469 | 0.00 | 88.37 |
| 60 | 208 | 77469 | 0.24 | 88.37 |
| 59 | 7539 | 77261 | 8.60 | 88.13 |
| 58 | 0 | 69722 | 0.00 | 79.53 |
| 57 | 285 | 69722 | 0.33 | 79.53 |
| 56 | 0 | 69437 | 0.00 | 79.21 |
| 55 | 0 | 69437 | 0.00 | 79.21 |
| 54 | 10347 | 69437 | 11.80 | 79.21 |
| 53 | 0 | 59090 | 0.00 | 67.41 |
| 52 | 0 | 59090 | 0.00 | 67.41 |
| 51 | 344 | 59090 | 0.39 | 67.41 |
| 50 | 12627 | 58746 | 14.40 | 67.01 |
| 49 | 0 | 46119 | 0.00 | 52.61 |
| 48 | 366 | 46119 | 0.42 | 52.61 |
| 47 | 0 | 45753 | 0.00 | 52.19 |
| 46 | 0 | 45753 | 0.00 | 52.19 |
| 45 | 14982 | 45753 | 17.09 | 52.19 |
| 44 | 406 | 30771 | 0.46 | 35.10 |
| 43 | 0 | 30365 | 0.00 | 34.64 |
| 42 | 0 | 30365 | 0.00 | 34.64 |
| 41 | 13051 | 30365 | 14.89 | 34.64 |
| 40 | 402 | 17314 | 0.46 | 19.75 |
| 39 | 0 | 16912 | 0.00 | 19.29 |
| 38 | 0 | 16912 | 0.00 | 19.29 |
|  |  | 4148 |  |  |

Table 17. 1997-98 North Carolina Open-Ended Assessment Grade 8 Reading Frequency Report (continued)

| SCALE | FREQUENCY | CUMULATIVE <br> FREQUENCY <br> SCORE | 0 | 16912 |
| :---: | :---: | :---: | :---: | :---: | | CUMULATIVE |
| :---: |
| 37 |

Table 18. 1997-98 North Carolina Open-Ended Assessment Grade 8 Mathematics Frequency Report

| NUMBER OF |  |  | HIGH SCORE | 84 |
| :---: | :---: | :---: | :---: | :---: |
| STUDENTS | 87,663 |  |  |  |
|  |  |  | LOW SCORE | 31 |
| MEAN | 51.8 |  | LOCAL | SCALE |
|  |  |  | PERCENTILES | SCORE |
| STANDARD | . |  | 90 | 68.01 |
| DEVIATION | 11.7 |  | 75 | 59.37 |
|  |  |  | 50 (MEDIAN) | V) 52.54 |
| VARIANCE | 137.3 |  | 25 | 42.25 |
|  |  |  | 10 | 36.80 |
|  | FREQUENCY DISTRIBUTION |  |  |  |
| SCALE | CUMULATIVE |  |  | CUMULATIVE |
| SCORE | FREQUENCY | FREQUENCY | PERCENT P | PERCENT |
| 84 | 277 | 87663 | 0.32 | 100.00 |
| 83 | 0 | 87386 | 0.00 | 99.68 |
| 82 | 0 | 87386 | 0.00 | 99.68 |
| 81 | 0 | 87386 | 0.00 | 99.68 |
| 80 | 0 | 87386 | 0.00 | 99.68 |
| 79 | 789 | 87386 | 0.90 | 99.68 |
| 78 | 34 | 86597 | 0.04 | 98.78 |
| 77 | 0 | 86563 | 0.00 | 98.75 |
| 76 | 1319 | 86563 | 1.50 | 98.75 |
| 75 | 0 | 85244 | 0.00 | 97.24 |
| 74 | 53 | 85244 | 0.06 | 97.24 |
| 73 | 1876 | 85191 | 2.14 | 97.18 |
| 72 | 74 | 83315 | 0.08 | 95.04 |
| 71 | 0 | 83241 | 0.00 | 94.96 |
| 70 | 2586 | 83241 | 2.95 | 94.96 |
| 69 | 117 | 80655 | 0.13 | 92.01 |
| 68 | 3374 | 80538 | 3.85 | 91.87 |
| 67 | 130 | 77164 | 0.15 | 88.02 |
| 66 | 0 | 77034 | 0.00 | 87.88 |
| 65 | 4326 | 77034 | 4.93 | 87.88 |
| 64 | 152 | 72708 | 0.17 | 82.94 |
| 63 | 0 | 72556 | 0.00 | 82.77 |
| 62 | 5789 | 72556 | 6.60 | 82.77 |
| 61 | 0 | 66767 | 0.00 | 76.16 |
| 60 | 161 | 66767 | 0.18 | 76.16 |
| 59 | 6788 | 66606 | 7.74 | 75.98 |
| 58 | 0 | 59818 | 0.00 | 68.24 |
| 57 | 190 | 59818 | 0.22 | 68.24 |
| 56 | 7483 | 59628 | 8.54 | 68.02 |
| 55 | 197 | 52145 | 0.22 | 59.48 |
| 54 | 0 | 51948 | 0.00 | 59.26 |
| 53 | 8485 | 51948 | 9.68 | 59.26 |
| 52 | 0 | 43463 | 0.00 | 49.58 |
| 51 | 0 | 43463 | 0.00 | 49.58 |
| 50 | 9153 | 43463 | 10.44 | 49.58 |
| 49 | 0 | 34310 | 0.00 | 39.14 |
| 48 | 0 | 34310 | 0.00 | 39.14 |
| 47 | 309 | 34310 | 0.35 | 39.14 |
| 46 | 9393 | 34001 | 10.71 | 38.79 |
| 45 | 0 | 24608 | 0.00 | 28.07 |
| 44 | 328 | 24608 | 0.37 | 28.07 |
| 43 | 0 | 24280 | 0.00 | 27.70 |
| 42 | 9583 | 24280 | 10.93 | 27.70 |
| 41 | 0 | 14697 | 0.00 | 16.77 |
| 40 | 0 | 14697 | 0.00 | 16.77 |
| 39 | 0 | 14697 | 0.00 | 16.77 |
| 38 | 0 | 14697 | 0.00 | 16.77 |
| 37 | 8465 | 14697 | 9.66 | 16.77 |
| 36 | 0 | 6232 | 0.00 | 7.11 |
| 35 | 461 | 6232 | 0.53 | 7.11 |
| 34 | 0 | 5771 | 0.00 | 6.58 |
| 33 | 0 | 5771 | 0.00 | 6.58 |
| 32 | 0 | 5771 | 0.00 | 6.58 |
| 31 | 5771 | 5771 | 6.58 | 6.58 |
|  |  | 43 |  |  |

