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ABSTRACT

Results from North Carolina's End-of-Course Testing Program in 1989-90 are presented. Participation, student characteristics, and achievement are summarized, largely in table form, for the following subject areas: (1) Algebra I, (2) Geometry, (3) Algebra II, (4) Biology, (5) Chemistry, (6) Physics, (7) U.S. History, and (8) English I. Background information is also given on the history, purposes, and development of the End-of-Course testing program. Of the 391,611 end-of-course tests taken in 1989-90, 919 were perfect scores, and 8,817 had no more than three items answered incorrectly. Many results from previous years are summarized, documenting modest gains over the last 5 years in the proportion of students taking advanced mathematics and in the percentage of students beginning an accelerated mathematics sequence in grade 8. Strengths and weaknesses of schools and school systems can be identified by examining relative performance on the 2,240 test items assessed in 1989-90. Eleven tables and 26 figures illustrate comparative performance for previous years, and 1989-90 results. The last two sections of the paper present eight tables of results for outstanding school systems, and five tables of results for public school systems, respectively. (SLD)

Secondary Education in North Carolina:

A Report of Student Participation and Performance in

Algebra I
Geometry
Algebra II
Biology
Chemistry
Physics
U.S. History
English I

Volume 1

Prepared by Chris P. Averett, Ph.D.

Testing Section/Division of Accountability Services
North Carolina Department of Public Instruction

Raleigh, North Carolina 27603-1712

Bob Etheridge

State Superintendent of Public Instruction

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FOREWORD

While there are notable exceptions, our high schools presently are not providing the high quality of education needed for students to achieve their personal best and to be prepared for an increasingly complex future.

In 1989 North Carolina dropped to the very bottom among all states and the District of Columbia on the Scholastic Aptitude Test (SAT), providing an indication that secondary education in North Carolina needs attention. Our SAT scores improved slightly in 1990, indicating that improvements do happen when our teachers and principals target their efforts toward achieving a goal. But improvements related to SAT scores are only a small part of the complex enterprise making up secondary education today. We must broaden our focus to include the entire range of academic instruction and strengthen our requirements for graduation. All students will need preparation in basic subjects like algebra and biology, and our brightest students need to be challenged with more rigorous preparation like that found in Advanced Placement courses.

This report, *Secondary Education in North Carolina: A Report of Student Participation and Performance in Algebra I, Geometry, Algebra II, U.S. History, Biology, Chemistry, Physics, and English I*, is based on results from the state's End-of-Course Testing Program. It provides important baseline information on where we are as school systems begin implementing local Senate Bill 2 plans to improve student performance. There are examples of excellence. Several school systems provide Algebra I instruction to all or most students, and we need to learn from them. Over the last five years, there have been modest gains in the proportion of students taking advanced mathematics and science courses, and in the percentage of students beginning an accelerated mathematics sequence with Algebra I in the eighth grade. While I am pleased with these results, they are not enough. It is clear from the results described in this report that more students are capable of taking advanced courses than are currently enrolled in them.

This is an important report. It provides information that can be used in making policy and program decisions concerning our high schools. But, perhaps more importantly, it provides a baseline so that those decisions can be evaluated over time and we can adjust our course as necessary. Ultimately, information such as that provided here will be used to judge the effectiveness of our decisions in achieving our goal of successful secondary education for all students.

This report is one of several that the Department of Public Instruction will release this year to help educators in the state evaluate secondary programs and chart progress toward their goals. *North Carolina Scholastic Aptitude Test Results*, for example, describes achievement in higher order thinking skills as measured by the SAT. We will release eight End-of-Course subject area reports describing in more detail performance on the goals and objectives specified in the *Standard Course of Study*.

Bob Etheridge
State Superintendent of Public Instruction

Executive Summary

This report describes participation, student characteristics, and achievement for eight high school courses assessed by the North Carolina End-of-Course Testing Program in 1989-90. The subject areas are Algebra I, Geometry, Algebra II, Biology, Chemistry, Physics, U.S. History, and English I. Background information on the history, purposes, and development of the End-of-Course Testing Program is also given. Companion volumes are devoted to an in-depth analysis of the participation and performance in each subject area. Highlights of this report are listed below.

- Participation of North Carolina students in Geometry, Biology, and Chemistry appears to be typical of that in other states, but participation in Algebra I and Physics is somewhat lower than that in other states.

- Participation in advanced math and science courses varies by sex, parental education, ethnic group, and post high school plans, and is widely variable among school systems. The variability in school system participation cannot be totally accounted for by differences in ability levels of school system populations.

- The estimated percentage of students taking the next course in the advanced math sequence is somewhat lower than the percentage passing the previous course. The estimated percentage taking the next course in the science sequence is dramatically lower than the percentage passing or achieving at least a "C" in the previous science course.

- The percentage of eighth-grade students in an accelerated math sequence, allowing for four additional advanced math courses, has grown since 1985-86 from 11.3 to 14.6 percent. However, it appears that only the very brightest students have the opportunity to be in this track, and 15 school systems do not offer Algebra I in the eighth grade.

- 1989-90 Algebra I, Biology, and U.S. History students on average are answering 2 to 3 more test items correctly than their counterparts at initial administrations several years ago. These improvements reflect about half a letter grade when placed on a grading scale. Thus, today's students are half a letter grade stronger in their content knowledge of these courses than students a few years ago. Furthermore, grading standards have become more stringent as overall achievement has increased.

- Average performance on all tests differ by sex, ethnic group, parental education, post high school plans, anticipated final grades, and school system. The largest average differences by sex occur on the English I and Physics Tests, with females averaging higher scores in English I and males averaging higher scores in Physics. Average scores for black students and American Indian students are lower than those for white students and "other" students. Students whose parents have some education beyond high school tend to score higher, on average, than students whose parents are less educated. While

there are performance differences by grade level, one important finding is the relatively small difference in average scores for students taking Algebra I in regular one or two year programs.

- Statewide performance on End-of-Course Tests reflect the grading patterns of teachers for student performance throughout the school year, which is an indication of the validity of the tests.

- Average scores for students planning to attend four-year colleges are between the average for "C" and "B" students for the select courses of Algebra I, Geometry, and Algebra II. Average scores for these students are similar to the average for "B" students in the general courses of Biology and English I, and for the highly selective Physics course.

- Two indices of program effectiveness which reflect not only "what students know" but also "how many know it" are reported for all selective math and science courses. These indices, yield and effective yield, have generally increased since the beginning of assessment in each subject area. Gains in effective yield in Algebra I parallel the gains in yield, indicating that the additional students taking Algebra I are performing at acceptable levels.

- Outstanding programs are identified in terms of overall performance, participation, yield, effective yield, and change in these scores since the 1988-89 school year. The top 15 school systems are listed for each area. It can be seen from the overall list that many school systems are making improvements in one or more areas in secondary education. One hundred and five of the 134 school systems are in one or more categories of outstanding programs.

- Of the 391,611 end-of-course tests taken in 1989-90, 919 were perfect scores. On 8,817 tests students missed no more than 3 items.

Schools and school systems can identify strengths and weaknesses in their instructional programs by examining relative performance on the goals and objectives measured by the 2,240 test items assessed in 1989-90 across the eight subject areas. Comparative data on grading practices and participation rates give school systems additional information for planning and program evaluation. Beyond the use of test information for improved decision-making, evaluation, and planning, the end-of-course tests are part of three accountability programs. North Carolina's Program for Accreditation, Senate Bill 2, and the State Board of Education's Report Card for School Systems use student outcomes, including scores on end-of-course tests, in the accountability process.

Table of Contents

Section III cont'd. **Page**

Section IV: Outstanding School Systems

Page

Section V: Results for Public School Systems

Section I: Background

Introduction

In July of 1983 the North Carolina General Assembly directed the State Board of Education to define and to estimate the cost for a basic education program. The Basic Education Program which was adopted by the State Board of Education and funded by the General Assembly includes support services, such as counseling and psychological services; promotion standards and graduation requirements; drop-out prevention and remedial and compensatory education services; programs for exceptional students; material support; staffing ratios at the school and district level; staff development; facility standards; and a *Standard Course of Study* that describes a common core of knowledge and skills to be available to all North Carolina students. The Basic Education Program, of which the *Standard Course of Study* is a part, describes "what each child in the North Carolina public schools is guaranteed." The *Standard Course of Study* in high school includes courses in the arts, communication skills, healthful living, mathematics, science, social studies, second languages, and vocational education. In an attempt to ensure that the state curriculum reflects a consensus view of what is considered basic education, the development process for the *Standard Course of Study* involved teachers and curriculum specialists from local school districts as well as state level staff and university specialists in the various curricular areas.

In order to assess the implementation of the *Standard Course of Study*, the Basic Education Program also includes curriculum testing in basic skills in grades 3, 6, and 8; minimum competency testing in high school; and end-of-course testing for high school courses. The purposes of the end-of-course tests are two-fold:

1. The tests provide information about each individual student's performance relative to that of other students in North Carolina.

2. The tests provide information about school and school system achievement on the subject area goals and objectives specified in the *Standard Course of Study*.

Based on statewide enrollment patterns and recommendations made by two commissions on education in North Carolina, the courses chosen for initial test development were Biology and Algebra I. In the spring of 1985, soon after the *Standard Course of Study* was written, item pools for these two courses were built. The results of the item development phase indicated that the Algebra I items were sufficient in quality and quantity to merit building end-of-course tests. The first end-of-course test of Algebra I was implemented in the 1985-86 school year. Since then, one or two courses have been added to the End-of-Course Testing Program each year. In 1989-90 eight courses were assessed: Algebra 1, Geometry, Algebra II, Biology, Chemistry, Physics, U.S. History, and English I. Physical Science and Economic, Legal, and Political Systems in Action were field-tested in 1989-90 and will be implemented statewide in 1990-91. Items for Healthful Living will be

field-tested in 1990-91 with statewide implementation scheduled for the 1991-92 school year. The implementation schedule can be seen in Table 3. North Carolina is one of only a few states that have statewide assessments by subject area in high school, and is the only state with a comprehensive assessment program in high school mathematics, science, social studies and communication skills.

Using the summary information about performance on goals and objectives, schools and school systems are able to analyze strengths and weaknesses in their instructional programs and allocate resources based on this information. Comparative data on grading practices and participation rates give school systems additional information for planning and program evaluation. Beyond the use of test information for improved decision-making, evaluation, and planning, the end-of-course tests are part of three recently-mandated accountability programs. North Carolina's Program for Accreditation, Senate Bill 2, and the State Board of Education's Report Card for School Systems include student outcomes, including scores on end-of-course tests, in the accountability process. North Carolina's Basic Education Program promises students a similar basic education no matter where they live, and these tests were mandated to help ensure this promise.

The purpose of this report is to describe achievement, participation, and student characteristics in eight high school courses. Indices of effectiveness which combine achievement and participation are described for selective courses. Outstanding programs are identified, in terms of 1990 overall achievement, participation, effectiveness, and gain in all these indices. Finally, indices of achievement, participation, and effectiveness in all eight subjects are reported for the 134 North Carolina public school systems. Eight companion volumes will describe performance in detail for each subject, including achievement by subject area goals and objectives. These reports describe achievement in high school in relation to the prescribed *Standard Course of Study*. For further information about achievement in higher order thinking skills as measured on the SAT, refer to *North Carolina Scholastic Aptitude Test Results*, Volumes 1 and 2.

Report format. This report is divided into five sections. Background information on the End-of-Course Testing Program is provided in Section I. Section II contains participation and performance information for the eight courses, followed by graphical representations of the data in Section III. Results are described in paragraph form in Section II and highlights accompany each graph in Section III. Outstanding programs are identified in Section IV and results for all school systems are provided in Section V.

Structure of End-of-Course Tests

In order to fulfill the dual purposes of student reporting and curriculum reporting, multiple test forms are administered in each classroom. Each test form consists of a core of items taken by all students, and one of three to five sets of variable items. For example, five forms of the Algebra I test are administered each year. The core contains 60 items and the variable sets contain 35 items, so

that a total of 235 items ((60 + (5 x 35)) are administered in each classroom. Individual student scores are based entirely on core items. The large number of test items provides broad curriculum coverage, and school and district summary reports include scores based on items matched to particular goals and objectives. See the accompanying subject area reports for a description of achievement by goals and objectives and for school system performance on each goal.

During the test development process a large pool of test items are written so that different forms of the tests can be administered each year. The core tests are statistically equivalent so that comparisons of performance on the core tests can be made across years. The use of different forms each year, the administration of over 145 test items in each classroom, and the match of test content to the *Standard Course of Study* virtually eliminates problems in assessing educational improvement associated with "teaching to the test."

Most North Carolina end-of-course tests are composed of multiple-choice test items written to reflect the *Standard Course of Study* for each subject. However, the Geometry Test requires students to write two proofs. The proofs portion of the Geometry Test is administered in late March and scored by specially trained teachers at centralized scoring sites using a focused holistic scoring method. Each student writes two proofs, one common to all students and one of four variable proofs, so that five proofs are administered in each classroom.

The three proposed English tests will differ from the other subject area tests. Each test will measure only a portion of the curriculum each year, but across the three courses (English I, II, and III), the major areas of the curriculum will be measured. Because English is a required four-year course sequence, the State Board of Education and the North Carolina Commission on Testing determined that the most efficient method for any in-depth assessment would be to concentrate on particular areas of the curriculum each year. This decision was made after consulting with writing specialists, an advisory group of high school English teachers, an advisory group of university professors of English, and the Communication Skills and Testing Areas of the North Carolina Department of Public Instruction. Therefore, on the ninth-grade English I Test, definition and application of literary terms, proofreading and editing skills, and reading comprehension is measured. For English II, the students will write two compositions, one common and one of four variable essays. Four types of writing will be assessed in each classroom each year: argumentative, expository, narrative, and descriptive. The essays, some of which will require literary analysis, will be scored for both content and conventions, including sentence formation, word usage, mechanics and spelling. The eleventh-grade English III tests will assess reading comprehension and literary analysis.

Test Development Process

The *Standard Course of Study* and the accompanying *Teacher Handbook* specify curricular goals and objectives by grade and subject. In order to ensure the instructional validity of the tests, teachers throughout the state are surveyed to determine which objectives are basic and important to measure on end-of-course

tests. After the survey, some objectives may be designated as relevant only to accelerated courses, and therefore are not tested on the end-of-course tests. Specially trained North Carolina teachers in each subject area write test items to match specific objectives in the *Teacher Handbook*. Approximately 1200 items are written for each course so that multiple forms of each test can be developed. After editing, the items are evaluated by subject area specialists and teachers from all regions of the state for curriculum match, format and art, absence of bias, and technical quality. The items are placed into field test booklets and are administered in randomly selected North Carolina schools. After field testing, the items are subjected to statistical and psychometric analyses and further curricular review, which typically results in elimination of approximately 25 percent of the item pool, leaving about 900 items from which to build the core and variable portions of the end-of-course tests. Several versions of the final tests are reviewed by North Carolina teachers and curriculum specialists before statewide administration. Alternate forms of the core tests are field tested during the first year of statewide administration. These forms are adjusted so that equivalent core tests are administered each year.

The development of the performance assessments in Geometry and English have involved advisory groups composed of state level curriculum experts, local curriculum specialists, teachers from the various regions of the state, and university professors. The advisory groups determine the scoring criteria and score scale. Eighty English II prompts were administered during the 1988-89 school year in a statewide field test. The English II Advisory Group has reviewed responses to the prompts and developed scoring criteria so that a scoring guide could be distributed to English teachers in the fall of 1990, well before the test is administered statewide in 1991-92.

Section II: Participation and Performance in High School Courses

Participation

In 1989-90 the End-of-Course Testing Program assessed three mathematics courses, three science courses, one social studies course, and one English course. The three mathematics courses, Algebra I, Geometry, and Algebra II, and two of the science courses, Chemistry and Physics, are elective; only a select subgroup of the student population takes these courses. U.S. History and English I are required for graduation. Although Biology is not required for graduation, a life science is required and Biology is the life science taken by almost all high school students.

Modern technological society demands more advanced mathematics and science preparation for more students than has been required in the past. The need for better education in mathematics does not translate to better skills at computation and calculation. Rather, the demand is for the thinking, reasoning, and problem-solving skills that true mathematical understanding can impart, and for specific content knowledge in algebra, geometry, probability and statistics, and other advanced mathematics topics. Math courses, especially Algebra I, are now viewed as the "gatekeepers", stratifying students for future opportunities. As is noted in *Everybody Counts*[1], mathematics needs to be seen as a pump, not a filter, enabling students to pursue opportunities, not closing off opportunities for them. In addition, understanding the biological and physical world not only makes more informed consumers and voters, but also prepares students to make the technological advances that will enable the United States to compete successfully in today's world economy and to make the changes required for a safe environment and a higher standard of living for all.

Comparison with other states. Since students take selective courses at different grade levels, calculating the exact percentage of high school students who take each course is difficult. Without statewide individual student record databases, estimates of participation must be based on overall course enrollments and grade level enrollments. The State Science/Math Indicators Project sponsored by the Council of Chief State School Officers estimates participation by dividing the enrollment of all grades 9-12 students in a course by the total student enrollment for the grade level at which most students take the course. The report from this project gives the only state-by-state information on variations in math and science course enrollment; only 29 states, including North Carolina, were able to provide enrollment by courses. Table 1 gives the course enrollments for the southern states that provided data and the range and median for all 29 states.

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[1]*Everybody Counts. A Report to the Nation on the Future of Mathematics Education*, National Academy Press, 1989.

Table 1. Estimated Percentage of Students Taking Selected Math and Science Courses over Four Years of High School: 1987-88.

State	Formal Math Level 1 (e.g. Algebra)	Formal Math Level 2 (e.g. Geometry)	Biology 1st Year	Chemistry 1st Year	Physics 1st Year
Alabama	57%	45%	100%	36%	23%
Kentucky	68%	57%	100%	43%	13%
Louisiana	98%	86%	94%	51%	22%
Mississippi	74%	60%	100%	54%	16%
North Carolina	64%	55%	98%	46%	14%
South Carolina	54%	50%	97%	48%	14%
Virginia	77%	61%	99%	56%	24%
Median*	79%	55%	98%	43%	19%
Range*	47-98%	28-86%	65-100%	27-56%	10-29%

*Based on the above states plus Arkansas, California, Delaware, Hawaii, Idaho, Illinois, Indiana, Iowa, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Wisconsin, and Wyoming.

Source: *State-by-State Indicators of Course Enrollment in Science and Mathematics*, Rolf Blank and Diane Schilder, Council of Chief State School Officers.

Based on the data from these states, it appears that North Carolina participation in Geometry, Biology and Chemistry is typical of participation in other states, but that participation in Algebra I and Physics is below that in other states. Louisiana requires Algebra I for all students and its participation rate is 98%. North Carolina is always lower in participation than Virginia, a southern state with comparable percentages of students taking the SAT and substantially higher SAT scores. It should be noted that these participation rates do not take into account curriculum variations across states or differences in achievement, and that the participation rate for Algebra I is underestimated for North Carolina, and perhaps for other states, because eighth-grade students may not be included. Also, since the enrollment in the grade level which is typical for students taking the course is used as the denominator in estimating participation, participation rates are not comparable across subjects. Dropout in the upper grades means that the denominator used for the very advanced courses is much smaller than that for the courses taken earlier in high school careers.