Table 19. 1997-98 North Carolina Open-Ended Assessment Grade 8 Total Frequency Report


# State-Level Score-Point Distributions 

1997-98

North Carolina

## Open-Ended Assessment

## Grades 5 and 8

Table 20 provides the state-level score point distributions by item for each of the items on the tests. Statistics are provided for reading and mathematics for grades 5 and 8.

Table 20. 1997-98 North Carolina Open-Ended Assessment Score-Point Distribution by Item


[^3]
## Goals and Thinking Skills Measured

## Open-Ended Assessment

## Grades 5 and 8

These tables provides the reading and mathematics goals described in the North Carolina Standard Course of Study measured by each of the items on the tests. In addition, the thinking skills measured by each of the items are provided. Goals and thinking skills measured by the items are provided for reading and mathematics for grades 5 and 8.

# 1997-98 North Carolina Open-Ended Assessment Goal from the North Carolina Standard Course of Study Measured by Each Test Item 

## Grade 5 - Form D

| Item | Goal |
| :---: | :--- |
| 1 | Communication Skills Goal 2. Use language for the acquisition, interpretation, <br> and application of information. (Evaluating) |
| 2 | Communication Skills Goal 2. Use language for the acquisition, interpretation, <br> and application of information. (Evaluating) |
| 3 | Communication Skills Goal 4. Use language for aesthetic and personal response. <br> (Evaluating) |
| 4 | Communication Skills Goal 4. Use language for aesthetic and personal response. <br> (Evaluating) |
| 5 | Communication Skills Goal 3. Use language for critical analysis and evaluation. <br> (Evaluating) |
| 6 | Communication Skills Goal 3. Use language for critical analysis and evaluation. <br> (Evaluating) |
| 7 | Mathematics Goal 7. Compute with rational numbers. (Analyzing) <br> 8 <br> 9 <br> Mathematics Goal 4. Understand and use standard units of metric and customary <br> measure. (Applying) |
| 10 | Mathematics Goal 3. Demonstrate an understanding of patterns and <br> relationships. (Applying) |
| 11 | Mathematics Goal 4. Understand and use standard units of metric and customary <br> measure. (Applying) |
| 12 | Mathematics Goal 3. Demonstrate an understanding of patterns and <br> relationships. (Analyzing) |

# 1997-98 North Carolina Open-Ended Assessment Goal from the North Carolina Standard Course of Study Measured by Each Test Item 