Other participation indices. An alternative method is to base participation on eighth-grade final average daily membership (ADM) for the year in which the largest group of students taking the course was in the eighth grade.[1] For

[1]Using the same grade level for all courses allows comparisons across courses. Also, eighth grade is generally prior to a high incidence of dropping out. Allowing the eighth-grade year to vary by grade in which students typically take the course controls somewhat for cohort size differences. It should be noted that these indices use course takers in particular grade levels as indicators of participation over time. When statewide participation is calculated by adding the number of eighth-graders in 1985-86 to the ninth-graders in 1986-87, and so on, the difference between the result and the estimate for the 1985-86 cohort using the above method is less than one percentage point.

example, for Algebra I in 1989-90 the eighth-grade ADM for 1988-89 is used since ninth-grade is the typical grade in which students take Algebra I.[1] Table 2 compares the 1989-90 participation for the eight courses when calculated by both methods.

Table 2. 1989-90 Participation Indices for Eight End-of-Course Subjects

Subject	Typical Grade Level	Participation Index 1[2]	Participation Index 2[3]
Algebra I	9	72.3%	68.8%
Geometry	10	53.1%	56.6%
Algebra II	11	41.7%	50.9%
Biology	10	87.9%	93.8%
Chemistry	11	38.7%	47.3%
Physics	12	11.5%	15.2%
English I	9	90.3%	85.9%
U.S. History	11	76.2%	93.1%

Participation Index 1, based on eighth-grade ADM, is lower than Index 2 for all subjects except Algebra I and English I. For the six other subjects the grade levels used for the denominator in Index 2 have experienced various amounts of dropout. English I and Algebra I are based on the ninth grade which has a large ADM figure due to high retention rates the first year of high school. Participation Index 1 can be interpreted as an estimate of the percentage of students who are about to enter high school who will take each course prior to graduation. Index 2 is influenced by dropout rates but reflects the percentage of currently enrolled students who take each course. Index 1 will be used throughout the remainder of this report. For comparison purposes, both participation indices are given for each school system in Section V.[4]

Participation ***over time*** is given in Table 3. Since the beginning of assessment in each subject area there has been a slight increase in participation indices for selective courses (Algebra I, Geometry, Algebra II, and Chemistry) and a slight decrease in participation in courses taken by all students (U.S. History and Biology). Decreases in the numbers of students tested reflect declining cohort sizes.

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[1]In previous reports the current year first-month ADM for the ninth grade was used as the denominator for all participation estimates. Ninth-grade ADM varies considerably by school system due to the prevalence of retention the first year of high school and the differences among school systems in high school structure, e.g. 9-12 vs. 10-12 organizations.

[2]Participation Index 1 is based on the 8th grade final ADM for the year the students in the typical grade level were in the 8th grade.

[3]Participation Index 2 is based on the 1989-90 final ADM for the typical grade level of students in the course and is similar to the one used by the State-by-State Indicators Project.

[4]In a few cases the participation index goes over 100 percent when calculated at the school system level. This may occur in small school systems when students in one school system are allowed to transfer to another school system for high school only, or when program changes are implemented that change the grade level in which students take the course.

Table 3. Participation Indices for High School Courses Since 1985-86

	1985-86		1986-87		1987-88		1988-89		1989-90		1990-91		1991-92	
	Number Tested	Participation Index	Number Tested	Participation Index	Number Tested	Participation Index	Number Tested	Participation Index	Number Tested	Participation Index	Number Tested	Participation Index	Number Tested	Participation Index
Algebra I	63330	67.8%	61003	69.1%	59723	70.5%	60183	73.2%	59085	72.3%				
Geometry	field test				field test		43325	51.1%	43654	53.1%				
Algebra II	field test		36633	39.6%	36414	39.0%	35132	39.8%	35310	41.7%				
Physical Science									field test					
Biology	field test		82646	88.5%	77154	87.5%	72898	86.0%	72329	87.9%				
Chemistry					field test		33352	37.8%	32801	38.7%				
Physics							field test		10166	11.5%				
English I							field test		73768	90.3%				
English II											field test			
English III													field test	
ELP									field test					
U.S. History					72824	78.0%	66862	75.8%	64519	76.2%				
Healthful Living											field test			

ELP is a ninth grade course: Economic, Legal, and Political Systems. Gray areas indicate years prior to implementation for each subject.
Participation index is based on 8th-grade ADM when most students in the course were in the 8th grade.

Participation in successive courses. As mentioned above, Algebra I acts as a screen for participation in upper level math courses, and in many cases as a screen for participation in selective science courses. The typical course sequence for math is Algebra I followed by Geometry and then Algebra II. For science the typical sequence is Physical Science, Biology, Chemistry, and then Physics for a select, small group. Since each course may act as a screen for the next, i.e. only successful students in the lower level course are permitted to take the next course in the sequence, participation can also be viewed in terms of the percentage of Algebra I students taking Geometry, and so forth. The 1989-90 school year was the first in which a group of Algebra I students and Biology students could be followed through the sequence. Table 4 gives the percentages for the first course in the sequence based on the eighth-grade ADM. Then each successive course is based on the enrollment in the previous year's lower level course. Percentages of students estimated to receive a "D" or above in each course are given for comparison.

Table 4. Percentages of Students Taking the Next Course in the Math or Science Sequence.[1]

Subject/ Grade Level	Year	Number Tested	Percent Taking Next Course	Percent Passing[2]
Eighth-grade ADM	1986-87	84722	70.5%	
Algebra I	1987-88	59723	72.5%	84.5%
Geometry	1988-89	43325	81.5%	87.5%
Algebra II	1989-90	35310		
Eighth-grade ADM	1985-86	88223	87.5%	
Biology	1987-88	77154	43.2%	87.3%
Chemistry	1988-89	33352	30.5%	90.4%
Physics	1989-90	10166		

The estimated percentage of students taking the next course in the math sequence is somewhat lower than the percentage passing the previous course, and is dramatically lower for advanced science courses. It is estimated that less than half of those who pass Biology continue on to take Chemistry. Although approximately 90 percent of Chemistry students pass, and approximately 70 percent make a "C" or better, it appears that only about 30 percent of Chemistry students go on to take Physics.

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[1]These percentages are based on the assumption that all students take the courses in the sequence above. While this sequence is typical, variations do occur, e.g. students who take Algebra II immediately after Algebra I.

[2]Percent passing is based on the final grades teachers anticipated giving students at the time the the end-of-course tests were administered.

Factors affecting participation. Student participation in the selective math and science courses appears to be determined by a complex set of factors, including student attitudes and aspirations, peer influences, counseling, student ability, administrative selection criteria, parental involvement, course availability, expectations of teachers, counselors, and administrators, and community influences. The section below will illustrate how participation in these courses varies by grade level in school, sex, ethnic group, parental education, post high school plans, and school system.

Variations in ***grade levels*** that students take particular courses generally occur in selective math courses. Some students are on an accelerated track in which they take Algebra I in the eighth grade, Geometry in the ninth, and Algebra II in the tenth. Students who are in the "fast track" not only have opportunities to learn more advanced mathematics at an earlier age but also have opportunities to take additional advanced math courses in their junior and senior years in high school. Students who begin with Algebra I in the ninth grade can take three additional math courses in high school. Students who are in the tenth grade may be in the second year of a two-year Algebra I course, or may be just beginning to take the higher mathematics sequence. Participation by grade level in Geometry and Algebra II parallels that established in Algebra I.

Table 5. Participation by Grade Level in Algebra I in 1989-90

Grade Level	Final ADM	Algebra I Students	Percent of ADM	Percent of Algebra I Students
Eight	78474	11475	14.6%	19.4%
Nine	85908	23778	27.7%	40.2%
Ten	77082	17363	22.5%	29.4%
Eleven	69337	4938	7.1%	8.4%
Twelve/Other	66802	1531	2.3%	2.6%
TOTAL		59085		100.0%

Statewide, the proportion of students who begin an accelerated math sequence with Algebra I in the eighth grade has increased from 11.3 percent to 14.6 percent since 1985-86. Since approximately 15 percent of North Carolina's eighth-grade students score at or above the 90th percentile on the math section of the California Achievement Tests (CAT), it appears that only the very brightest of North Carolina students have the opportunity to take four additional advanced math courses in high school.

The opportunity to participate in an accelerated math sequence varies by ***school system***. Although the number of school systems in North Carolina who do not offer Algebra I in the eighth grade has declined since 1985-86, 15 school systems still did not offer Algebra I to eighth graders in 1989-90. Over half of the school systems with no eighth-grade Algebra I enrollment are in the northwest and western regions of the state. In 57 school systems more than 20 percent of

eighth graders were enrolled in Algebra I; and, in 12 school systems more than 30 percent of eighth graders took Algebra I.

The likelihood of participating in an accelerated math sequence also varies by ***ethnic group***. Figure 2 in Section III shows the differences among ethnic groups in each grade level for Algebra I. Although 25.5 percent of Algebra I students are black, only 13.4 percent of eighth grade Algebra I students are black. Approximately 47.7 percent of eleventh-grade Algebra I students are black; these students have begun the math sequence too late in their high school careers to complete the three advanced mathematics courses required by the 16 campuses of the North Carolina university system prior to graduation. Also, among white Algebra I students, 22.9 percent are in the eighth grade, while only 10.2 percent of black Algebra I students are in the eighth grade.

In Table 6 enrollment in the eight courses is broken down by sex, ethnic group, parental education, post high school plans, and anticipated final grade. Figures 3 through 8 give graphic representation to the data in Table 6.

Except for Physics, ***females*** are overrepresented in the selective math and science courses when compared with what would be expected in the K-12 student population. Between 53.5 percent and 56.1 percent of Algebra I, Geometry, Algebra II, and Chemistry classes are female, while 45.3 percent of Physics classes are female. Females and males are equally represented in the survey courses taken by most students.

Participation in selective courses varies by ***ethnic group***. Black students represent slightly over 30 percent of the K-12 population, and close to 30 percent of the enrollment in Biology, English I, and U.S. History. As the courses become more advanced, fewer black students are enrolled. For example, while 29.0 percent of Biology students are black, 23.1 percent of Chemistry students and only 14.3 percent of Physics students are black. Compared to their distribution in the school population, it appears that black students are underrepresented and white students are overrepresented in the selective math and science courses.

Parental education also appears to have an impact on participation in selective math and science courses. In the courses taken by most students, between 55 and 60 percent of the students have one or more parents with education beyond high school. About 65 percent of Algebra I students have one or more parents with beyond high school education, and the percentage increases as the courses become more advanced, with almost 82 percent of Physics students having one or more parents educated beyond high school.

Students recorded their ***post high school plans*** when they took the end-of-course tests. As would be expected, a higher percentage of students in the advanced courses plan to attend a four-year college than in the more general courses.[1] While approximately half of Biology and English I students intend

[1]Due to space limitations on the answer sheet, post high school plans were not collected for U.S. History students.

Table 6. Characteristics of Students Taking Each Course

	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Sex																
Male	27357	46.5	19715	45.3	15912	45.2	35929	49.8	14363	43.9	5544	54.7	36587	49.8	31779	49.4
Female	31511	53.5	23819	54.7	19305	54.8	36172	50.2	18331	56.1	4596	45.3	36953	50.2	32607	50.6
Ethnic Group																
American Indian	835	1.4	542	1.2	315	0.9	1274	1.8	405	1.2	98	1.0	1327	1.8	981	1.5
Black	14999	25.5	10266	23.6	7550	21.5	20865	29.0	7542	23.1	1444	14.3	21278	29.0	18757	29.2
White	41555	70.7	31637	72.8	26381	75.0	48363	67.2	23882	73.1	8153	80.7	49443	67.4	43211	67.2
Other	1370	2.3	1016	2.3	927	2.6	1458	2.0	821	2.5	411	4.1	1350	1.8	1326	2.1
Parental Education																
Eighth Grade or Less	509	0.9	251	0.6	173	0.5	833	1.2	180	0.6	55	0.5	964	1.3	756	1.2
Eighth to Twelfth	4612	7.9	2410	5.6	1544	4.4	8086	11.4	1462	4.5	257	2.5	8935	12.3	6800	10.7
High School Graduate	15434	26.5	9700	22.4	7189	20.5	21093	29.7	6633	20.4	1516	15.0	22192	30.6	18364	28.9
More than High School	37790	64.8	30971	71.5	26215	74.6	41100	57.8	24315	74.6	8280	81.9	40327	55.7	37661	59.2
Post High School Plans																
Seek Employment	1395	2.4	569	1.3	390	1.1	3838	5.4	270	0.8	49	0.5	3911	5.4		
Military Service	3712	6.4	1975	4.6	1334	3.8	6097	8.5	1146	3.5	252	2.5	6245	8.6		
Trade/Business School	1242	2.1	789	1.8	471	1.3	2348	3.3	425	1.3	45	0.4	1715	2.4		
Community/Tech. Coll.	7529	12.9	5845	13.5	4984	14.2	11580	16.2	4344	13.3	745	7.4	8362	11.5		
Private Junior College	681	1.2	705	1.6	646	1.8	788	1.1	584	1.8	108	1.1	534	0.7		
Four-year College	34477	59.0	28733	66.2	24875	70.8	33734	47.3	23627	72.5	8670	85.6	36580	50.3		
Undecided	7852	13.4	4159	9.6	2092	5.0	10645	14.9	1870	5.7	179	1.8	12231	16.8		
Other	1560	2.7	609	1.4	365	1.0	2362	3.3	344	1.1	82	0.8	3074	4.2		
Anticipated Final Grade																
A	7758	13.2	5578	12.8	5210	14.8	7478	10.4	4632	14.2	2158	21.3	7505	10.2	7759	12.0
B	14662	24.9	10371	23.8	8533	24.2	17024	23.6	8543	26.1	3452	34.0	19421	26.4	15440	24.0
C	15959	27.1	12051	27.6	9930	28.1	22190	30.7	9897	30.2	2856	28.2	23108	31.4	19767	30.7
D	12142	20.6	10054	23.0	7658	21.7	16867	23.4	6579	20.1	1225	12.1	15501	21.1	14907	23.1
F	8439	14.3	5579	12.8	3951	11.2	8615	11.9	3078	9.4	448	4.4	8059	11.0	6565	10.2

to go to a four-year college, more than 70 percent of Algebra II and Chemistry students, and more than 85 percent of Physics students, have such plans. Also, more than 65 percent of students in general courses intend to further their education in somefashion, in addition to more than 14 percent who are undecided and may yet choose to further their education. The percentage of undecided students also decreases as the courses become more selective. Among the census courses of Biology and English I more than 5 percent plan to work after graduation, and more than 8 percent intend to enlist in military service.

Post high school plans of students enrolled in various high school courses appear to vary by ***ethnic group***. Figure 7 displays the percentages of black and white students in each course with various post high school plans. In Algebra I, Geometry, Chemistry, and English I the percentage of black students in each course who plan to attend a four-year college is similar to the percentage of white students with such plans. The percentage of black students taking the most advanced math and science courses who plan to go to college is slightly higher than the percentage of white students. In general, a higher percentage of white students than black students plan to attend a community college, while a higher percentage of black than white students plan to enlist in the military. In all courses, smaller percentages of black students are undecided about their post graduation plans.

Except for the highly selective Physics classes, ***grading patterns*** appear to be consistent across high school subjects. Algebra I has the highest percentage of "Fs", reflecting its perceived status as a screening course for other subjects. A higher percentage of students receive "Fs" in this relatively selective course than in the general courses of Biology, English I, or U.S. History. There is a slight tendency for higher percentages of students to receive higher grades in selective courses than in general courses. However, even though only about 43 percent of Biology students take Chemistry, similar percentages fail the course -- 9.4 percent for Chemistry and 11.9 percent for Biology.

Finally, participation varies by ***school system***. For example, in 1989-90 participation in Algebra I varied from an estimated 43.6 percent to 100.0 percent, and between 17.1 percent and 65.4 percent for Chemistry. While the median participation index for Algebra I was about 70, 10 percent of school systems had participation rates under 57 and 10 percent had rates over 85. Participation indices for all school systems are reported in Section V and are displayed graphically in Figure 9. The ranges depicted in the graph show that even among general courses there is some variation in participation. This variation is much narrower than that for Algebra I and other selective courses. One might speculate that the wide variation is due to differences in ability among students in the school systems. The table below gives the range and the median participation rates for the two initial selective math and science courses for school systems grouped by average performance on the eighth-grade California Achievement Tests.

Table 7. 1989-90 Participation in Algebra I and Chemistry, Grouped by Eighth-Grade Total Battery California Achievement Tests Scores

Total Battery	Algebra I			Chemistry			Number
Percentile Range	Low	Median	High	Low	Median	High	of LEAs
65 and Above	50.0%	79.2%	100.0%	28.9%	39.2%	58.9%	18
60-64	50.0%	73.8%	100.0%	18.7%	44.2%	65.4%	27
55-59	50.0%	69.7%	93.4%	19.2%	32.7%	57.7%	35
50-54	51.4%	67.2%	84.2%	21.1%	35.9%	51.6%	29
Less than 50	43.6%	67.7%	92.2%	17.1%	30.9%	58.8%	25

This table illustrates that among low achieving student populations and high achieving student populations the range in participation is almost as great as that among all school systems. Therefore, even when controlling for average achievement levels for school systems the variation in participation is still quite large. Participation and performance for all school systems grouped by the above performance ranges are displayed in Figures 22-26 and are reported in Section V. School systems are listed in alphabetical order within each group.

Performance

The purposes of the end-of-course tests include providing a student score and a summary score which are comparable across years and can be used for student grading and school and school system accountability. The tests do not provide information about how North Carolina students are doing compared with other students in the nation; rather, they measure the implementation of the goals and objectives in the *Standard Course of Study*. The core tests are designed to average between 60 and 65 percent correct at the initial administration. Therefore, scores at the initial administration of tests, such as the Physics and English I Tests in 1989-90, do not provide much information about statewide achievement, but give a benchmark for comparisons in future years, and a standard to which school and school system achievement can be compared.

Statewide performance in all courses. Average scores at the 1989-90 administration ranged from 61.2 average percent correct in Biology to 70.3 in U.S. History.[1] Table 8 displays the core scores for all end-of-course tests since the first Algebra I Test was administered in 1985-86. Gains are exhibited for five of the six subjects tested in both 1988-89 and 1989-90. Except for Algebra II, tests which have been administered three or more years have shown average gains of 2 or more test items since their initial administrations. For example, 1989-90 Algebra I students answered an average of 2.9 more test items than 1985-86 Algebra I students. Average scores for English I and Physics were within the range expected for first administrations.

Average scores since 1985-86 for Algebra I and since 1986-87 for Biology are displayed graphically in Figures 10 and 11. The dotted lines on the graphs show

[1]The end-of-course core tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items.