Grade 8-Form D

| Item | Goal |
| :---: | :--- |
| 1 | Communication Skills Goal 2. Use language for the acquisition, interpretation, <br> and application of information. (Analyzing) |
| 2 | Communication Skills Goal 2. Use language for the acquisition, interpretation, <br> and application of information. (Evaluating) |
| 3 | Communication Skills Goal 2. Use language for the acquisition, interpretation, <br> and application of information. (Generating) |
| 4 | Communication Skills Goal 3. Use language for critical analysis and evaluation. <br> (Evaluating) |
| 5 | Communication Skills Goal 3. Use language for critical analysis and evaluation. <br> (Evaluating) |
| 6 | Communication Skills Goal 4. Use language for aesthetic and personal response. <br> (Generating) |
| 7 | Mathematics Goal 6. Demonstrate an understanding and use of graphing, <br> probability, and statistics. (Applying) |
| 8 | Mathematics Goal 1. Demonstrate an understanding and use of real numbers. <br> (Evaluating) |
| 9 | Mathematics Goal 6. Demonstrate an understanding and use of graphing, <br> probability, and statistics. (Evaluating) |
| 10 | Mathematics Goal 7. Compute real numbers. (Evaluating) |
| 11 | Mathematics Goal 4. Demonstrate an understanding and use of measurement. <br> (Analyzing) |
| 12 | Mathematics Goal 6. Demonstrate an understanding and use of graphing, <br> probability, and statistics. (Evaluating) |

# Copies of the Grades 5 and 8 Open-Ended Tests 

## Open-Ended Assessment

## Grades 5 and 8

The following pages provide copies of the Open-Ended Assessment instruments administered to students in grades 5 and 8 during the 1997-98 school year. State-level score-point distributions have been provided for each item on the test for each grade-level.




You are going to read a story about a dragon who is not mean. Think about how this story is different from other dragon stories and answer the questions that follow.

## The Lonely Dragon

The average dragon's idea of a good time is to kidnap a princess, burn down a village, and scare the wits out of everyone. But Charles was a sweet, good-natured fellow who wanted nothing to do with those kinds of things, so he had no dragon friends. Unfortunately, he looked exactly like all the other mean' and nasty dragons, and no human ever stayed around long enough to find out how nice he really was. So he was often lonely.

One day Charles decided that he'd had enough of being lonely and was going to do something about it. He headed off across the countryside in search of a friend.

The first person he met was a woodcutter in the forest. Charles managed to sneak up on him, so the man didn't have time to run away.
"Will you be my friend?" he asked rather timidly.

The man realized from the tone of Charles' voice that he was not the usual fearsome sort of dragon. So he considered for a minute. Then he said, "Friends are supposed to do things for each other. If I'm your friend, what will you do for me?"

Charles thought a moment, then he turned and knocked over five trees with a single blow of his tail.
"Perfect!" shouted the woodcutter, and he took Charles home to supper.

As Charles entered the woodcutter's yard, he turned to ask a question and knocked over the fence with his tail. He became flustered and turned around quickly to apologize and knocked a hole in the front wall of the man's house.
"This will never do," the woodcutter said. "You are much too big to be my friend!" And he sent Charles back where he had come from.

$$
\text { Page } 2
$$

Charles was very depressed, but he kept traveling, and soon he saw an old woman plowing her field. Luckily, the old woman was nearsighted and didn't realize Charles was a dragon until he was right beside her.
"Will you be my friend?" he asked, even more timidly.

The old farmer peered in the direction of his voice. "Friends are supposed to do things for each other," she said. "If I'm your friend, what will you do for me?"

Charles thought for a moment and said, "I could go home ahead of you and start a fire and warm your supper. I'm very good with fires."
"Perfect," said the woman. "I'm always too tired in the evening to fix myself a hot meal. A fire-starter is just what I need."

That evening Charles went to the old woman's house, started the fire with one breath, and began warming her supper. The old woman's house was even smaller than the woodcutter's, but somehow Charles managed to control his tail and not knock anything over. His new friend seemed pleased with the supper he prepared, and she even gave him a kiss on the cheek before she went to bed.

Charles finally found a big enough space under one of the windows and lay down. He was so happy that he let out a long sigh of contentment. Unfortunately, his sigh set the curtains on fire.
"This will never do," the old woman cried as she jumped up to douse the curtains with water. "You are much too hot to be my friend!" She sent Charles out the door and back where he had come from.

Now Charles was even more depressed. He walked slowly back through the woods. He hadn't gone very far, though, when he came upon a little man sitting in a
clearing. The man was huddled in the morning sun with a blanket around his shoulders and a crown on his head. He didn't look any happier than Charles.

Charles thought the man would run away. But he didn't. So Charles sat down and sighed. So did the man. Charles sighed again. So did the man.
"I've had a rotten day," Charles finally said.
"Me, too," the man replied.
"Why was your day so rotten?" Charles asked politely.
"You first," the man said.
"Well, it isn't just this day especially," Charles said. "My whole life is rotten."