Table 8. Average Core Scores for End-of-Course Subjects Since 1985-86

	1985-86		1986-87		1987-88		1988-89		1989-90		1990-91		1991-92	
	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Algebra I	37.7	62.9%	39.2	65.3%	39.2	65.3%	39.8	66.4%	40.6	67.7%				
Geometry					*field test*		37.5	62.6%	38.4	64.0%				
Algebra II	*field test*		37.7	67.2%	36.2	64.6%	37.6	67.2%	37.4	66.8%				
Physical Science									*field test*					
Biology	*field test*		38.0	57.6%	39.0	59.1%	39.2	59.4%	40.4	61.2%				
Chemistry					*field test*		37.5	62.5%	38.5	64.1%				
Physics							*field test*		38.3	63.9%				
English I							*field test*		64.3	64.3%				
English II											*field test*			
English III													*field test*	
ELP									*field test*					
U.S. History					39.9	66.5%	42.0	70.0%	42.2	70.3%				
Healthful Living											*field test*			

ELP is a ninth grade course: Economics, Legal, and Political Systems. Gray areas indicate years prior to implementation for each subject.
Due to administrative differences between the 1987 and subsequent testings, scores on the 1987 test cannot be directly compared with scores on the subsequent tests.

the average scores for students receiving various anticipated final grades at the first administrations.[1] These average scores for various letter grades can be used to interpret differences in average core scores either across time or across groups. For example, in 1985-86 the average Algebra I score for "B" students was 42.2 and the average for "C" students was 37.8. Since that time the statewide average for all Algebra I students has increased from 37.7 to 40.6, or more than half a letter grade. In other words, according to 1985-86 standards, average performance in 1989-90 was at "C+" or "B–" levels while average performance in 1985-86 was at a "C" level (see grading discussion below).

Performance by subgroups of students. Average scores for all courses are reported in Table 9 by grade level, sex, ethnic group, parental education level, post high school plans, and anticipated final grade. Graphs depicting score differences among these groups are presented in Figures 12 through 16. The largest performance differences by students across ***grade levels*** occurs in courses in which students may be in dissimilar tracks. For example, in the math sequence there are large differences between eighth-grade students, who are on an accelerated track, ninth-grade students, who are on the traditional track, and tenth grade students, who are on a slower track or may be retaking the course. Typically, eighth-grade students are a highly select subgroup of eighth-grade students, and therefore are expected to outperform other students. These differences are paralleled in Geometry and Algebra II. In the science sequence, in some school systems high achieving students do not take Physical Science in the ninth grade. Instead, they take Biology in the ninth grade, followed by Chemistry in the tenth and then take Physics to fulfill the physical science requirement. The select nature of these students is reflected in the large score differences between different grade levels in Biology and Chemistry.

Average differences by ***sex*** are minimal for Algebra I, Algebra II, and Biology. The largest sex differences in performance occur in English I and Physics; in English I females average 7 percentage points higher than males and in Physics males score an average of 6.5 percentage points higher than females. On the remainder of the courses, Geometry, Chemistry, and U.S. History, males average several percentage points higher than females.

Average differences by ***ethnic group*** occur for all subjects. White students and "other" students scored higher on average than black students and American Indian students on all end-of-course tests.

Parental education differences on end-of-course tests are similar to those on other tests. Although there are some differences between students whose parents are high school graduates and students whose parents have less education, the largest difference occurs between students who have parents educated beyond high school and students with less educated parents. The differences among parental education levels are somewhat smaller in the selective courses.

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[1]Teachers record the final grades they anticipate giving each students at the time of test administration.

Table 9. Average Performance of Students in Each Course

	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
All Students	40.6	67.7	38.4	64.0	37.4	66.8	40.4	61.2	38.5	64.1	38.3	63.9	64.3	64.3	42.2	70.3
Grade Level																
8	47.7	79.5														
9	42.1	70.2	46.9	78.1			46.6	70.6								
10	38.3	60.5	38.9	64.3	44.9	80.2	40.1	60.8	43.5	72.5						
11	34.0	56.7	32.7	54.6	36.7	65.5	35.1	53.2	38.5	64.2	40.0	66.7				
12			31.4	52.4	30.4	54.2			35.1	58.5	38.0	63.3				
Sex																
Male	40.4	67.4	39.4	65.7	37.6	67.1	40.8	61.9	39.7	66.2	40.1	66.8	60.8	60.8	43.0	71.7
Female	40.8	68.1	37.5	62.6	37.3	66.6	40.2	60.9	37.5	62.5	36.2	60.3	67.8	67.8	41.4	69.0
Ethnic Group																
American Indian	36.4	60.7	33.3	55.5	32.2	57.4	36.6	53.9	34.2	57.0	34.0	56.6	55.5	55.5	38.2	63.6
Black	36.7	61.2	32.7	54.6	32.4	57.9	34.9	52.9	33.9	56.5	33.3	55.5	56.6	56.6	37.5	62.5
White	42.1	70.1	40.2	67.0	38.7	69.2	42.8	64.9	39.9	66.5	39.2	65.3	67.8	67.8	44.3	73.8
Other	43.7	72.8	41.4	68.9	42.2	75.4	42.2	63.9	40.6	67.7	39.8	66.3	66.3	66.3	42.3	70.6
Parental Education																
Eighth Grade or Less	37.4	62.3	33.8	56.0	35.7	59.7	33.7	51.1	34.9	58.2	35.9	59.8	51.5	51.5	35.8	59.7
Eighth to Twelfth	37.1	61.9	34.1	56.9	33.5	59.8	34.4	52.1	34.4	57.4	34.2	57.0	54.5	54.5	37.1	61.9
High School Graduate	38.7	64.5	36.7	59.5	35.0	62.5	37.2	56.3	36.3	60.5	35.9	59.8	59.7	59.7	39.8	66.4
More than High School	42.0	70.0	39.6	66.0	38.3	68.4	43.6	66.0	39.3	65.6	38.9	64.9	69.7	69.7	44.5	74.2
Post High School Plans																
Seek Employment	35.3	58.8	33.7	56.2	31.8	56.8	33.1	50.2	33.5	55.8	32.7	54.5	50.7	50.7		
Military Service	36.2	60.3	34.0	56.7	32.1	57.3	35.0	53.0	35.0	58.3	35.3	58.8	54.1	54.1		
Trade/Business School	36.4	60.7	33.0	55.0	31.7	56.6	36.1	54.7	33.1	55.2	29.8	49.7	55.9	55.9		
Community/Technical Coll.	36.3	60.5	33.3	55.5	31.6	56.4	37.2	56.4	34.1	56.8	33.2	55.3	59.3	59.3		
Private Junior College	36.9	61.5	33.2	55.3	31.2	55.7	39.1	59.2	34.4	57.3	34.6	57.7	62.2	62.2		
Four-year College	43.1	71.8	40.4	67.3	39.5	70.5	45.2	68.5	39.9	66.5	39.0	65.0	71.9	71.9		
Undecided	38.8	64.7	36.5	60.8	35.3	63.0	37.1	56.2	36.7	61.2	35.4	59.0	59.3	59.3		
Other	38.1	63.5	36.6	61.0	36.0	64.3	35.2	53.3	36.7	61.2	39.0	65.0	54.6	54.6		
Anticipated Final Grade																
A	50.8	84.7	49.5	82.5	46.6	86.8	51.0	77.3	46.1	76.8	43.0	73.0	81.4	81.4	50.2	83.7
B	45.6	76.0	43.6	72.7	42.7	76.3	45.6	69.1	41.4	69.0	39.1	65.2	72.0	72.6	46.3	77.2
C	40.4	67.3	37.8	63.0	36.7	65.8	40.2	60.9	37.6	62.7	36.3	60.5	63.8	63.8	42.0	70.0
D	35.7	59.5	33.0	55.0	31.1	55.5	35.5	53.8	34.2	57.0	33.5	55.8	55.4	55.4	37.8	63.1
F	30.1	50.2	28.4	47.3	25.4	45.4	31.0	47.0	30.9	51.5	31.8	53.0	47.5	47.5	33.5	55.8

Students in all courses except U.S. History were asked to record their ***post high school plans*** when they took the end-of-course tests. As expected, students who plan to continue their education in a four-year college score substantially higher on average than students with other post high school plans. In the selective math courses there is very little difference in average performance among students who intend to work, enlist in the military, attend trade or business schools, attend community colleges, or attend private junior colleges.

Currently, Algebra I is the only end-of-course subject that is offered over either one or two academic years. The two-year course allows students to take additional time to master the same course content. As can be seen in Table 10, students in ***two-year Algebra I*** programs do not score substantially lower than regular Algebra I students.

Table 10. 1989-90 Algebra I Performance by Type of Program

Program	Number Tested	Average Core	Average Percent Correct
Two-Year	10,526	37.0	61.6%
Regular	43,529	40.5	67.5%
Honors	4,585	49.8	83.0%

At the time of test administration teachers recorded the final grades that they anticipated giving students. The average scores by ***anticipated final grade*** are reported in Table 9 and displayed in Figure 16. There is a consistent difference between grade groups of about 4 to 5 raw score points for all subjects with tests of 56 to 66 items, and about 8 to 9 raw score points for the 100-item English I Test. This pattern is an indication of test ***validity*** in that the results parallel the grading practices of teachers for student work over the course of the school year.

Although there are consistent differences in average scores for the grade groups, wide variations exist in scores for students receiving each grade. Figure 17 displays the variations in scores for Algebra I students. The range of scores reflects ***differences in grading standards*** across tracks, teachers, schools, and school systems.[1] In fact, grading standards appear to have changed somewhat since the implementation of the first end-of-course test. Figure 18 shows the average scores for each grade group in Algebra I since 1985-86. As overall scores have increased, so have scores for each grade group. The increases for each grade group indicate that grading standards for students have become more stringent as overall achievement has increased.

[1]The companion subject area volumes contain average scores for each letter grade group and percentages of students attaining each letter grade for all public school systems. In those tables it can be seen that although there are different standards across school systems, within most school systems the average score for each letter grade group differs in a systematic way, paralleling the performance on the tests.

The consistent differences among grade groups on the end-of-course tests help ***interpret differences in scores*** over time and among groups. For example, the average scores for college-bound students in the selective courses of Algebra I, Geometry, Algebra II, and Chemistry are between the overall average for "C" and "B" students. In other words, in these courses college-bound students are scoring on average at a "C+" or "B–" level. In the general courses of Biology and English I, average scores for college-bound students are at the "B" average score level.

Finally, average performance on end-of-course tests varies by ***school system***. See Section V for the average core scores for all school systems on all end-of-course tests. The widest variations in school system performance occurs among the selective courses in math and science (see Figure 19), with narrower differences among most school system averages occurring for the general courses of Biology, English I, and U.S. History. For example, in U.S. History the range of average scores for the middle 50 percent of school systems is about 3 test items (5 percentage points), or slightly more than half a letter grade on the grading scale. In Algebra II the range for the middle 50 percent of school systems is about 5 items (about 10 percentage points), or an entire letter grade.

Indices of Program Effectiveness: Yield and Effective Yield

Since selective math and science courses are not taken by all students, overall performance in these subjects may be related to participation within school systems or within the state. For example, if only the top 20 percent of students take a course, scores will necessarily be higher than if the top 50 percent take the course. ***Yield*** is an index of the effectiveness of a program which takes into account both participation and performance. It is based on the concept of yield presented in *The Underachieving Curriculum* and suggests that indices of program effectiveness should reflect not only "what students know" but also "how many know it".[1] Yield is calculated for all selective course by multiplying the participation in a course by the average percent of core items answered correctly and then multiplying by 100. Yield would be 100 percent if all students took a course and all students achieved a perfect score. Statewide yield scores for selective courses are presented in Table 11 below.

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[1]Curtis McKnight, et. al., *The Underachieving Curriculum: Assessing U.S. School Mathematics from an International Perspective.* International Association for the Evaluation of Education Achievement, Stipes Publishing Company, Champaign, IL, 1987. McKnight did not quantify yield. The suggestion for quantifying yield as described above was made by Randy Harter, Mathematics Supervisor for Buncombe County Schools. He also suggested the effective yield index.

Table 11. Yield and Effective Yield for Selective Courses Since 1985-86

	•••Algebra I•••		•••Geometry•••		•••Algebra II•••		•••Chemistry•••		•••Physics•••	
	Yield	Effective Yield	Yield	Effective Yield	Yield	Effective Yield	Yield	Effective Yield	Yield	Effective Yield
1985-86	42.6	36.6								
1986-87	45.2	39.1								
1987-88	46.0	40.5			25.2	21.7				
1988-89	48.6	43.4	32.0	28.4	26.8	24.9	23.6	21.7		
1989-90	48.9	43.6	34.0	30.8	27.8	24.5	24.8	23.1	7.4	7.1

Gray areas indicate years prior to implementation.

As would be expected, yield scores are progressively lower as courses become more selective. A gain of 6.3 points in yield has occurred for Algebra I since 1985-86.

Effective yield is a similar index but it counts as "participating" in the course only those students whose achievement is above a cutoff point estimating that they will pass the course. Effective yield will be the same as yield only when all students taking a course achieve at or above the estimated passing score. While yield increases dramatically when participation increases, effective yield increases only when participating students achieve above a passing level. Statewide effective yields for selective courses are reported in Table 11. Yield and effective yield for all school systems are reported in Section V.

Figure 20 displays the trends in participation, average scores, yield, and effective yield for Algebra I since 1985-86. All indices have increased over the past 5 years. Gains in effective yield parallel gains in yield, indicating that the additional students taking Algebra I are capable of performing at acceptable levels.

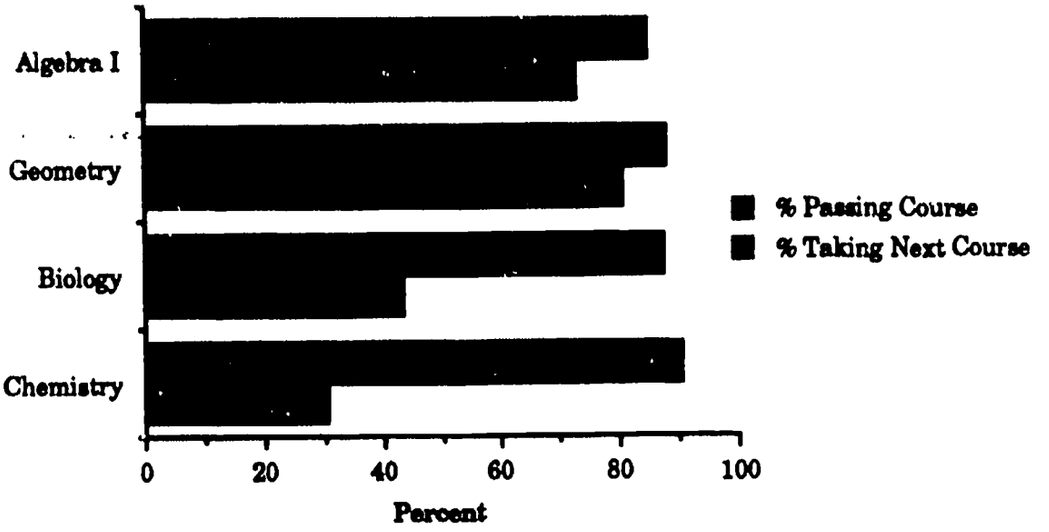
Since the beginning of the End-of-Course Testing Program with the statewide Algebra I assessment in 1985-86 participation in Algebra I has been a concern. As mentioned above, Algebra I is an important course in high school; it is a gatekeeper for almost all advanced study in math and science. Several school systems have set goals for increased participation and have made progress in attaining those goals. For example, Richmond County set a criterion level at the 50th percentile on the mathematics section of the California Achievement Tests taken in the eighth grade[1], encouraging enrollment of all students who score

[1]The CAT was used as an indicator of overall ability or achievement in advising students to take Algebra I. There are other tests that measure the likelihood of success in Algebra I.

above this point. Seeing that enrollment still was not at expectation, they enrolled all students between the 35th and 50th percentile in the two-year Algebra I program. Participation increased from 47.1 to 71.9 percent during the period from 1986 to 1990, *and* average scores increased from 32.2 to 37.3. Trends in participation, performance, yield, and effective yield for Richmond County are displayed in Figure 21.

Section III: Graphical Representations of Results

Figure 1. Estimated Percentage of Students Taking Next Course in Sequence



Observations:

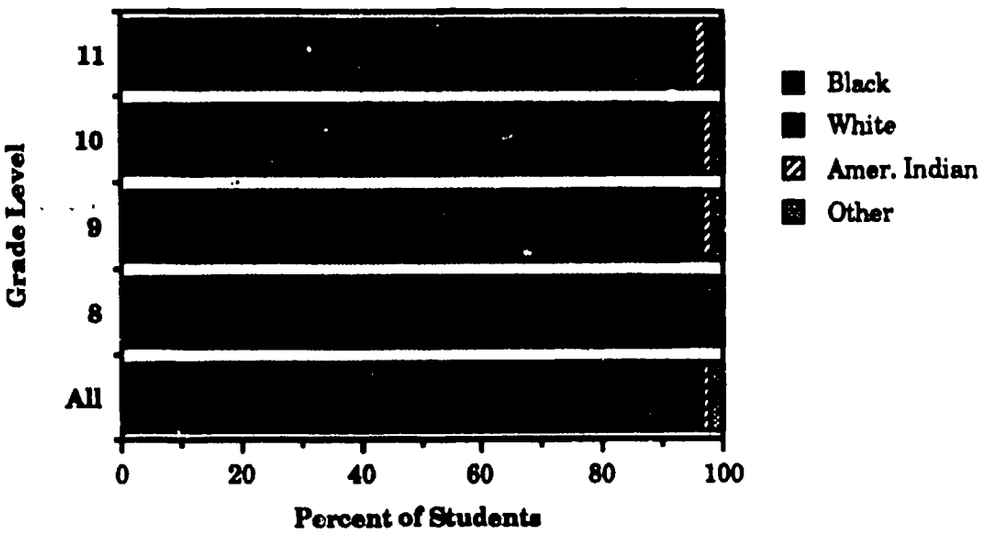
- The estimated percentage of students taking the next course in the math sequence is somewhat lower than the percentage passing the previous course.
- The estimated percentage of students taking the next course in the science sequence in dramatically lower than the percentage passing the course.
- Less than half the students taking Biology go on to take Chemistry, and less than one third of the students taking Chemistry go on to take Physics.

Notes:

The typical math sequence is Algebra I -- Geometry -- Algebra II.
The typical science sequence is Biology -- Chemistry -- Physics.

Data Source: Table 4

Figure 2. Percent of Algebra I Students by Grade Level and Ethnic Group

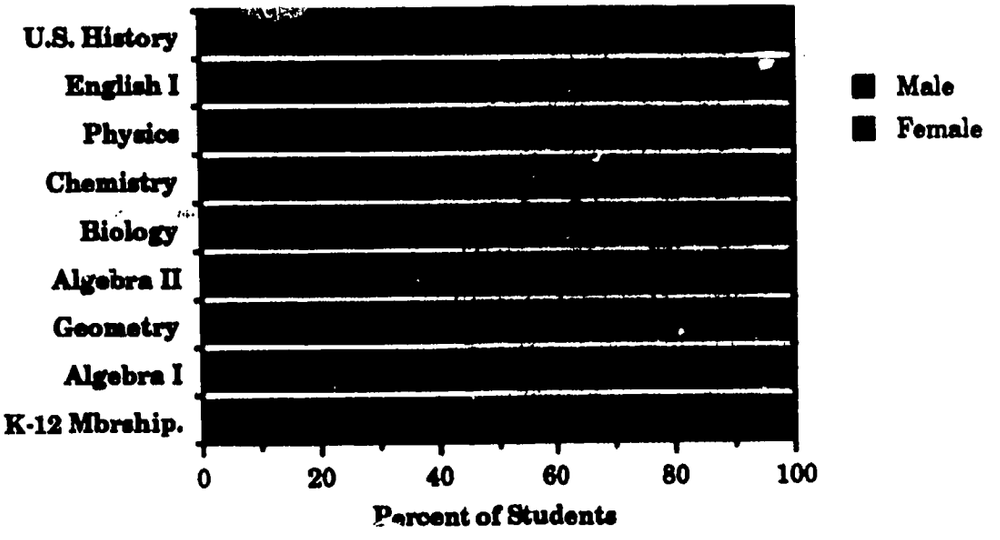


Observations:

- Although about 25 percent of Algebra I students are black, less than 14 percent of eighth-grade Algebra I students are black.
- The opportunity to participate in an accelerated math sequence by taking Algebra I in the eighth grade appears to vary by ethnic group.
- Almost half the 4,938 students taking Algebra I in the eleventh grade are black. Students not completing Algebra I until the eleventh grade cannot complete the three year math sequence required by the University of North Carolina system prior to graduation.