The man nodded, and Charles began telling him how lonely he was and how he had gone in search of a friend. He told him about the woodcutter and how his tail got in the way. He told him about the farmer and how his breath had ruined everything.
"Why didn't you run away when you saw me coming?" he asked.
"I thought you were the answer to my problems," the man said. "I figured if you ate me, at least I wouldn't be lonely any more."
"You are lonely, too?" Charles asked.
The man nodded and pointed to his crown. "See this?" he asked. "Do you know what this means? It means I'm a king. Wonderful. I collect taxes and rent from my subjects, have a party once a year, and that's the only time I ever have any fun.
"No one ever comes to my door and says, 'Oh, I was just passing by and thought I would pop in for tea.' Nobody asks me over for dinner, or wants me to come have a peek at their new baby. Nobody thinks a king would want to do any of those ordinary things. But I'm really just an ordinary guy.
"To make matters worse I live alone in a drafty 300 -room castle. I can never keep a fire going, so I'm always cold. Lonely and cold-that's the story of my life."

The king sniffed and wrapped the blanket tighter around himself, and then looked at Charles.

Charles felt his heart leap, but he hardly dared to agree. "They say that friends are supposed to do things for each
other," he said. "If I'm your friend, what can you do for me?"
"Why, I'll be your friend," the king replied.
"Perfect!" said Charles.
The king took Charles back to his dragon-sized castle, and Charles got a fire going in the fireplace. They kept each other company and roasted marshmallows and lived happily ever after.


[^4]1. Why was Charles the dragon lonely? Explain your answer using specific examples from the passage.
2. Why do you think the friendship between Charles and the king was more lasting than Charles's friendships with the woman and the woodcutter? Explain your answer using specific examples from the passage.
3. If you had been a character in the passage, would you have been Charles's friend? Explain your answer using specific examples from the passage.
$\qquad$
$\qquad$
$\qquad$
$\qquad$

| $\underline{\mathbf{0}}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |

4. Directions: Write a paragraph on the topic below.

## Charles was a very special dragon.

Describe the kind of dragon Charles was so that your reader will be able to picture him. Include specific examples from the passage in your description.

As you write your paragraph, remember to:

- Use words that will help your reader picture Charles the dragon.
- Write in complete sentences.
- Use correct grammar, spelling, punctuation, and capitalization.

| $\mathbf{0}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |



## Is The Loch Ness Monster Just a Lot of Hot Air?

Scientists are very interested in finding answers to the mystery of the Loch Ness monster. Read to learn about one scientist's ideas and answer the questions that follow.

Loch Ness, Scotland: For years cryptozoologists (people who study "unexpected" animals) have been studying this famous lake. And for years people have been taking pictures of something they see there . . . something unknown . . . something they say is a monster whose nickname is "Nessie."

Recently a well-known British scientist has shed some new light on Loch Ness. Dr. Maurice Burton, once a firm believer in Nessie, has changed his mind. Now he feels that many of the photographs show nothing more than large, playful otters.

Dr. Burton also thinks that people may be seeing something else in the lake. He points out that water-soaked branches and logs often settle on the bottom. As they begin to rot, gas bubbles form in them. When the bubbles are big enough to float the mess to the surface, up pops "Nessie." The gas bubbles burst, and the "monster" sinks. But not before it has been spotted and photographed.

Dr. Burton's idea is very interesting. But somehow it's not as much fun as thinking that a real monster may live in Loch Ness.
5. How do you know that the Loch Ness monster might be real but Charles the lonely dragon is not real? Explain your answer using specific examples from the passages.
$\qquad$

| $\underline{\mathbf{0}}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{8 \%}$ | $\mathbf{6 6 \%}$ | $\mathbf{2 5 \%}$ | $\mathbf{1 \%}$ |

6. Authors use different kinds of artwork with different kinds of writing.

Why are the pictures shown the best to use with each passage? Explain your answer using specific examples from the pictures and the passages.
$\qquad$
$\qquad$

|  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\underline{0}$ | $\underline{1}$ | $\underline{2}$ | $\underline{3}$ |
|  | $19 \%$ | $\mathbf{7 4 \%}$ | $\mathbf{6 \%}$ | $1 \%$ |


7. The drawing above shows a very deep lake much like Loch Ness. The water temperature at the surface of the lake is $55^{\circ} \mathrm{F}$.

If the water temperature drops $2^{\circ} \mathrm{F}$ every 50 feet, what is the temperature at the bottom of the lake?
$\qquad$ ${ }^{\circ} \mathrm{F}$

Explain or show how you determined your answer.

$$
\begin{array}{cccc}
\underline{\mathbf{0}} & \underline{\mathbf{1}} & \underline{\mathbf{2}} & \underline{\mathbf{3}} \\
\mathbf{5 1} \% & 28 \% & \mathbf{1 1} \% & \mathbf{9 \%}
\end{array}
$$

8. The fireplace room in the king's castle has a perimeter of 240 feet. What are three possible pairs of lengths and widths of this room?
9. $\qquad$ $\mathrm{ft} \times$ $\qquad$ ft
10. $\qquad$ $\mathrm{ft} \times$ $\qquad$ ft
11. $\qquad$ $\mathrm{ft} \times$ $\qquad$ ft

| $\mathbf{0}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ |
| :--- | :--- | :--- |
| $\mathbf{9 2} \%$ | $\mathbf{5 \%}$ |  |

9. The king has a clock in his castle that rings once at one o'clock, twice at two o'clock, and so on during the day.

How many rings will the king's clock make in a day?
$\qquad$ rings

Explain or show how you determined your answer.

| $\underline{\mathbf{0}}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{4 0} \%$ | $\mathbf{8 \%}$ | $\mathbf{1 4} \%$ |  |

10. A scientist was camped on the southern shore of Loch Ness. She walked 300 yards south from her camp. She then walked 112 yards west, 212 yards north, 62 yards east, and 88 yards north.

How far was the scientist from her camp when she stopped? $\qquad$ yards

Use the picture below to explain or show how you determined your answer.

11. When Charles met the king, Charles weighed 1600 pounds. If his weight had doubled every year, how much did Charles weigh 4 years before he met the king?
$\qquad$ pounds

Explain or show how you determined your answer.

| $\mathbf{8 6} \%$ | $\underline{\mathbf{0}}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{4 \%}$ |  |  |  |

12. When you add together the ages of Charles and his two younger sisters, Charlotte and Charlene, you get 55. Together, the ages of Charles and Charlotte equal 44.

How old is each dragon if Charles is 14 years older than Charlotte?
Charles $\qquad$ years old

Charlotte $\qquad$ years old

Charlene $\qquad$ years old

| $\mathbf{6 4} \%$ | $\underline{\mathbf{1}}$ | $\mathbf{2 7} \%$ |
| :--- | :--- | :--- |
| $\mathbf{9} \%$ |  |  |



DO NOT WRITE IN THIS SHADED AREA

Read the opening paragraphs below of Homesick, My Own Story, the autobiography of Jean Fritz. Here, ten-year-old Jean tells about her life in China. Answer the questions that follow.

In my father's study there was a large globe with all the countries of the world running around it. I could put my finger on the exact spot where I was and had been ever since I'd been born. And I was on the wrong side of the globe. I was in China in a city named Hankow, a dot on a crooked line that seemed to break the country right in two. The line was really the Yangtse River, but who would know by looking at a map what the Yangtse River really was?

Orange-brown, muddy mustard-colored. And wide, wide, wide. With a river smell that was old and came all the way up from the bottom. Sometimes old women knelt on the riverbank, begging the River God to return a son or grandson who may have drowned. They would wail and beat the earth to make the River God pay attention, but I knew how busy the River God must be. All those people on the Yangtse River! Coolies hauling water. Women washing clothes. Houseboats swarming with old people and young, chickens and pigs. Big crooked-sailed junks with eyes painted on their prows so they could see where they were going. I loved the Yangtse River, but, of course, I belonged on the other side of the world. In America with my grandmother.

Twenty-five fluffy little yellow chicks hatched from our eggs today, my grandmother wrote.

I wrote my grandmother that I had watched a Chinese magician swallow three yards of fire.

The trouble with living on the wrong side of the world was that I didn't feel like a real American.

For instance. I could never be president of the United States. I didn't want to be
president; I wanted to be a writer. Still, why should there be a law saying that only a person born in the United States could be president? It was as if I wouldn't be American enough.

Actually, I was American every minute of the day, especially during school hours. I went to a British school and every morning we sang "God Save the King." Of course the British children loved singing about their gracious king. Ian Forbes stuck out his chest and sang as if he were saving the king all by himself. Everyone sang. Even Gina Boss who was Italian. And Vera Sebastian who was so Russian she dressed the way Russian girls did long ago before the Revolution when her family had to run away to keep from being killed.

But I wasn't Vera Sebastian. I asked my mother to write an excuse so I wouldn't have to sing, but she wouldn't do it. "When in Rome," she said, "do as the Romans do." What she meant was, "Don't make trouble. Just sing." So for a long time I did. I sang with my fingers crossed but still I felt like a traitor.

Then one day I thought: If my mother and father were really and truly in Rome, they wouldn't do what the Romans did at all. They'd probably try to get the Romans to do what they did, just as they were trying to teach the Chinese to do what Americans did. (My mother even gave classes in American manners.)

So that day I quit singing. I kept my mouth locked tight against the king of England. Our teacher, Miss Williams, didn't notice at first.