Data Source: not in text. Table 5 gives overall proportions of Algebra I students by grade level.

Figure 8. Percent of Students in Each Course by Sex

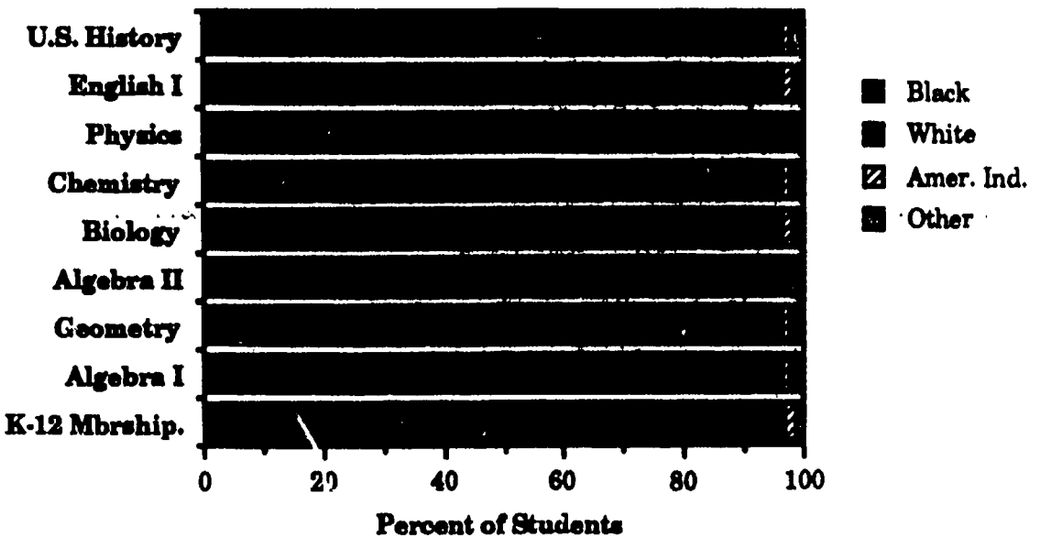


Observations:

- Except for Physics, a higher percentage of females than males are enrolled in selective math and science courses.
- Females and males are equally represented in the general courses taken by all students: Biology, U.S. History, and English I.

Data Source: Table 6

Figure 4. Percent of Students in Each Course by Ethnic Group

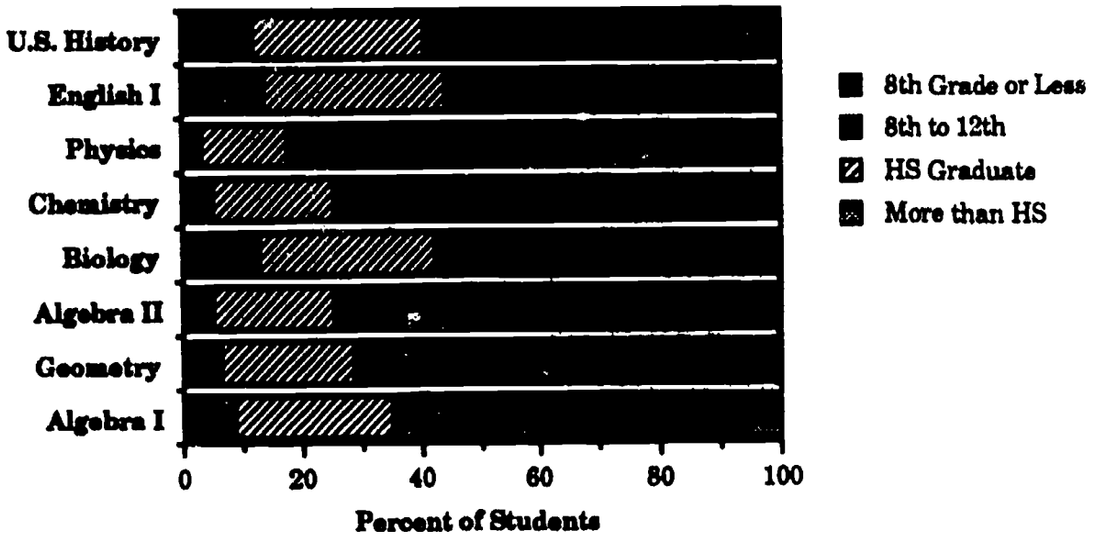


Observations:

- Black students represent slightly over 30 percent of the K-12 membership, and close to 30 percent of the enrollment in in the general courses of Biology, English I, and U.S. History.
- Based on their representation in the overall student population, black students are less likely than white students to be enrolled in selective math and science courses.
- Based on their representation in the overall student population, "other" students are more likely to be enrolled in selective math and science courses.
- As the courses become more advanced in the selective math and science sequences, fewer black students are enrolled.

Data Source: Table 6.

Figure 5. Percent of Students in Each Course by Level of Parental Education

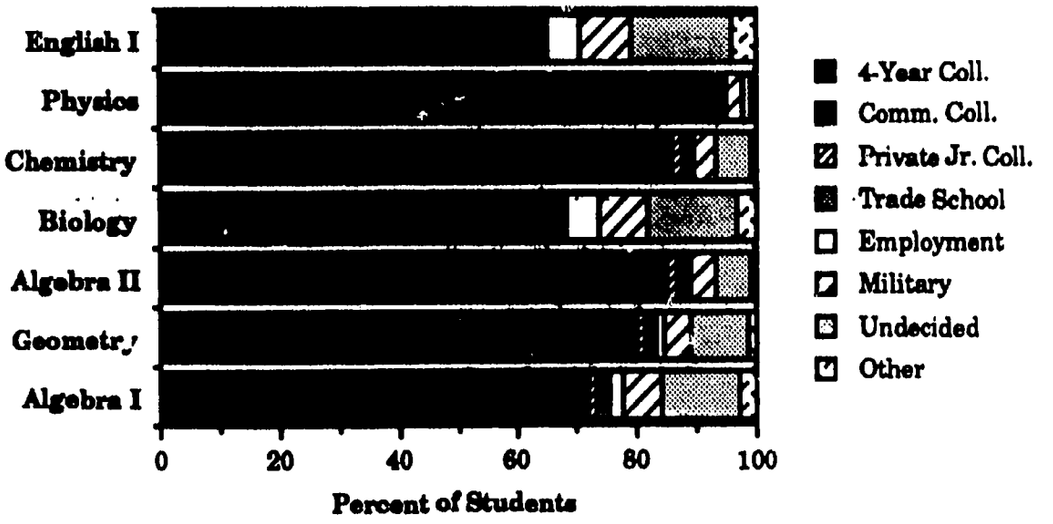


Observations:

- In the general courses between 55 and 60 percent of students have one or more parents with education beyond high school.
- About 65 percent of Algebra I students have parents with beyond high school education, and the percentage increases as the courses become more advanced, with almost 82 percent of Physics students having parents with some education beyond high school.
- Students whose parents have no more than a high school education are less likely to take the advanced math and science courses.

Data Source: Table 6.

Figure 6. Percent of Students in Each Course by Post Graduation Intentions



Observations:

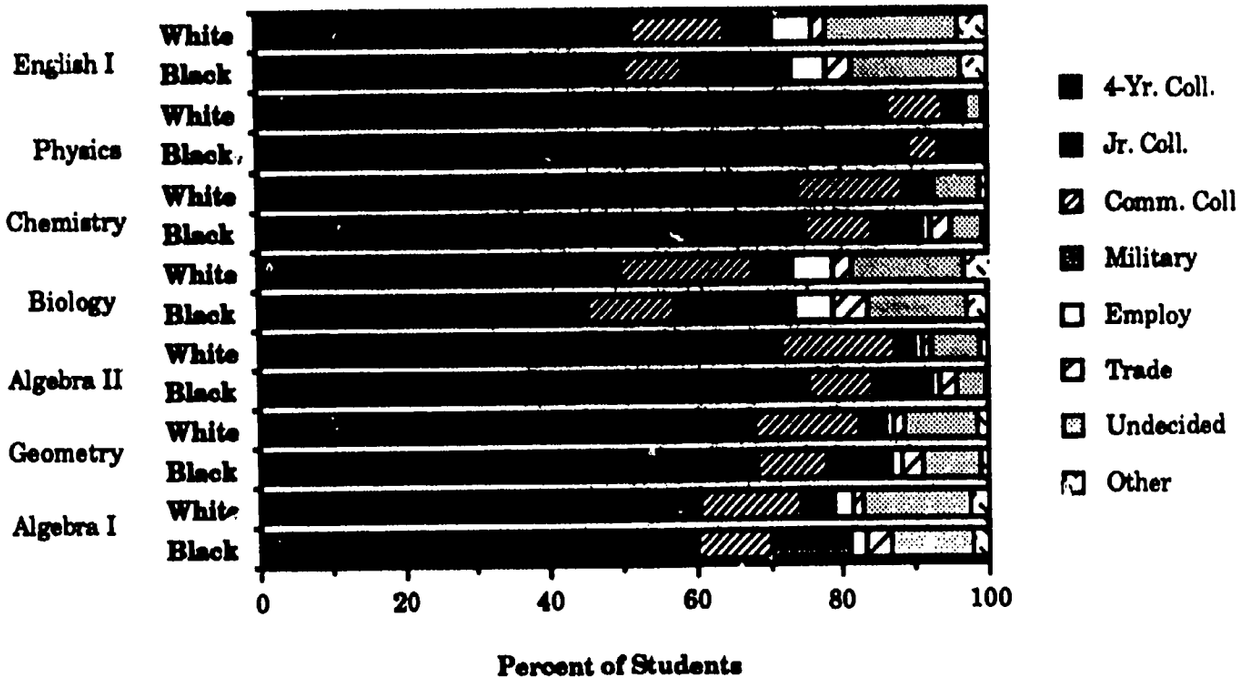
- A larger proportion of students in the advanced math and science courses intend to go to college than in the more general courses.
- While about 50 percent of the students in the general courses intend to go to college, more than 70 percent of Algebra II and Chemistry students, and more than 85 percent of Physics students, plan to go to college.
- More than 65 percent of students in general courses plan to further their education after high school, and more than 14 percent remain undecided and may yet choose to continue their education.
- The percentage of undecided students decreases as the courses become more selective.

Note:

Post high school plans were not collected for U.S. History students.

Data Source: Table 6.

Figure 7. Percent of Students in Each Course by Ethnic Group and Post Graduation Plans



Observations:

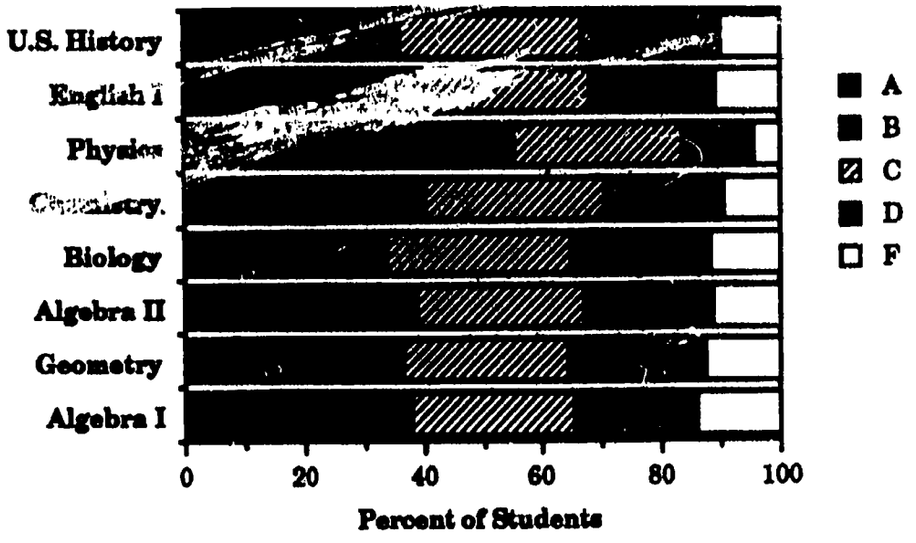
- In Algebra I, Geometry, Chemistry, and English I there is no difference between black and white students in the proportion who intend to go to college.
- In the most advanced math and science courses, Algebra II and Physics, a higher percentage of black students plan to attend college.
- In general, a higher percentage of white students than black students plan to attend a community college, while a higher percentage of black students than white students plan to enlist in military service.
- In all courses, smaller proportions of black students are undecided about their post graduation plans.

Note:

Post high school plans were not collected for U.S. History students.

Data Source: not in report. Table 6 contains the overall propotions of students for each post graduation plan.

Figure 8. Percent of Students in Each Course by Anticipated Final Grade

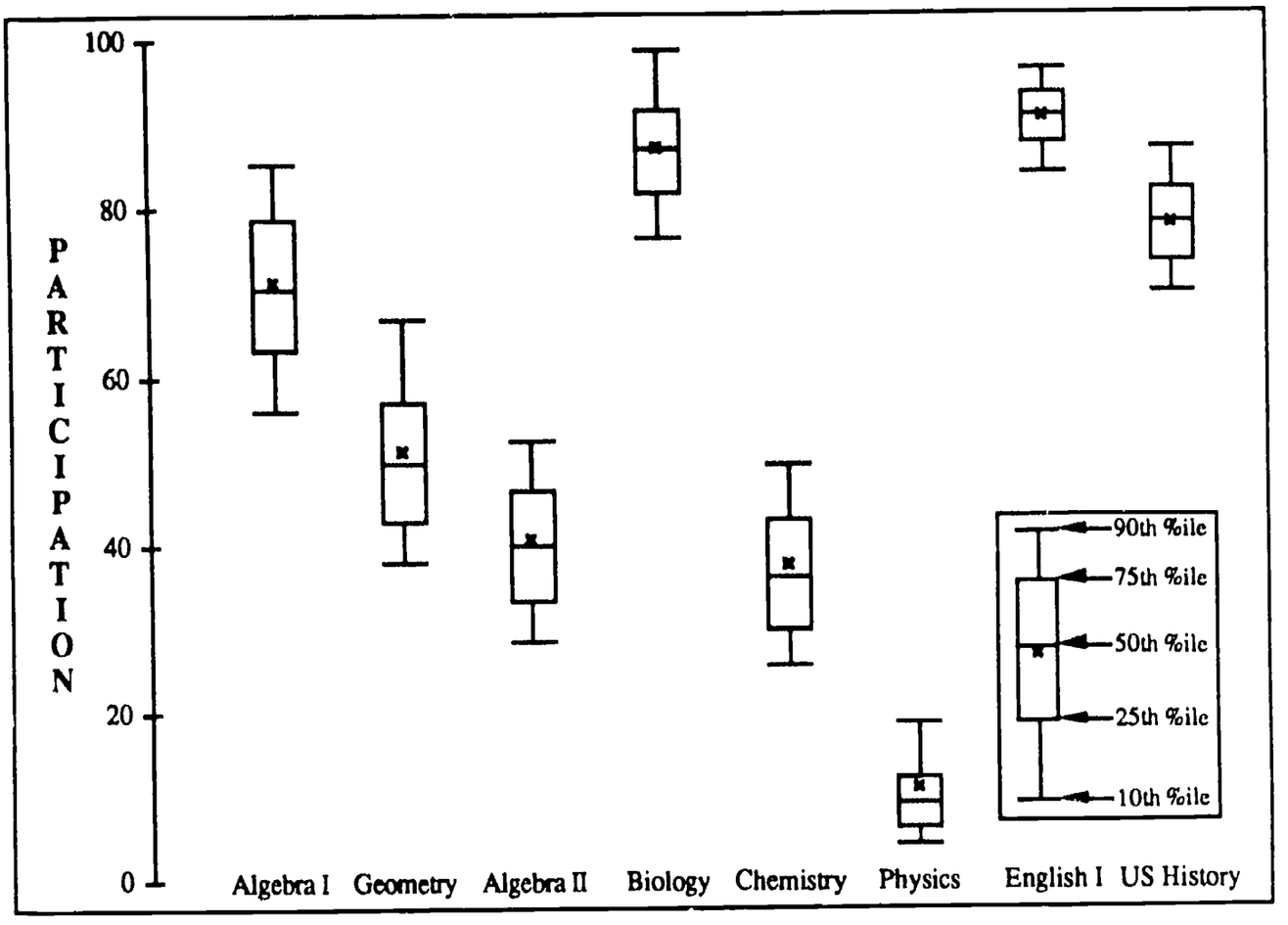


Observations:

- Except for Physics, grading patterns are consistent across high school subjects; similar percentages of students are receiving each letter grade.
- Algebra I has a somewhat higher failure rate, reflecting its perceived status as a screening course for other advanced math and science courses.

Data Source: Table 6.

Figure 9. Plots of Participation Indices for 134 School Systems



Observations:

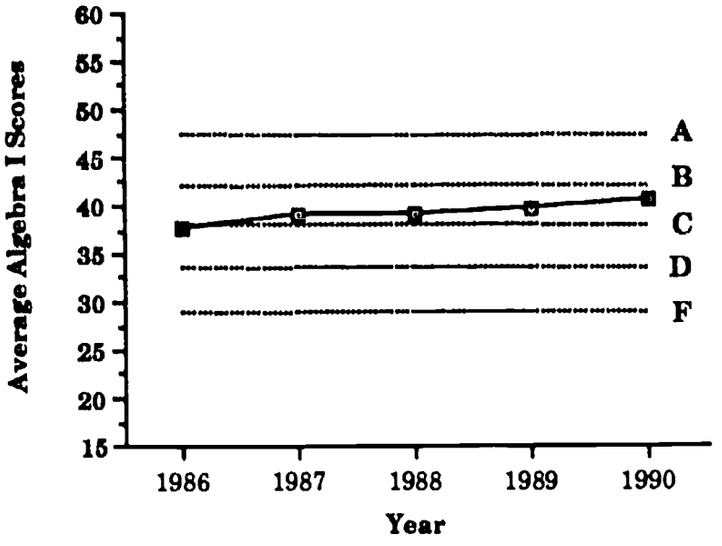
- The variation in participation indices among the 134 school systems tends to be narrower for the general courses, and wider for the more advanced, selective courses.
- The widest variation in participation occurs for Algebra I and Geometry. Ten percent of school systems have Algebra I participation rates over 85 and 10 percent have participation rates under 57.
- Physics is a very selective course, with less than 10 percent of school systems having participation rates over 20.

Note:

Box and whisker plots illustrate not only the typical values of mean and median, but also the range in values. They are useful in evaluating the scope of variation among groups, and for comparing the high and low values for different groups.

Data Source: Section V.

Figure 10. Statewide Average Algebra I Scores: 1986-1990



Observations:

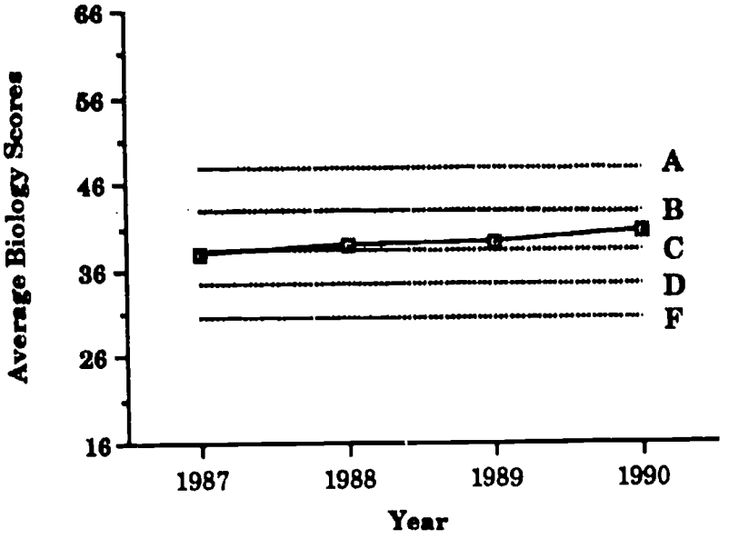
- Average core scores in Algebra I have increased from a "C" level to a "C+" or "B–" level according to 1985-86 grading standards.

Notes:

Teachers recorded the final grade they anticipated giving each student at the time of the test administration. The dotted gray lines indicate statewide average scores for each anticipated final grade for the 1985-86 administration of the Algebra I Test, and reflect grading standards at the initial administration. As can be seen in Figure 18 below, the grading standards have increased with each test administration.

Data Source: Table 8.

Figure 11. Statewide Average Biology Scores: 1987-1990



Observations:

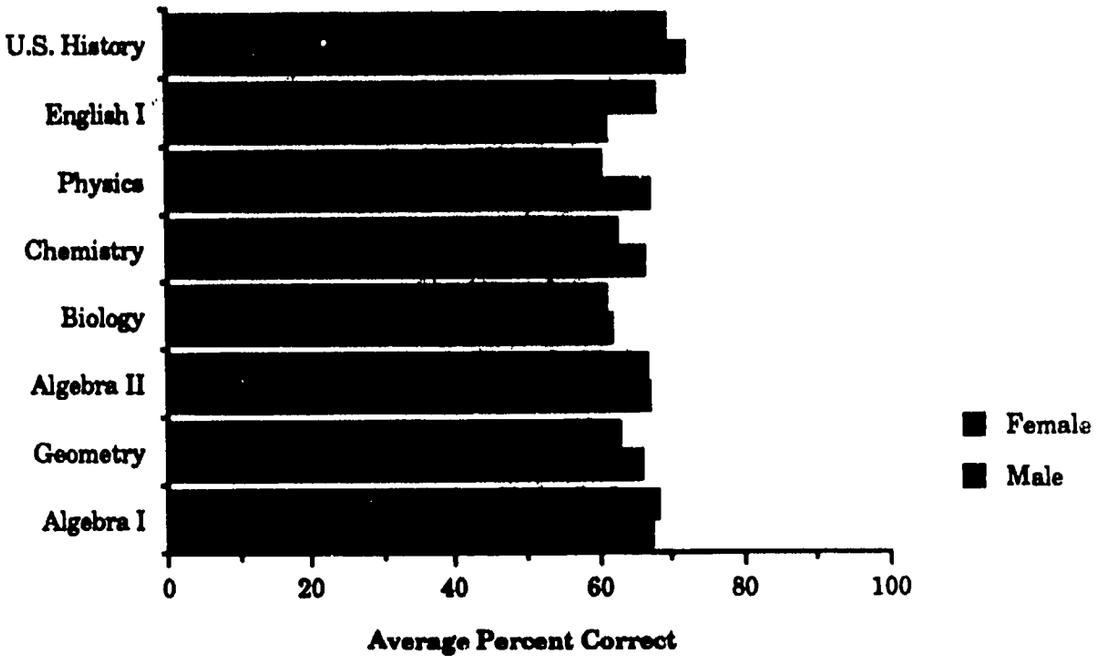
- Average core scores in Biology have increased from a "C" level to a "C+" level according to 1987-88 grading standards.

Notes:

Teachers recorded the final grade they anticipated giving each student at the time of the test administration. The dotted gray lines indicate statewide average scores for each anticipated final grade for the 1986-87 administration of the Biology Test, and reflect grading standards at the initial administration. As can be seen in Figure 18 below, the grading standards increase with each test administration.

Data Source: Table 8.

Figure 12. Average Percent Correct on Core Tests by Sex

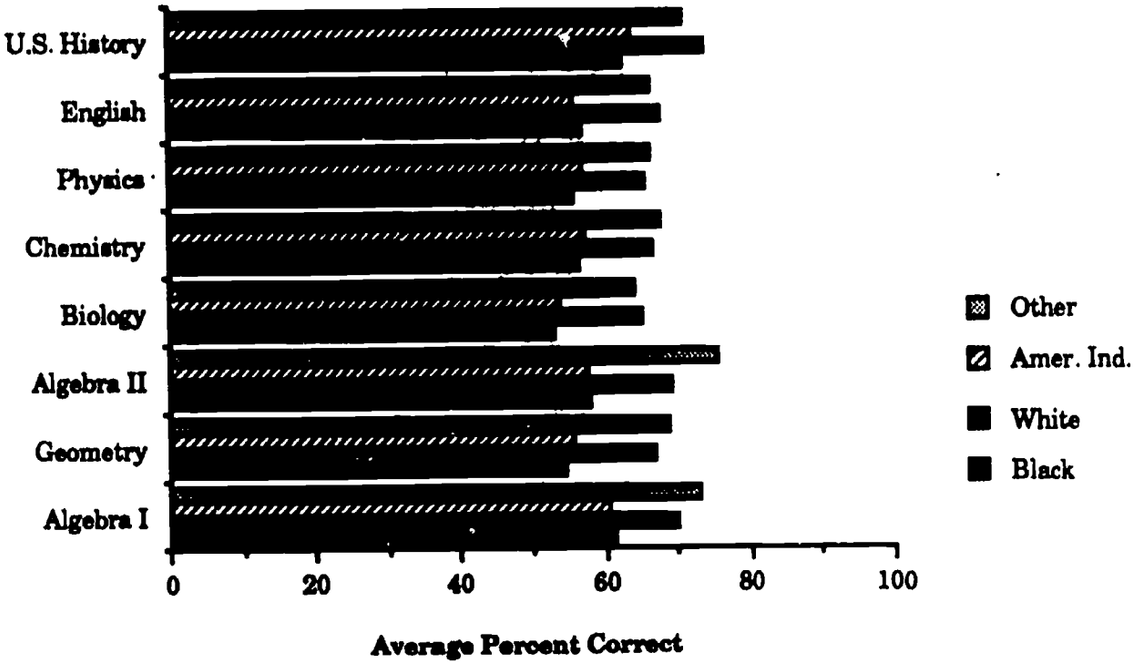


Observations:

- Average differences by sex are minimal for Algebra I, Algebra II, and Biology.
- The largest sex differences in performance occur in English I and Physics, with females averaging about 7 percentage points higher in English I and males averaging about 6.5 percentage points higher in Physics.
- Males average several percentage points higher than females in Geometry, Chemistry, and U.S. History.

Data Source: Table 9.

Figure 13. Average Percent Correct on Core Tests by Ethnic Group

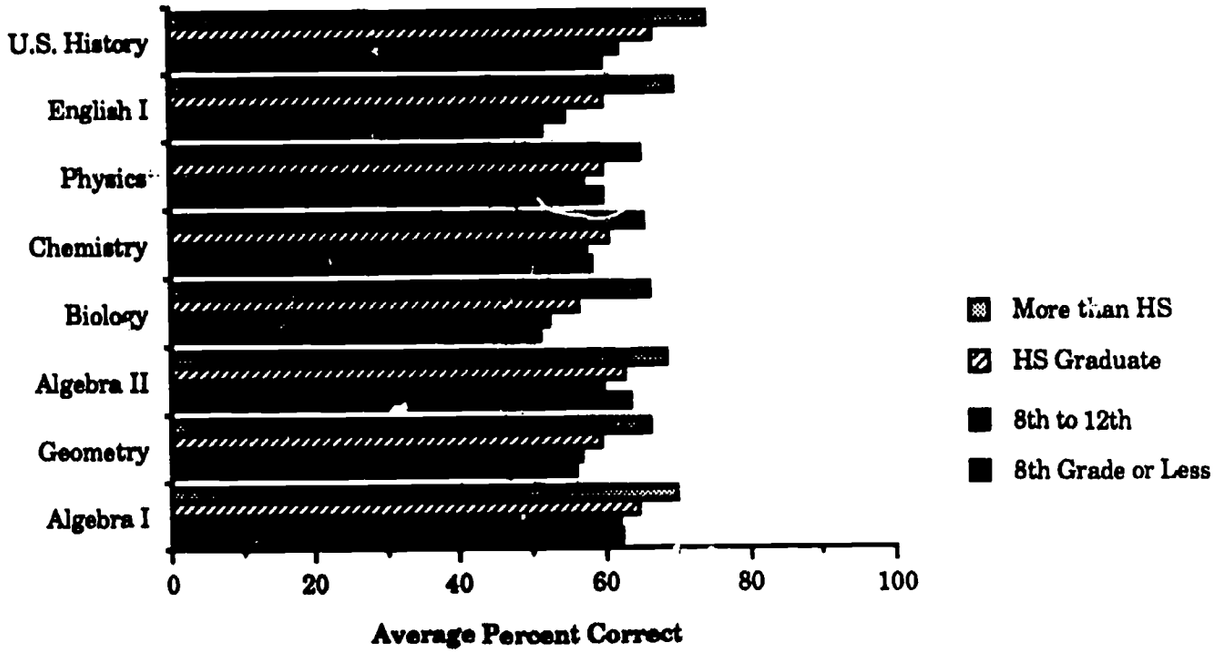


Observations:

- Average differences by ethnic group occur for all subjects.
- On average, white students and "other" students scored higher than black students and American Indian students.

Data Source: Table 9.

Figure 14. Average Percent Correct on Core Tests by Parental Education



Observations:

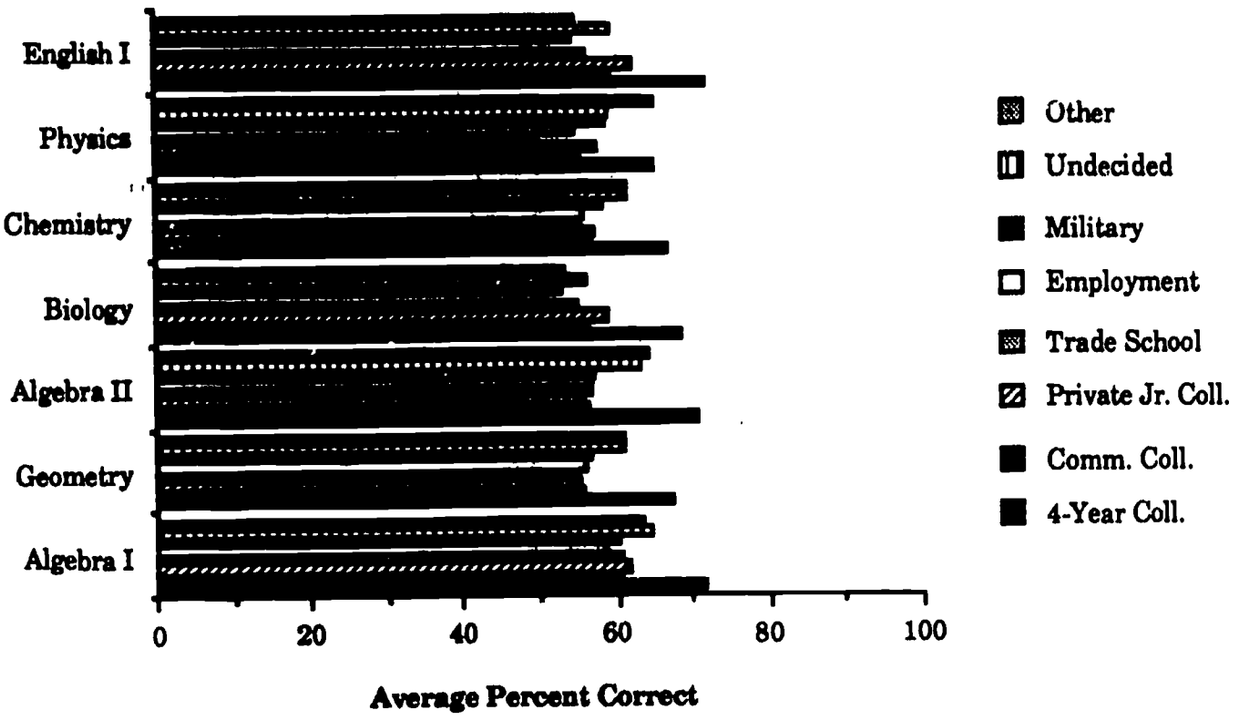
- Average score differences by parental education occur for all subjects.
- The largest difference is between averages for students whose parents have some education past high school and all other students.
- In the select math and science courses the differences among students whose parents have a high school education or less are small.

Note:

Students recorded the education level of the parent with the most education.

Data Source: Table 9.

Figure 15. Average Percent Correct on Core Tests by Post High School Plans

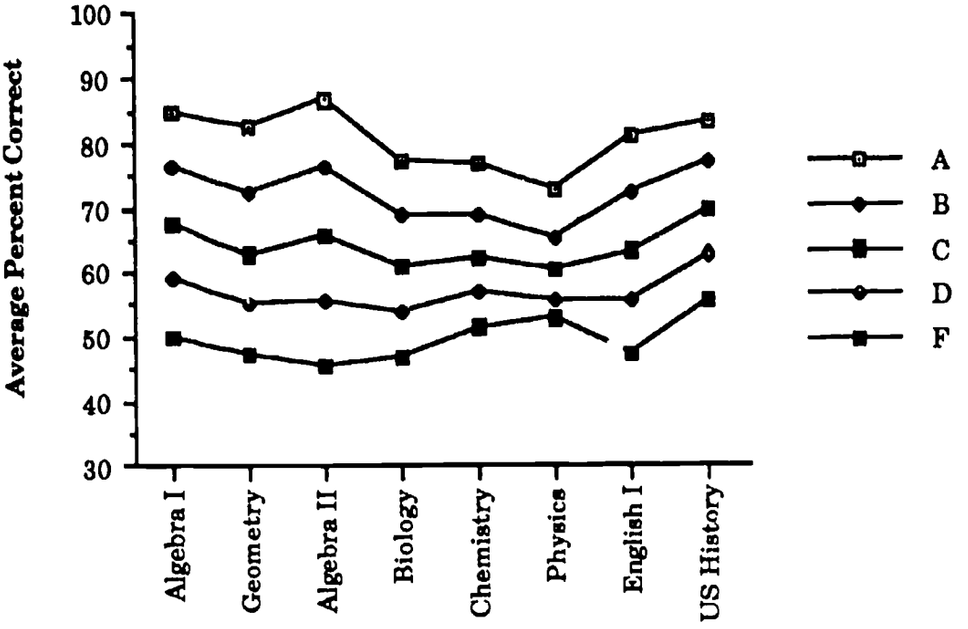


Observations:

- Students who plan to continue their education in a four-year college score substantially higher on average than students with other post high school plans.
- In the selective math courses there is very little difference in average performance among students who intend to work, enlist in the military, attend trade or business schools, attend community colleges, or attend private junior colleges.

Data Source: Table 9.

Fibure 16. Percent Correct Scores by Course and Letter Grade



Observations:

- There is a consistent difference in average scores for each anticipated final grade across all subjects, which is an indication of test validity, in that the results parallel the grading practices of teachers for students' work over the course of the school year.

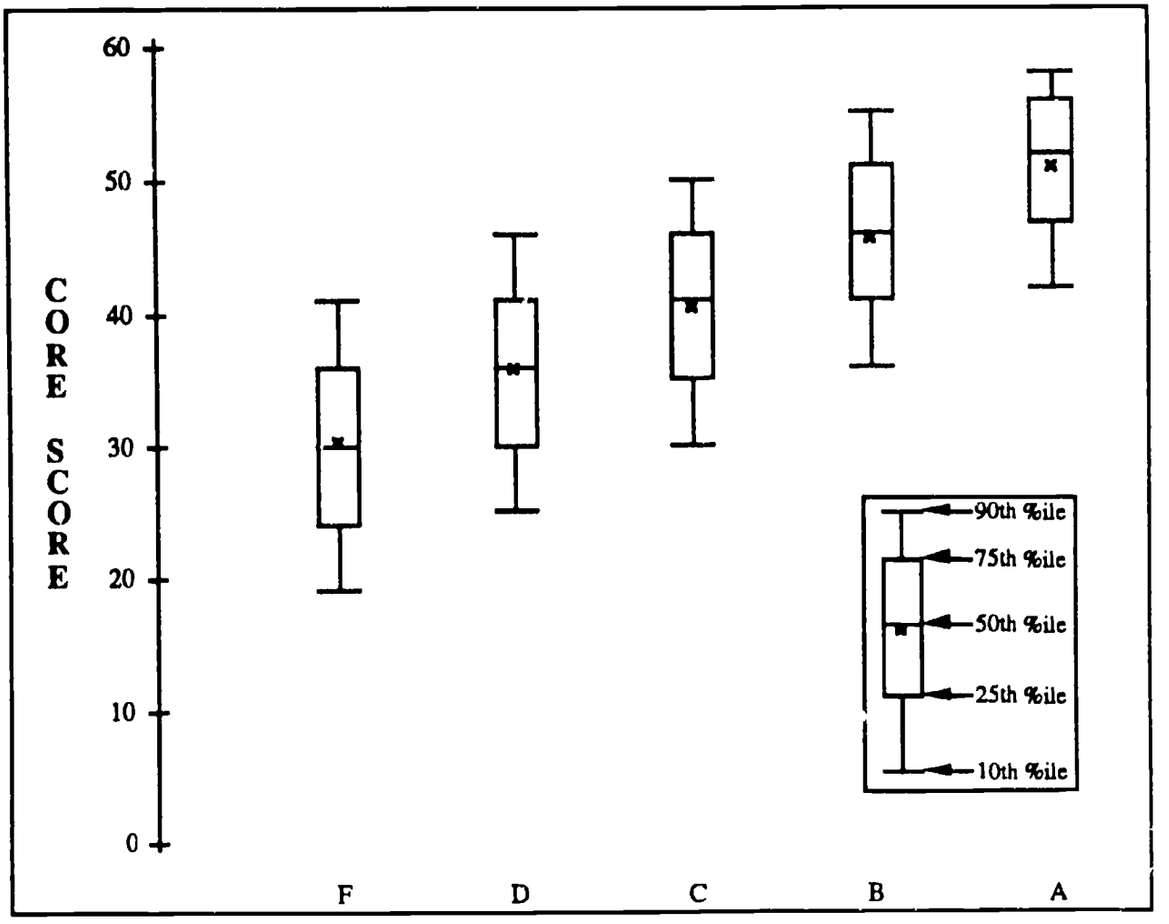
- The range of average scores for each letter grade is narrower for the two selective science courses than for the other courses.