[^5]1. During what time period do you think the events in this passage took place? Explain what evidence from the passage was the most helpful to you in determining the time period you chose.
$\qquad$
$\qquad$
$\qquad$

| $\underline{\mathbf{0}}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{3 1 \%}$ | $\mathbf{6 0} \%$ | $\mathbf{8 \%}$ | $\mathbf{1 \%}$ |

2. Explain why the lines from the grandmother's letter and Jean's letter are important enough to Jean and the plot of the story to be in italics.
$\qquad$
$\qquad$
$\qquad$

| $\underline{\mathbf{0}}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ |
| :--- | :--- | :--- |
| $\mathbf{3 4} \%$ | $\mathbf{5 7} \%$ | $\mathbf{9 \%}$ |


3. Using the information provided on the map, describe the location of the city of Hankou (Hankow) in relation to other features on the map. Be as accurate and specific as you can.
$\qquad$
$\qquad$ $\begin{array}{lllll} & \mathbf{0} & \underline{\mathbf{1}} & \underline{\mathbf{2}} & \frac{\mathbf{3}}{27} \\ & \mathbf{5 4} \% & \mathbf{2 7} \% & \mathbf{3} \%\end{array}$
4. If you had to choose one word to describe the type of person Jean was as a ten-year-old, what would it be? Explain your choice using specific references from the passage.
$\qquad$
$\qquad$
$\qquad$

$\qquad$
$\qquad$
5. Do you think Jean's attitude of not feeling like a real American was based on factual information or emotion?

Explain your answer using specific references from the passage.

| $\mathbf{0}$ | $\underset{\mathbf{1}}{\mathbf{1}} \%$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{3 1 \%}$ | $\mathbf{2} \%$ |  |  |

6. Directions: Write a brief letter on the topic below.

Each morning in the British school, the students sang "God Save the King."
Write a brief letter to Miss Williams trying to persuade her to accept your view on whether she should or should not require Jean to sing "God Save the King."

As you write your brief letter, remember to:

- Be sure to persuade Miss Williams that the suggestion you give is the best one.
- Write in complete sentences.
- Check to be sure that you are writing good paragraphs.
- Use correct grammar, spelling, punctuation, and capitalization.

| $\underline{\mathbf{0}}$ | $\underline{\mathbf{1}}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{8 2 \%}$ | $\underline{\mathbf{1 9} \%}$ | $\mathbf{1 \%}$ |  |

7. Jean's school in Hankow has three floors. Each floor has eight classrooms. Each classroom is divided into a work section and a study section.

Miss Williams is in a section of a classroom somewhere in the school.
What is the probability that the principal could locate Miss Williams on the first attempt?

Explain or show how you determined your answer.

$$
\begin{array}{llll}
\underline{\mathbf{0}} & \underline{\mathbf{1}} & \underline{\mathbf{2}} & \underline{\mathbf{3}} \\
\mathbf{3 3} \% & \mathbf{1 1} \% & \mathbf{3 3} \%
\end{array}
$$

8. Jean knew that there were 134,338 books in the school library. She also knew that 133,519 had been listed in a new card catalog. She rounded to the nearest 10,000 to estimate how many more books had to be entered in the catalog. Using this approach, how many were left to enter?
$\qquad$ books

Explain or show what was wrong with her estimation procedure and provide a more appropriate procedure.


Use the information in the graph below to answer question 9.
U.S. TRADE WITH CHINA: 1983-1993


Source: International Agriculture and Trade Reports-CHINA, U.S. Department of Agriculture, Economic Research Service, WRS-94-4, August 1994, page 34.
9. Make a generalization concerning U.S. trade with China between 1983-1993. Support your generalization with evidence from the graph.
$\qquad$
$\qquad$
$\qquad$
$\qquad$ 0
$24 \%$ 62\%

2 $14 \%$

## OOMOOMOMOOOM000■0000000 DO NOT WRITE IN THIS SHADED AREA

10. Jean's father conducts boat tours part-time on the Yangtse River. The length of a tour varies from 32 minutes to 48 minutes. He told Jean that he spent two hours leading four tours yesterday. Jean told him that wasn't possible. Which person was correct?

Explain or show how you determined your answer.

| $\mathbf{0}$ | $\mathbf{1}$ | $\underline{\mathbf{2}}$ |
| :--- | :--- | :--- |
| $\mathbf{3 2} \%$ | $\mathbf{3 3} \%$ |  |

11. A 1,200 square foot passenger deck is going to be built between the boat tour office building and the Yangtse River. A safety rail will be built around the four sides of the deck.

How many feet of railing will be needed to complete the job? $\qquad$ feet

Explain or show how you determined your answer.

| $\mathbf{0}$ | $\mathbf{1}$ | $\underline{\mathbf{2}}$ | $\underline{\mathbf{3}}$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{8 3} \%$ | $\mathbf{8 \%}$ | $\mathbf{4 \%}$ | $\mathbf{6 \%}$ |

$\square \square$

Use the information in the chart below to answer question 12.

| Body of Water | Area (sq. mi.) |
| :---: | :---: |
| Pacific Ocean | 64,186 |
| Atlantic Ocean | 33,420 |
| Indian Ocean | 28,351 |
| Arctic Ocean | 5,106 |
| South China Sea | 1,149 |
| Bering Sea | 873 |
| Sea of Japan | 391 |
| East China Sea | 257 |
| Red Sea | 175 |