Notes:

Teachers recorded the final grade they anticipated giving each student at the time of the test administrations.

Data Source: Table 9.

Figure 17. Distributions of Algebra I Core Scores by Anticipated Final Grade: 1990



Observations:

- The box and whisker plots illustrate the variation in anticipated final grades when compared with a common standard: scores on the Algebra I Test.
- The range of scores reflects differences in grading standards across tracks, teachers, schools, and school systems.

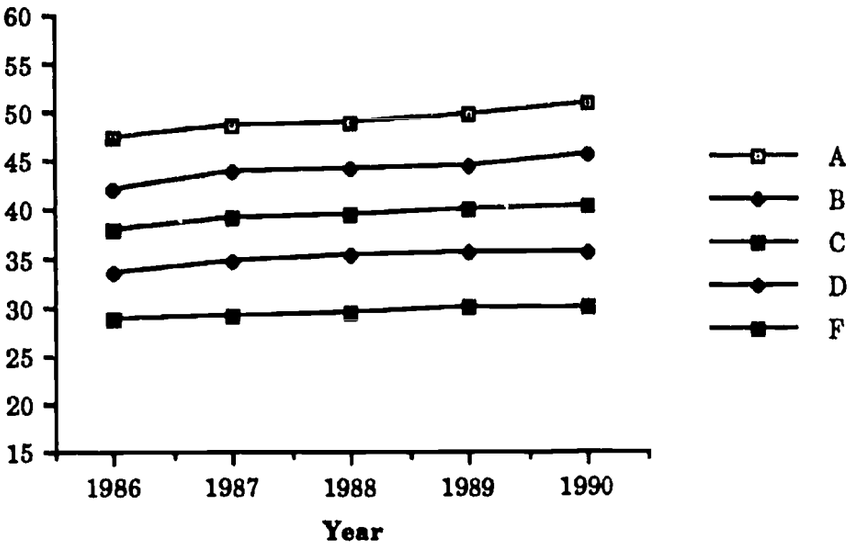
Notes:

Box and whisker plots illustrate not only the typical value such as a mean or median, but also the range in values. They are useful in evaluating the variation among groups, and for comparing the high and low values for different groups.

The companion subject area volumes contain average scores for each letter grade group and percentages of students attaining each letter grade for all public school systems. In those volumes it can be seen that although there are differences in standards across school systems, within most school systems the average scores for each letter grade group differ in a systematic way, paralleling performance on the end-of-course tests.

Data Source: not in text

Figure 18. Average Algebra I Scores by Anticipated Final Grade: 1986-1990



Observations:

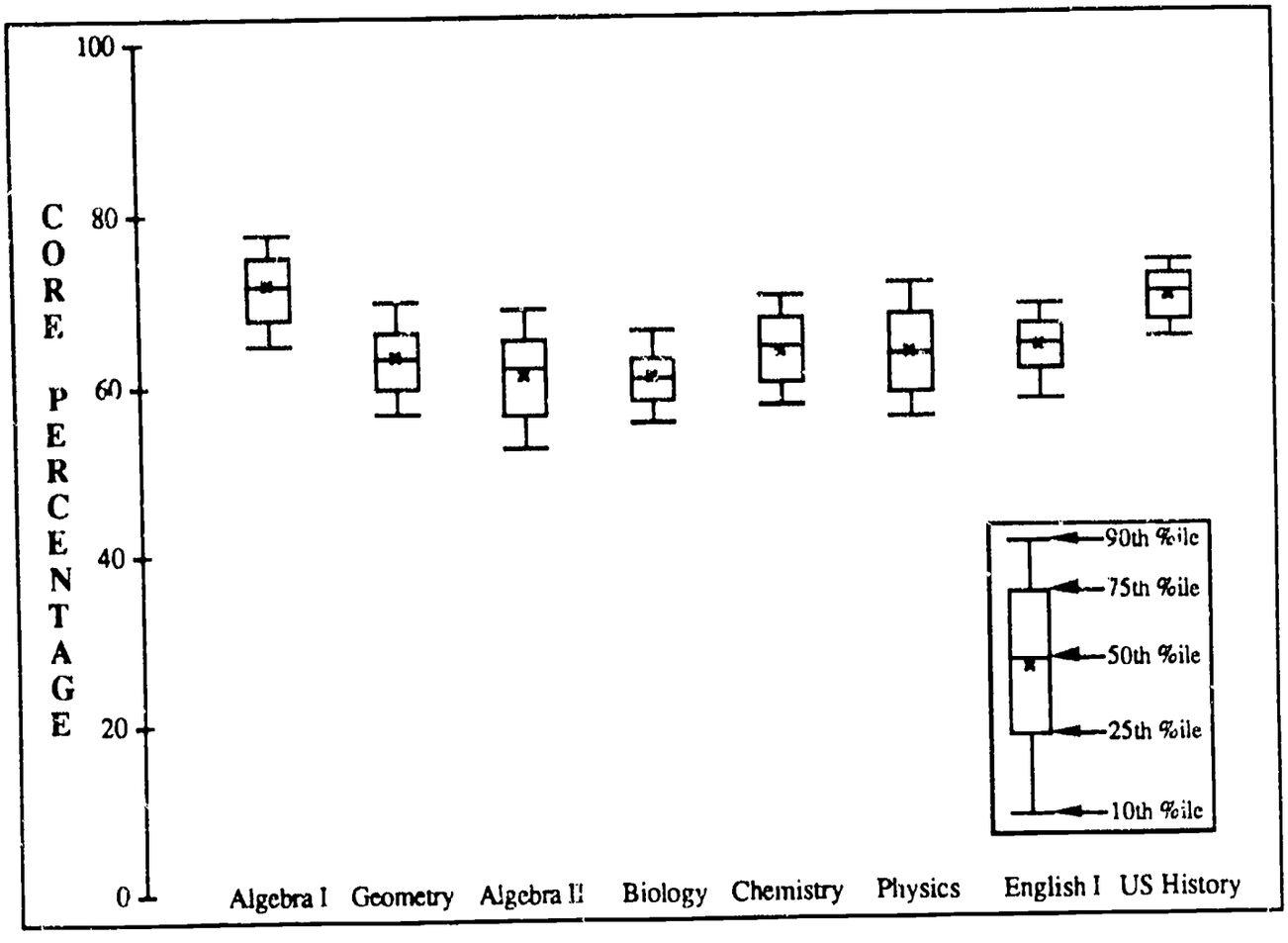
- An increase in average scores for each letter grade has paralleled the increase in overall average scores.
- It appears that grading standards for students have become more stringent as overall achievement has increased.

Notes:

Teachers recorded the final grade they anticipated giving each student at the time of test administration.

Data Source: Reports of Student Performance for Algebra I, 1986 through 1989.

Figure 19. Plot of Average Core Performance for 134 School Systems.



Observations:

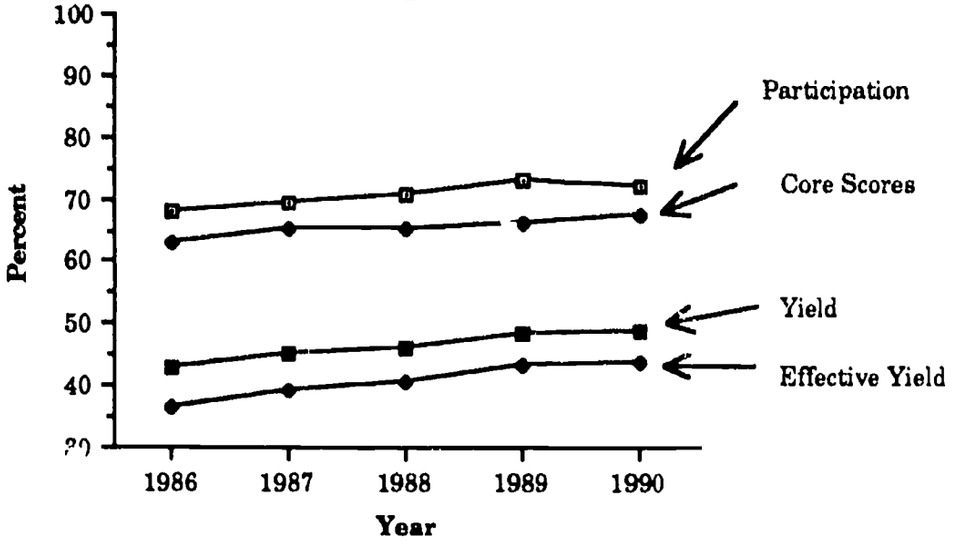
- The widest variations in school system performance occur among the selective courses in math and science, with narrower differences among most school system averages occuring for the general courses of Biology, English I, and U.S. History.
- For U.S. History, the range of average scores for the middle 50 percent of school systems is about 3 test items (5 percentage points), or slightly more than half a letter grade on the grading scale.
- For Algebra II, the range for the middle 50 percent of school systems is about 5 items (about 10 percentage points), or an entire letter grade.

Note:

Box and whisker plots illustrate not only the typical value such as a mean or median, but also the range in values. They are useful in evaluating the variation among groups, and for comparing the high and low values for different groups.

Data Source: Section V.

Figure 20. Participation, Average Scores, Yield, and Effective Yield for Algebra I: 1986-1990



Observations:

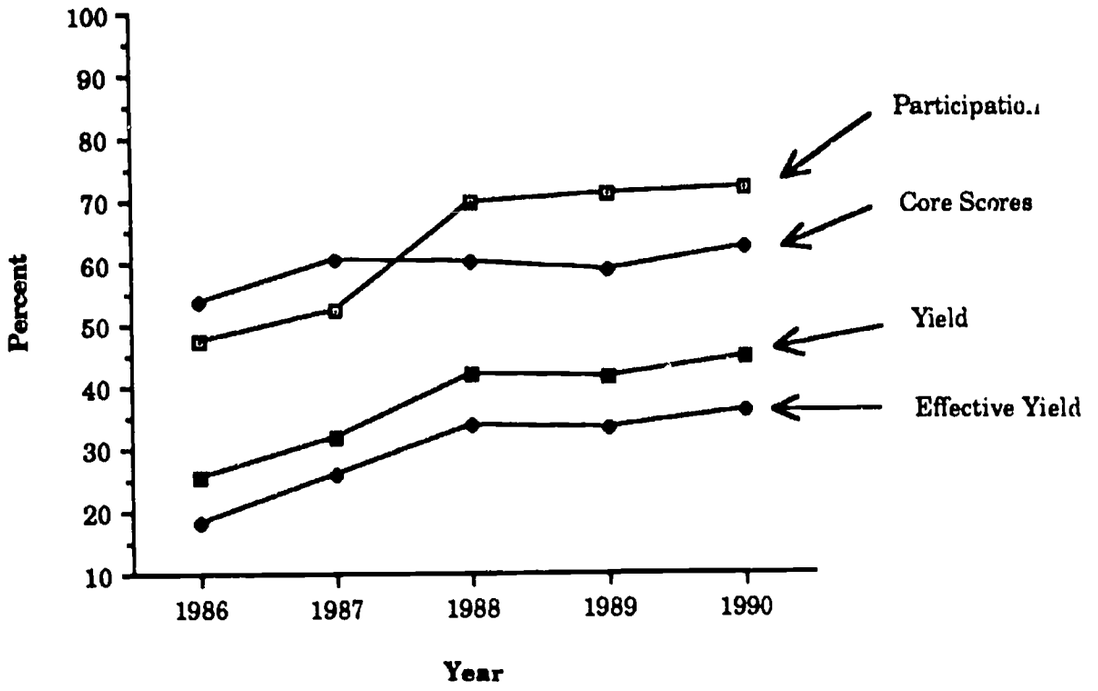
- Since the initial administration in 1986, participation and average scores have increased, resulting in increases in yield and effective yield.
- Gains in effective yield have paralleled gains in yield, indicating that the additional students taking Algebra I are capable of performing at acceptable levels.

Notes:

Yield is an index of the effectiveness of a program which takes into account both participation and performance. It is calculated by multiplying the participation in a course by the average percent of core items answered correctly and then multiplying by 100. Yield would be 100 if all students took a course and all students achieved a perfect score. Effective yield is a similar index but it counts as "participating" only those students whose achievement is above a cutoff point estimating whether they will pass the course.

Data Source: Tables 3, 8, and 11.

Figure 21. Richmond County Participation, Average Scores, Yield, and Effective Yield for Algebra I: 1986-1990



Observations:

- Since the initial administration in 1986, participation in Algebra I in Richmond County has increased dramatically.
- The increase in participation has been accompanied by an increase in performance, and a corresponding increase in yield and effective yield.
- These results suggest that school systems can increase participation in Algebra I, *and* increase performance at the same time.

Data Source: not in text.

Figures 22-26. Average Algebra I Core Scores and Participation for School Systems Grouped by 1989-90 8th Grade California Achievement Test Total Battery Scores.

Observations:

- The range in participation among school systems with similar average ability, as measured by the 8th grade California Achievement Test, is almost as great as the range among all school systems.
- Variation in participation cannot be explained totally by variations in the ability levels of students populations.

Notes:

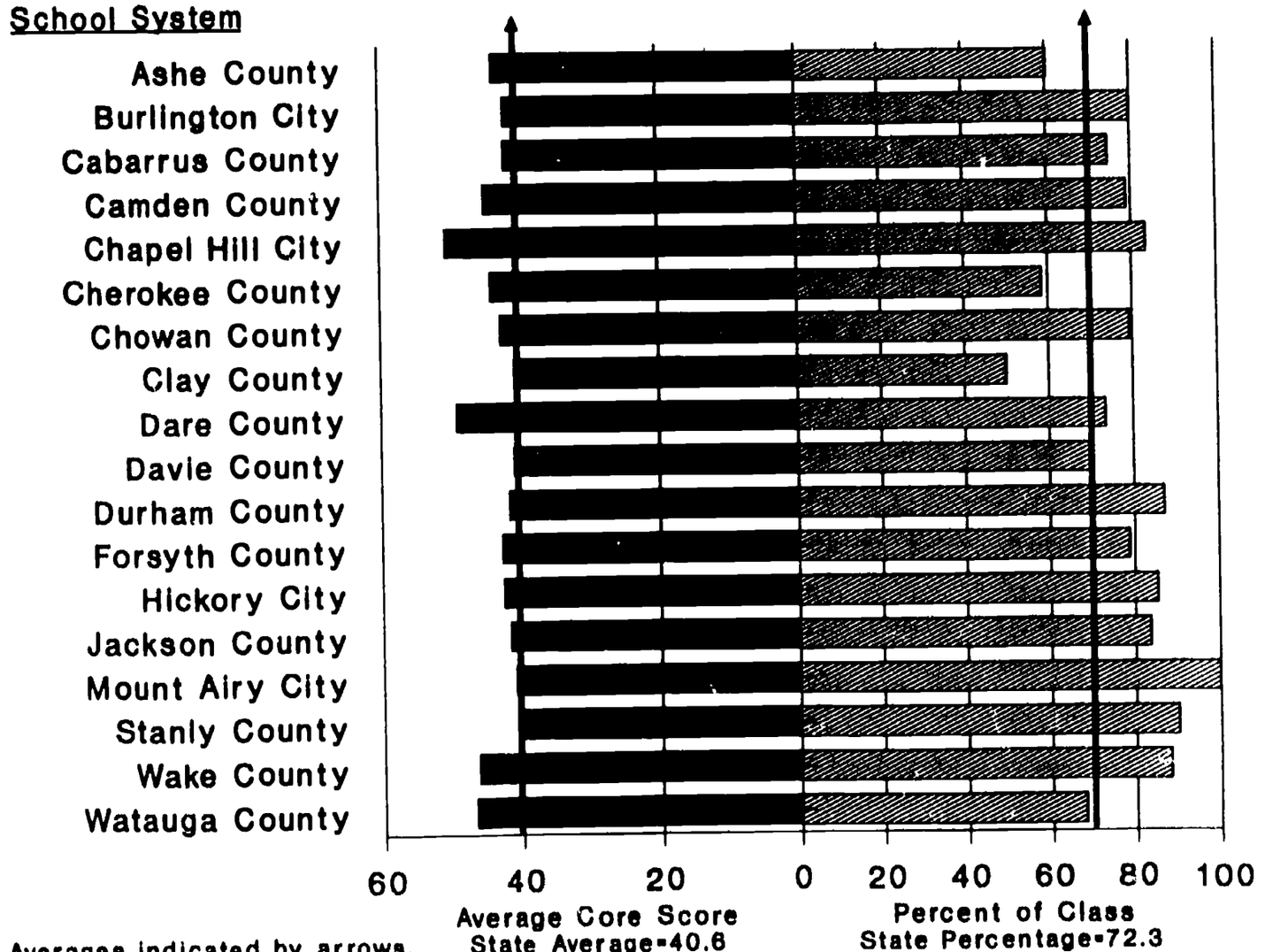
School systems are arranged in alphabetical order within groups.

Data Source: not in text.

Figure 22

Average Algebra I Core Scores and Participation for School Systems Scoring at the 65th Percentile or Above on the 1989-90 8th Grade CAT

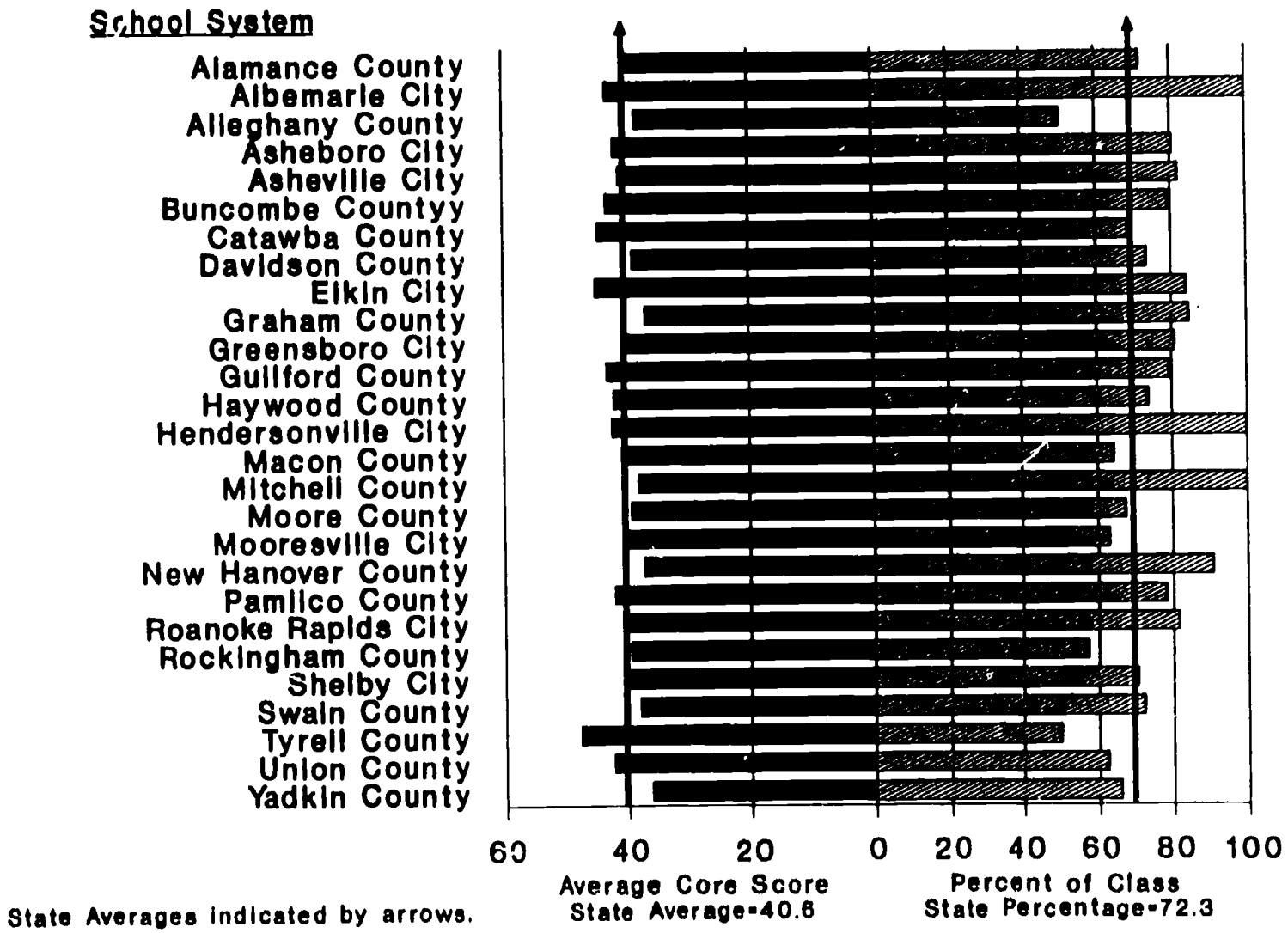
School Systems are arranged in alphabetical order



State Averages indicated by arrows.

Figure 23
Average Algebra I Core Scores and Participation for School Systems Scoring at the 60th-65th Percentile on the 1989-90 8th Grade CAT

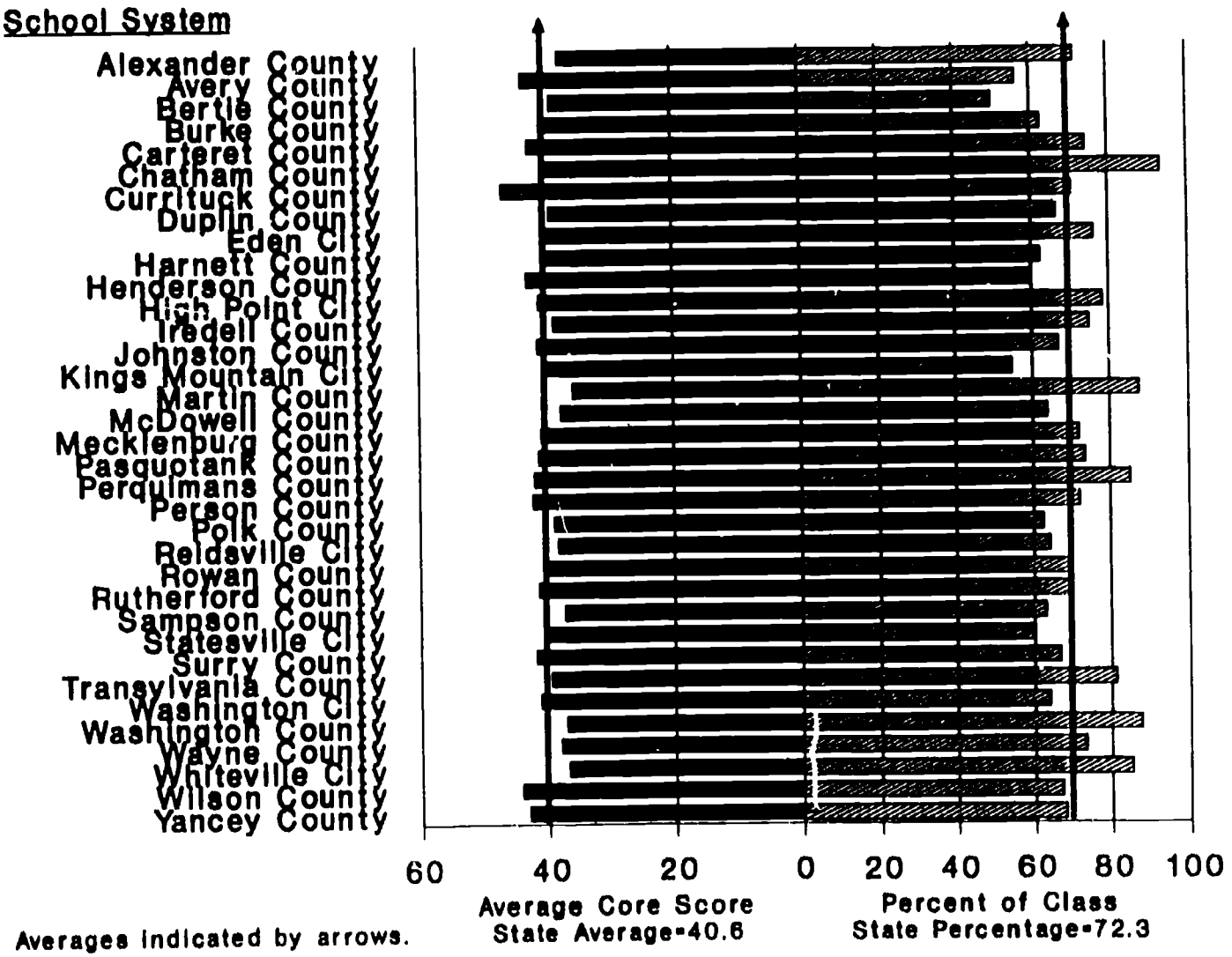
School Systems are arranged in alphabetical order



State Averages indicated by arrows.

Figure 24
Average Algebra I Core Scores and Participation for School Systems Scoring at the 55-59th Percentile on the 1989-90 8th Grade CAT

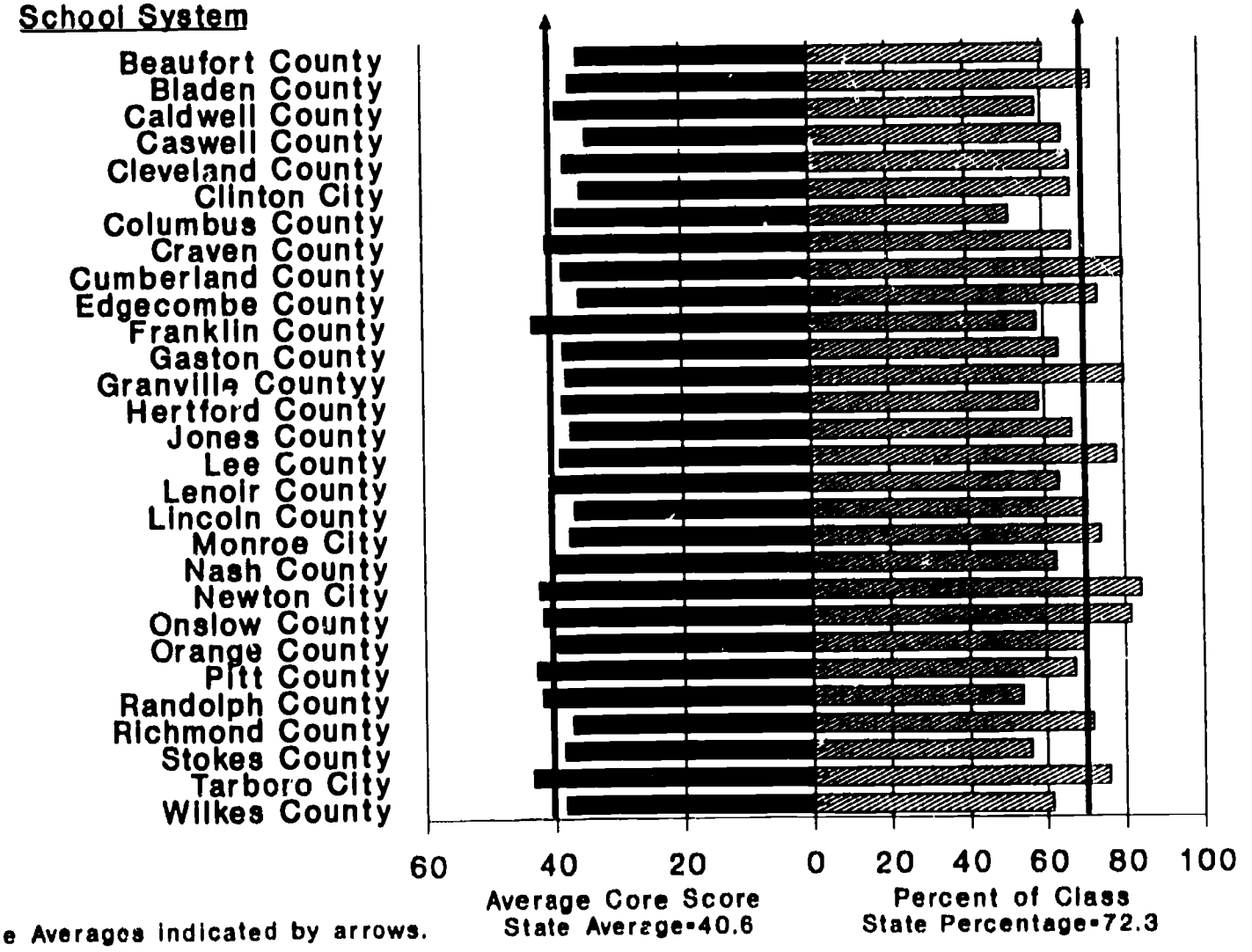
School Systems are arranged in alphabetical order



State Averages indicated by arrows.

Figure 25
Algebra I Core Scores and Participation for School Systems Scoring at the 50-54th Percentile on the 1989-90 8th Grade CAT

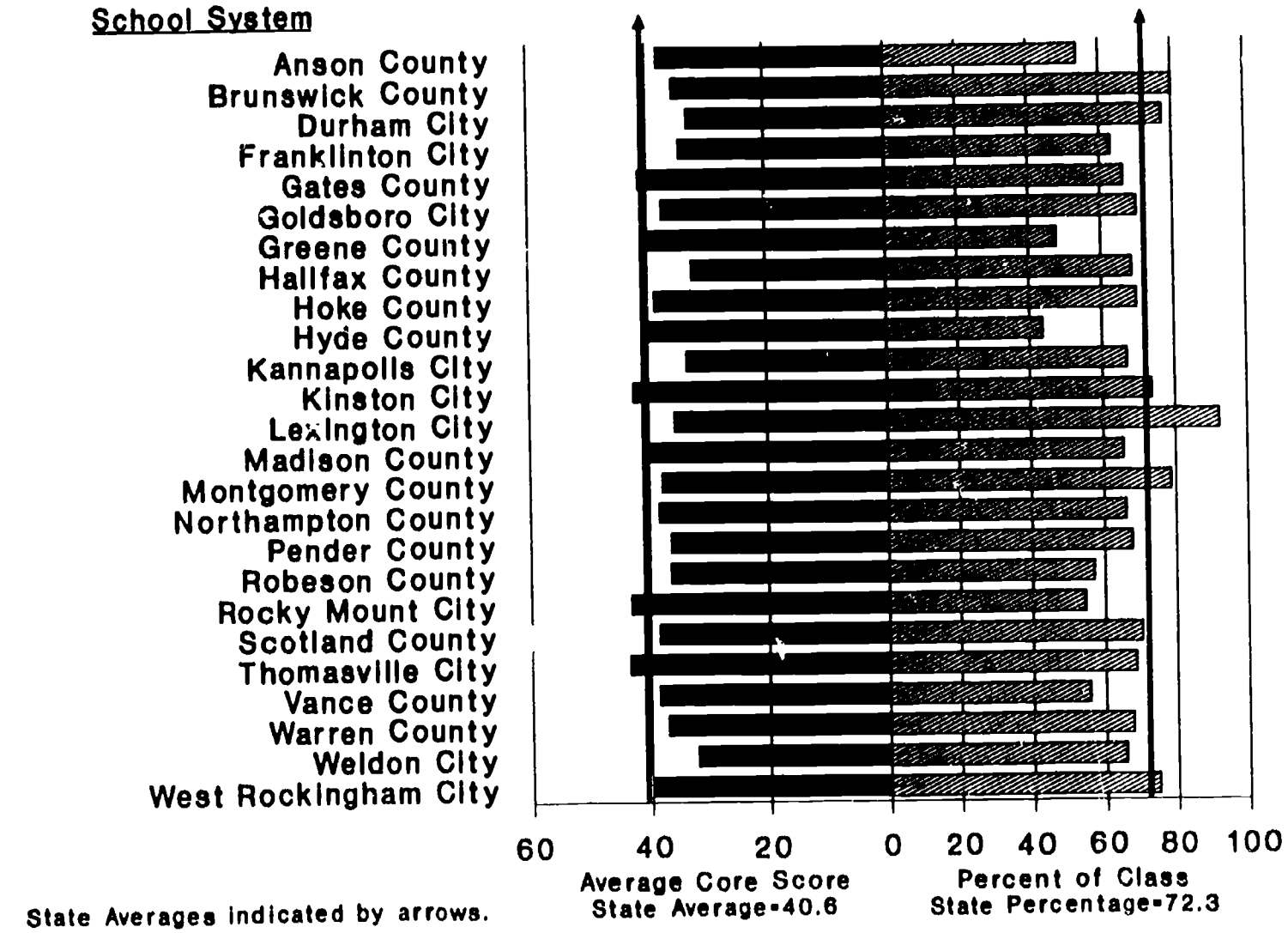
School Systems are arranged in alphabetical order



State Averages indicated by arrows.

Figure 26
Average Algebra I Core Scores and Participation for School Systems Scoring Below the 50th Percentile on the 1989-90 8th Grade CAT

School Systems are arranged in alphabetical order



State Averages indicated by arrows.

Section IV

Outstanding School Systems

Outstanding School Systems: 1989-90 Performance on End-of-Course Tests[1]

Rank	Algebra I
1.	Chapel Hill City (83.5%)
2.	Dare County (73.5%)
3.	Tyrrell County (50.0%)
4.	Watauga County (68.0%)
5.	Currituck County (70.7%)
6.	Wake County (88.4%)
T7.	Elkin City (84.3%)
T7.	Camden County (79.0%)
9.	Catawba County (68.6%)
10.	Wilson County (67.3%)
11.	Cherokee County (58.7%)
12.	Tarboro City (75.8%)
T13.	Avery County (56.5%)
T13.	Ashe County (60.4%)
T13.	Thomasville City (68.6%)

14 school systems were within 1 raw score point of the 15th school system.

Rank	Biology
1.	Chapel Hill City (98.1%)
2.	Dare County (81.0%)
3.	Hickory City (78.7%)
4.	Roanoke Rapids City (91.1%)
T5.	Elkin City (102.7%)
T5.	Wake County (92.1%)
T5.	Hendersonville City (127.0%)
8.	Watauga County (89.9%)
9.	Pamlico County (86.9%)
10.	Davie County (77.5%)
11.	Mount Airy City (103.7%)
12.	Macon County (83.2%)
T13.	Burlington City (98.2%)
T13.	Carteret County (92.5%)
T14.	Mooresville City (113.2%)
T14.	Cabarrus County (83.4%)

5 school systems were with 1 raw score point of the 15th school system.

Rank	Geometry
1.	Dare County (46.2%)
2.	Chapel Hill City (86.6%)
3.	Mooresville City (54.9%)
4.	Tyrrell County (41.7%)
5.	Ashe County (39.9%)
6.	Catawba County (39.7%)
7.	Wake County (65.2%)
8.	Macon County (37.2%)
9.	Roanoke Rapids City (52.1%)
T10.	Currituck County (42.7%)
T10.	Albemarle City (74.3%)
12.	Hickory City (63.3%)
13.	Yancey County (38.2%)
T14.	Watauga County (55.5%)
T14.	Hendersonville City (45.2%)

11 school systems were within 1 raw score point of the 15th school system.

Rank	Chemistry
1.	Elkin City (50.8%)
2.	Mooresville City (26.1%)
3.	Davie County (35.1%)
4.	Roanoke Rapids City (45.6%)
5.	Watauga County (28.9%)
6.	Transylvania (30.9%)
7.	Wake County (58.9%)
8.	Perquimans County (31.2%)
9.	Rocky Mount City (26.9%)
T10.	Mitchell County (18.7%)
T10.	Union County (33.5%)
T10.	Rutherford County (22.0%)
T13.	Chapel Hill City (56.4%)
T13.	Wilson County (29.9%)
T13.	Durham County (46.4%)

8 school systems were within 1 raw score point of the 15th school system

[1]T means tie. Participation indices are in parentheses.

Outstanding School Systems: 1989-90 Performance on End-of-Course Tests, cont'd.[1]

Rank	Algebra II
1.	Chapel Hill City (58.0%)
2.	Watauga County (36.7%)
3.	Dare County (51.3%)
4.	Perquimans County (36.8%)
5.	Currituck County (35.3%)
6.	Chatham County (40.0%)
7.	Carteret County (39.3%)
8.	Albemarle City (50.7%)
9.	Wake County (65.2%)
10.	Greene County (34.4%)
11.	Chowan County (43.4%)
12.	Kinston City (34.4%)
13.	Rocky Mount City (25.6%)
14.	Pitt County (38.7%)
T15.	Gates County (37.0%)
T15.	Clinton City (40.1%)
	6 school systems were within 1 raw score point of the 15th school system.

Rank	Physics
1.	Mooresville City (6.5%)
2.	Chapel Hill City (46.0%)
3.	Asheboro City (6.1%)
4.	Watauga County (10.3%)
5.	Chowan County (5.6%)
T6.	Carteret County (7.2%)
T6.	Rutherford County (5.5%)
8.	Pasquotank County (3.5%)
T9.	Clay County (11.8%)
T9.	Davie County (6.2%)
11.	Lenoir County (3.6%)
12.	Mitchell County (7.4%)
T13.	Albemarle City (13.2%)
T13.	Henderson County (5.8%)
15.	Kings Mountain City (3.6%)
	7 school systems were within 1 raw score point of the 15th school system.

Rank	U.S. History
1.	Wake County (84.9%)
2.	Montgomery County (74.4%)
3.	Dare County (99.5%)
4.	New Hanover County (81.7%)
5.	Hickory City (76.9%)
6.	Davie County (74.5%)
7.	Elkin City (100.0%)
T8.	Chapel Hill City (93.3%)
T8.	Watauga County (73.7%)
10.	Macon County (81.1%)
T11.	Union County (80.4%)
T11.	Burlington City (82.3%)
T11.	Cabarrus County (83.7%)
14.	Hendersonville City (110.7%)
T15.	Henderson County (71.8%)
T15.	Randolph County (72.2%)
T15.	Currituck County (89.2%)
	22 school systems were within 1 raw score point of the 15th school system.