12. Jean knew that the largest body of water near Hankow was the Pacific Ocean. Using the information from the chart, how many times larger is the area of the Pacific Ocean than the median area of all the bodies of water listed in the chart?
$\qquad$ times larger

| $\underline{0}$ | $\underline{1}$ | $\underline{2}$ |
| :--- | :--- | :--- |
| $\mathbf{6 8} \%$ | $\mathbf{1 9} \%$ | $\mathbf{1 2} \%$ |

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0010010000000100000001

## Formulas

Rectangular or Triangular Prism with base area ( $B$ ) and height ( $h$ )

Volume $=B h$

Circle with radius ( $r$ )
Area $=\pi r^{2}$
Circumference $=2 \pi r$

Cylinder with radius ( $r$ ) and height ( $h$ )
Volume $=\pi r^{2} h$
Surface Area $=2 \pi r h+2 \pi r^{2}$

Triangle with base (b) and height ( $h$ )

$$
\text { Area }=\frac{1}{2} b h
$$

Pyramid with base area ( $B$ ) and height ( $h$ )

Volume $=\frac{1}{3} B h$
Total Area $=$ Surface Area $+B$
Cone with radius ( $r$ ), height ( $h$ ), and slant height ( $l$ )

Volume $=\frac{1}{3} \pi r^{2} h$
Lateral Area $=\pi r l$
Total Area $=\pi r^{2}+\pi r l$
Use $\pi=3.14$ or $\frac{22}{7}$
Hypotenuse (c) of right triangle with base ( $b$ ) and altitude ( $a$ )

$$
c^{2}=a^{2}+b^{2}
$$

## Appendix

# Sample Individual Student Reports Grades 5 \& 8 

List of Charter Schools

|  |
| :---: |


|  |
| :---: |



> Test Date:


## Definition of Open-Ended Assessment

The Open-Ended Assessments are designed to broadly measure higher level thinking skills by requiring students to apply or demonstrate skills beyond the recall level. They commonly require the integration of knowledge and skills from more than one curricular area. Instead of choosing from a list of provided possible answers, students are required to generate their responses by writing out their thoughts. Since the
 grade 4 goals and objectives. Each student answers six reading and six mathematics open-ended questions. The student's number of score points in each subject area and the total combined score have been converted to a scale score. a percentile, and an achievement level.

## Achievement Level Descriptions

 skills in the subject area(s) to be successful at this grade level.
II Students performing at this level demonstrate inconsistent mastery of knowledge and skills in the subject area(s) and are minimally prepared to be successful at this grade level.
III Students performing at this level consistently demonstrate mastery of knowledge and skills in the subject area(s) and are well-prepared to be.successful at this
grade level.
IV Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at this grade level.

## Teacher's Comments

Explanation of Scoring Rules
For scoring purposes, there are general rubrics for reading and mathematics. The general rubric insures that the same level of expectation is maintained for all items within a
content area. In addition to a general rubric, each item will have a specific scoring rubric that defines the level of expectation on a particular item. The levels will be consistent
with the more generic levels of the general rubric. The number of score points in a rubric depends on the complexity of the item. Each student answers six reading and six
mathematics open-ended questions. The student's number of score points in each subject area and the total combined score have been converted to a scale score, a percentile,
and an achievement level. Below are the general mathematics and reading rubrics with sample student responses to one of this year's open-ended mathematics items.

| Mathematics General Rubric (4 point scale) |  | SAMPLE 1 |
| :---: | :---: | :---: |
| Score Point | Description | When Charles met the king, Charles weighed 1600 pounds. If his weight had doubled |
| $0$ | Answer does not address task, is unresponsive, or is inappropriate. Nothing is correct. | every year, how much did Charles weigh 4 years before he met the king? <br> 6,400 $\qquad$ pounds |
| $1$ | Answer addresses question but is only partially correct; something correct related to the question. |  |
| 2 | Answer deals correctly with most aspects of the question, but something is missing. May deal with all aspects of the question but have minor errors. | Explain or show how you determined your answer. <br> All I did was said $1600 \times 4=6,400$ |
| 3 | Answer deals with all parts of the question accurately and completely. All directions are followed. | Scure Point 0: Response contains an incorrect weight and the nork shown has no merit. |
| Reading General Rubric (4 point scale) |  | SAMPLE 2 |
| Score Point | Description | When Charles met the king, Charles weighed 1600 pounds. If his weight had doubled every year, how much did Charles weigh 4 years betore he met the king? |
| 0 | Answer is unresponsive, unrelated, or inappropriate. | 100 pounds |
| 1 | Answer deals with material on a concrete, literal level that may be accurate in most dimensions. |  |
|  |  | Explain or show how you determined your answer. |
| 2 | Answer deals with most aspects of the question and makes correct inferences, although minor errors may exist. Comprehension is on an inferential level and the key skills are synthesis and analysis. | $\begin{aligned} 1600 \div 2 & =800 \\ 800 \div 2 & =400 \\ 400 \div 2 & =200 \end{aligned}$ |
| 3 | Answer addresses all aspects of the question, uses sound reasons, and cites and explains appropriate examples. Uses skills of evaluation as well as analysis and synthesis. | Score Puint 3: Response contains the correct weight ( 100 pounds) and the work shown is complete and correct. $200 \div 2=100$ |
| *Students' test booklets and scoring guides are returned to the classroom teachers. 83 |  | $03$ |

Grade 8


| 9 |
| :--- |



## Definition of Open-Ended Assessment

The Open-Ended Assessments are designed to broadly measure higher level thinking skills by requiring students to apply or demonstrate skills beyond the recall level. They commonly require the integration of knowledge and skills from more than one curricular area. Instead of choosing from a list of provided possible answers, students are required to generate their responses by writing out their thoughts. Since the

 open-ended questions. The sludent's number of score points in each subject area and the total combined score have been converted to a scale score, a percentile, and an achievement level.

## Achievement Level Descriptions

Students performing at this level do not have sulficient mastery of knowledge and skills in the subject area(s) to be successful at this grade level.
II. Students performing at this level demonstrate inconsistent mastery of knowledge and skills in the subject area(s) and are minimally prepared to be successful at
this grade level.
III Students performing at this level consistently demonstrate mastery of knowledge and skills in the subject area(s) and are well-prepared to be successful at this
grade level.
IV Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at this grade level.
Teacher's Comments
Explanation of Scoring Rules
For scoring purposes, there are general rubrics for reading and mathematics. The general rubric insures that the same level of expectation is maintained for all items within a content area. In addition to a general rubric, each item will have a specific scoring rubric that defines the level of expectation on a particular item. The levels will be consistent with the more generic levels of the general rubric. The number of score points in a rubric depends on the complexity of the item. Each student answers six reading and six mathematics open-ended questions. The student's number of score points in each subject area and the total combined score have been converted to a scale score, a percentile, and an achievement level. Below are the general mathematics and reading rubrics with sample student responses to one of this year's open-ended mathematics items.


| Mathematics General Rubric (4 point scale) |  |
| :---: | :---: |
| Score Point | Description |
| 0 | Answer does not address task, is unresponsive, or is inappropriate. Nothing is correct. |
| 1 | Answer addresses question but is only partially correct; something correct related to the question. |
| 2 | Answer deals correctly with most aspects of the question, but something is missing. May deal with all aspects of the question but have minor errors. |
| 3 | Answer deals with all parts of the question accurately and completely. All directions are followed. |
| Reading General Rubric (4 point scale) |  |
| Score Point | Description |
| 0 | Answer is unresponsive, unrelated, or inappropriate. |
| 1 | Answer deals with material on a concrete, literal level that may be accurate in most dimensions. |
| 2 | Answer deals with most aspects of the question and makes correct inferences, although minor errors may exist. Comprehension is on an inferential level and the key skills are synthesis and analysis. |
| 3 $9 ?$ | Answer addresses all aspects of the question, uses sound reasons, and cites and explains appropriate examples. Uses skills of evaluation as well as analysis and synthesis. |

*Students' test booklets and scoring guides are returned to the classroom teachers.

# List of Charter Schools <br> Participating in the 1997-98 North Carolina Open-Ended Assessment 

Arapahoe Charter School
Bonner Academy
Bridges Charter School
Bright Horizons Charter
Carter G. Woodson School of Challenge
Charter Public School
Chatham Charter School
Communities in Schools Academy
Community Charter School
Englemann School of Arts and Sciences
Francine Delany New School for Children
Grandfather Academy
L.I.F.T. Charter

Lakeside School
Magellan Charter School
MAST Charter School
Nguzo Sabo Charter School
Orange County Charter School
Quality Education Academy
Right Step Academy
Sallie B. Howard Charter School
School in the Community
Sterling Montessori Academy
Summit Charter School of Arts and Science
The Learning Center
United Children Ability Nook (UCAN)
Village Charter School

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[^0]:    Notes: Due to rounding, some ethnicity categories may not sum to $100 \%$.

[^1]:    Notes: Due to rounding, some categories may not sum to $100 \%$. All percents are calculated based on actual N -counts and are not summed.

[^2]:    complete charter school name can be found in the appendix. 24.

[^3]:    Note: Due to rounding, some atems may not sum to $100 \%$

[^4]:    "The Lonely Dragon" by Nancy Antle. Copyright 1985 by Nancy Antle. Illustrations copyright 1985 Lynn Musinger. Text reprinted by permission of the author. Illustrations reprinted by permission of Cricket Magazine, September 1985, Volume 13, Number 1, copyright 1985 by Open Court Publishing Company.

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