Rank	English I
1.	Elkin City (100.0%)
2.	Chapel Hill City (93.0%)
3.	Whiteville City (95.5%)
4.	Hickory City (87.3%)
5.	Roanoke Rapids City (92.5%)
6.	Burlington City (97.4%)
7.	Hendersonville City (119.2%)
8.	Mooresville City (89.4%)
9.	Wake County (93.0%)
10.	Perquimans County (86.8%)
11.	Cherokee County (85.2%)
12.	Mount Airy City (88.4%)
T13.	Mitchell County (90.3%)
T13.	Currituck County (87.8%)
T13.	Cabarrus County (88.1%)
	8 school systems were within 1 raw score point of the 15th school system.

[1]T means tie. Participation indices are in parentheses.

Outstanding School Systems: 1989-90 Participation in Selective Courses[1]

Rank	Algebra I
1.	Hendersonville City
2.	Albemarle City
3.	Mount Airy City
4.	Mitchell County
5.	Chatham County
6.	Lexington City
7.	New Hanover County
8.	Stanly County
9.	Wake County
10.	Washington County
11.	Martin County
12.	Durham County
13.	Hickory City
14.	Whiteville City
15.	Perquimans County

7 school systems were within 3 percentage points of the 15th system.

Rank	Chemistry
1.	Albemarle City
2.	Shelby City
3.	Hendersonville City
4.	Wake County
5.	Gates County
6.	Whiteville City
7.	Chapel Hill City
8.	New Hanover County
9.	Eden City
10.	Tarboro City
11.	Wayne County
12.	Elkin City
13.	Alleghany County
14.	Dare County
15.	Weldon City

7 school systems were within 3 percentage points of the 15th system.

Rank	Geometry
1.	Chapel Hill City
2.	Clay County
3.	Swain County
4.	Elkin City
5.	Albemarle City
6.	New Hanover County
T7.	Jones County
T7.	Guilford County
9.	Burlington City
10.	Durham County
11.	Perquimans County
12.	Mount Airy City
T13.	Asheboro City
T13.	Chatham County
15.	Kannapolis City

5 school systems were within 3 percentage points of the 15th system.

Rank	Physics
1.	Chapel Hill City
2.	Whiteville City
3.	Eden City
4.	Transylvania County
5.	Wake County
6.	Weldon City
7.	Tyrrell County
8.	Burlington City
9.	Hendersonville City
10.	Camden County
11.	Mount Airy City
12.	Gates County
T13.	Tarboro City
T13.	Alexander County
15.	Durham County

9 school systems were within 3 percentage points of the 15th system.

Rank	Algebra II
1.	Hendersonville City
2.	Elkin City
3.	Wake County
4.	Shelby City
5.	Roanoke Rapids City
6.	Chapel Hill City
7.	Cherokee County
8.	Kannapolis City
9.	Mount Airy City
10.	Durham County
11.	Macon County
12.	Cabarrus County
13.	Forsyth County
14.	Hickory City
15.	Dare County

11 school systems are within 3 percentage points of the 15th system.

[1]T means tie.

Outstanding School Systems: 1989-90 Yield in Selective Courses[1]

Rank	Algebra I
1.	Albemarle City
2.	Hendersonville City
3.	Chapel Hill City
4.	Wake County
5.	Mount Airy City
6.	Mitchell County
7.	Elkin City
8.	Chatham County
9.	Hickory City
10.	Durham County
11.	Dare County
12.	Stanly County
13.	Newton City
14.	Perquimans County
15.	Camden County

9 school systems were within 3 points of the 15th system.

Rank	Chemistry
1.	Albemarle City
2.	Hendersonville City
3.	Wake County
4.	Chapel Hill City
5.	Shelby City
6.	Elkin City
7.	Whiteville City
T8.	New Hanover County
T8.	Alleghany County
10.	Dare County
11.	Gates County
12.	Roanoke Rapids City
13.	Durham County
14.	Eden City
15.	Guilford County

10 school systems were within 3 points of the 15th system.

Rank	Geometry
1.	Chapel Hill City
T2.	Clay County
T2.	Albemarle City
4.	Elkin City
T5.	Wake County
T5.	Burlington City
7.	Swain County
8.	Durham County
9.	New Hanover County
10.	Guilford County
11.	Mount Airy City
12.	Perquimans County
13.	Hickory City
14.	Chatham County
15.	Asheboro City

2 school systems were within 3 points of the 15th system.

Rank	Physics
1.	Chapel Hill City
2.	Wake County
3.	Whiteville City
4.	Eden City
5.	Transylvania County
6.	Burlington City
7.	Hendersonville City
8.	Camden County
9.	Durham County
10.	Mount Airy City
11	Pitt County
12.	Cherokee County
13.	Tyrrell County
14.	Tarboro City
15.	Alexander County

16 school systems were within 3 points of the 15th system.

Rank	Algebra II
1.	Hendersonville City
2.	Elkin City
3.	Chapel Hill City
4.	Wake County
5.	Dare County
6.	Cherokee County
7.	Mount Airy City
8.	Durham County
9.	Roanoke Rapids City
10.	Forsyth County
11.	Albemarle City
12.	Cabarrus County
13.	Hickory City
T14.	Macon County
T14.	Shelby City

8 school systems are within 3 percentage points of the 15th system.

[1] I means ue

Outstanding School Systems: 1989-90 Effective Yield in Selective Courses[1]

Rank	Algebra I
1.	Albemarle City
2.	Hendersonville City
3.	Wake County
4.	Mount Airy City
5.	Chapel Hill City
6.	Elkin City
7.	Dare County
8.	Camden County
9.	Mitchell County
10.	Newton City
11.	Chatham County
12.	Perquimans County
13.	Durham County
14.	Chowan County
15.	Hickory City

9 school systems were within 3 points of the 15th system.

Rank	Chemistry
1.	Albemarle City
2.	Wake County
3.	Hendersonville City
4.	Chapel Hill City
5.	Elkin City
T6.	Whiteville City
T6.	Shelby City
8.	Alleghany County
9.	Dare County
10.	New Hanover County
11.	Roanoke Rapids City
12.	Durham County
13.	Guilford County
14.	Burlington City
15.	Greensboro City

10 school systems were within 3 points of the 15th system.

Rank	Geometry
1.	Chapel Hill City
2.	Albemarle City
3.	Clay County
4.	Elkin City
5.	Wake County
6.	Burlington City
7.	Durham County
8.	Perquimans County
T9.	Hickory City
T9.	Guilford County
11.	New Hanover County
12.	Mooresville City
13.	Mount Airy City
14.	Chatham County
15.	Asheboro City

3 school systems were within 3 points of the 15th system.

Rank	Physics
1.	Chapel Hill City
2.	Wake County
3.	Whiteville City
4.	Eden City
5.	Burlington City
6.	Transylvania County
7.	Hendersonville City
8.	Camden County
9.	Durham County
10.	Pitt County
11.	Mount Airy City
12.	Cherokee County
13.	Tarboro City
T14.	New Hanover County
T14.	Alexander County

17 school systems were within 3 points of the 15th system.

Rank	Algebra II
1.	Hendersonville City
2.	Elkin City
3.	Chapel Hill City
4.	Wake County
5.	Dare County
6.	Mount Airy City
7.	Cherokee County
8.	Durham County
9.	Albemarle City
10.	Forsyth County
11.	Cabarrus County
12.	Roanoke Rapids City
13.	Hickory City
14.	Macon County
15.	Newton City

3 school systems are within 3 points of the 15th system.

[1]T means tie.

Outstanding School Systems: Gain in Performance 1989 to 1990[1]

Rank	Algebra I
1.	Avery County
2.	Yancey County
3.	Hyde County
T4.	Anson County
T4.	Washington County
T4.	Thomasville City
7.	Bertie County
8.	Hertford County
9.	Clay County
10.	Swain County
T11.	Camden County
T11.	Albemarle City
T11.	Hendersonville City
T11.	Weldon City
15.	Alamance County

10 school systems were within 1 raw score point of the 15th system.

Rank	Biology
1.	Pamlico County
2.	Polk County
3.	Mooresville City
4.	Jones County
T5.	Pasquotank County
T5.	Cabarrus County
7.	Swain County
T8.	Warren County
T8.	Washington City
10.	Thomasville City
11.	Surry County
12.	Kannapolis City
T13.	Transylvania County
T13.	Perquimans County
15.	Hickory City

15 school systems were within 1 raw score point of the 15th system.

Rank	Geometry
1.	Bladen County
2.	Dare County
3.	Macon County
4.	Franklinton City
T5.	Clay County
T5.	Elkin City
T5.	Tyrrell County
8.	Weldon City
9.	Edgecombe County
10.	Caswell County
11.	Asheboro City
T12.	Jackson County
T12.	Cabarrus County
T14.	Anson County
T14.	Polk County
T14.	Harnett County

25 school systems were within 1 raw score point of the 15th system.

Rank	Chemistry
1.	Perquimans County
2.	Franklinton City
3.	Thomasville City
4.	Yancey County
5.	Elkin City
6.	Kannapolis City
7.	Edgecombe County
8.	Jones County
9.	Hendersonville City
10.	Hyde County
11.	Hoke County
12.	Henderson County
T13.	Wilson County
T13.	Tyrrell County
15.	Kings Mountain City

18 school systems were within 1 raw score point of the 15th system.

Rank	Algebra II
1.	Lincoln County
T2.	Hendersonville City
T2.	Elkin City
4.	Martin County
T5.	Newton City
T5.	Surry County
7.	McDowell County
8.	Perquimans County
9.	Greene County
10.	Burlington City
11.	Kannapolis City
12.	Kings Mountain City
13.	Swain County
14.	Albemarle City
T15.	Hyde County
T15.	Kinston City

13 school systems were within 1 raw score point of the 15th system.

Rank	U.S. History
1.	Richmond County
2.	Warren County
3.	Franklinton City
4.	Hyde County
T5.	Gates County
T5.	Bertie County
T5.	Haywood County
8.	Scotland County
9.	Forsyth County
T10.	Thomasville City
T10.	Goldsboro City
T12.	Vance County
T12.	Whiteville City
14.	Graham County
15.	Caswell County

31 school systems were within 1 raw score point of the 15th system.

[1]T means tie.

Outstanding School Systems: Gain in Participation 1989 to 1990[1]

Rank	Algebra I
1.	Mitchell County
2.	Halifax County
3.	Weldon City
4.	Tarboro City
5.	Edgecombe County
T6.	Durham City
T6.	Pamlico County
8.	Lexington City
9.	Chowan County
10.	Clinton City
11.	Jackson County
12.	Madison County
T13.	Newton City
T13.	Albemarle City
15.	Rutherford County

8 school systems were within 3 percentage points of the 15th school system.

Rank	Geometry
1.	Clay County
2.	Jones County
3.	Chatham County
4.	Kings Mountain City
5.	Perquimans County
6.	Mount Airy City
7.	Camden County
8.	Rowan County
9.	Graham County
10.	Swain County
11.	Chapel Hill City
12.	Granville County
13.	Mooresville City
14.	Washington County
15.	Lincoln County

6 school systems were with 3 percentage points of the 15th school system.

Rank	Algebra II
1.	Cherokee County
2.	Alleghany County
3.	Polk County
4.	Elkin City
5.	Swain County
6.	Mount Airy City
T7.	Macon County
T7.	Reidsville City
9.	Hickory City
10.	Transylvania County
11.	Currituck County
T12.	Goldsboro City
T12.	Pasquotank County
14.	Eden City
15.	Stanly County

11 school systems were within 3 percentage points of the 15th school system.

Rank	Chemistry
1.	Whiteville City
2.	Gates County
3.	Roanoke Rapids City
4.	Columbus County
5.	Goldsboro City
6.	Clinton City
7.	Albemarle City
8.	Polk County
9.	Elkin City
10.	Stanly County
11.	Alleghany County
12.	Reidsville City
13.	Clay County
14.	Onslow County
15.	Orange County

13 school systems were within 3 percentage points of the 15th school system

[1]T means tie.

Outstanding School Systems: Gain in Yield 1989 to 1990[1]

Rank	Algebra I
1.	Mitchell County
2.	Tarboro City
3.	Albemarle City
T4.	Pamlico County
T4.	Chowan County
T4.	Weldon City
7.	Newton City
8.	Edgecombe County
9.	Jackson County
10.	Madison County
11.	Lexington City
12.	Halifax County
13.	Rutherford County
14.	Iredell County
15.	Currituck County
	11 school systems were within 3 points of the 15th school system.

Rank	Geometry
1.	Clay County
2.	Jones County
3.	Chatham County
4.	Kings Mountain City
5.	Chapel Hill City
6.	Mooresville City
7.	Jackson County
8.	Rowan County
9.	Mount Airy City
10.	Perquimans County
11.	Bladen County
12.	Granville County
13.	Asheboro City
14.	New Hanover County
15.	Camden County
	13 school systems were with 3 points of the 15th school system.

Rank	Algebra II
1.	Elkin City
2.	Cherokee County
3.	Swain County
4.	Alleghany County
5.	Mount Airy City
6.	Transylvania County
7.	Eden City
T8.	Macon County
T8.	Currituck County
10.	Dare County
T11.	Hickory City
T11..	Lincoln County
T11.	Goldsboro City
14.	Stanly County
15.	Surry County
	14 school systems were within 3 points of the 15th school system.

Rank	Chemistry
1.	Elkin City
2.	Whiteville City
3.	Roanoke Rapids City
4.	Columbus County
5.	Albemarle City
6.	Alleghany County
7.	Gates County
8.	Goldsboro City
9.	Stanly County
10.	Clinton City
11.	Onslow County
12.	Edgecombe County
13.	Sampson County
14.	Beaufort County
15.	Hyde County
	23 school systems were within 3 points of the 15th school system

[1]T means tie.

Outstanding School Systems: Gain in Effective Yield 1989 to 1990[1]

Rank	Algebra I
1.	Albemarle City
2.	Mitchell County
3.	Tarboro City
4.	Chowan County
T5.	Washington County
T5.	Pamlico County
7.	Yancey County
8.	Newton City
9.	Goldsboro City
10.	Weldon City
11.	Madison County
12.	Iredell County
13.	Rutherford County
14.	Edgecombe County
15.	Jackson County
	10 school systems were within 3 points of the 15th school system.

Rank	Geometry
1.	Clay County
2.	Jones County
3.	Chatham County
4.	Kings Mountain City
5.	Bladen County
6.	Mooresville City
7.	Perquimans County
8.	Burlington City
9.	Chapel Hill City
10.	Granville County
11.	Jackson County
12.	Asheboro City
13.	Rowan County
14.	New Hanover County
15.	Guilford County
	16 school systems were with 3 points of the 15th school system.

Rank	Algebra II
1.	Elkin City
2.	Cherokee County
3.	Mount Airy City
4.	Albemarle City
5.	Swain County
6.	Hendersonville City
T7.	Currituck County
T7.	Transylvania County
9.	Dare County
10.	Macon County
11.	Lincoln County
12.	Eden City
13.	Surry County
14.	Alleghany County
15.	Hickory City
	17 school systems were within 3 points of the 15th school system.

Rank	Chemistry
1	Elkin City
2	Whiteville City
3	Roanoke Rapids City
4	Albemarle City
5	Columbus County
6	Alleghany County
7	Edgecombe County
8	Stanly County
9	Goldsboro City
10	Clinton City
11	Sampson County
T12	Hyde County
T12	Gates County
14	Beaufort County
15	Onslow County
	21 school systems were within 3 points of the 15th school system

[1]T means tie.

Section V

Results for Public School Systems

Average Performance on 1989-90 End-of-Course Tests by School System

NORTHEAST REGION	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
School System	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Beaufort County	35.8	59.7	36.5	60.8	34.9	62.3	37.5	56.9	38.7	64.6	32.7	54.5	55.8	55.8	40.3	67.1
Washington City	41.2	68.6	35.4	59.0	37.2	66.4	40.3	61.1	36.7	61.1	34.3	57.2	61.3	61.3	42.4	70.6
Bertie County	39.1	65.1	36.2	60.3	28.1	50.2	37.7	57.1	38.1	63.5	26.6	44.4	63.4	63.4	35.9	59.8
Camden County	44.9	74.9	41.0	68.3	37.0	66.1	40.6	61.5	37.8	63.0	39.6	66.0	68.8	68.8	42.3	70.6
Chowan County	42.6	71.4	41.4	69.0	41.6	74.2	39.2	59.3	38.3	63.9	44.4	74.1	67.4	67.4	41.9	69.8
Currituck County	46.7	77.9	42.3	70.6	43.3	77.2	42.0	63.7	41.3	68.8	40.5	67.6	68.9	68.9	44.2	73.6
Dare County	49.2	82.0	50.9	84.8	44.3	79.1	47.7	72.2	41.8	69.3	41.1	68.6	66.6	66.6	46.1	76.8
Gates County	41.5	69.1	41.7	69.5	41.0	73.1	38.2	57.8	35.0	58.3	33.5	55.8	59.0	59.0	42.0	70.0
Hertford County	38.6	64.4	31.6	52.6	34.3	61.3	35.7	54.1	34.5	57.6	36.7	61.1	60.2	60.2	38.2	63.7
Hyde County	40.5	67.6	37.8	63.0	39.6	70.7	34.0	51.6	41.7	69.5	33.9	56.5	59.5	59.5	39.1	65.2
Martin County	35.9	59.8	35.8	59.7	37.2	66.5	38.4	58.2	38.4	64.1	34.6	57.7	61.9	61.9	40.9	68.2
Pasquotank County	41.3	68.9	35.7	59.5	36.0	64.3	42.3	64.1	37.1	61.8	43.9	73.1	66.3	66.3	41.7	69.5
Perquimans County	42.0	70.1	39.7	65.1	43.8	78.2	42.4	64.2	42.8	71.3	38.3	63.8	70.1	70.1	43.4	72.3
Pitt County	43.0	71.6	39.0	64.9	41.3	73.7	41.1	62.3	39.6	66.0	40.2	67.1	62.1	62.1	43.7	72.8
Tyrrell County	47.6	79.3	44.9	74.8	37.5	66.9	38.6	58.5	38.5	64.2	29.9	49.9	65.8	65.8	40.2	67.0
Washington County	37.1	61.9	32.8	54.7	34.5	61.6	36.5	55.3	34.9	58.1	42.3	70.4	64.4	64.4	38.9	64.8
Brunswick County	35.5	59.1	35.4	59.1	34.8	62.1	40.6	61.5	35.0	58.4	37.2	61.9	60.4	60.4	39.8	66.4

End-of-course tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items.

Average Performance on 1989-90 End-of-Course Tests by School System

SOUTHEAST REGION	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
School System	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Carteret County	42.7	71.2	40.2	66.9	42.0	74.9	43.9	66.4	39.9	66.4	44.2	73.7	62.4	62.4	43.4	72.3
Craven County	41.2	68.7	38.7	64.5	39.2	69.9	39.1	59.3	40.0	66.7	39.4	65.7	65.4	65.4	43.5	72.4
Duplin County	39.3	65.5	35.4	59.1	35.3	63.1	39.1	59.3	36.9	61.4	38.0	63.4	64.3	64.3	41.8	69.6
Greene County	40.4	67.4	40.3	67.2	41.7	74.5	40.2	60.8	41.2	68.7	37.9	63.1	57.8	57.8	40.8	67.9
Jones County	37.3	62.1	35.3	58.8	34.6	61.9	40.9	62.0	34.9	58.2	36.4	60.7	56.7	56.7	40.2	67.0
Lenoir County	40.2	67.0	37.6	62.6	33.9	60.6	38.8	58.8	39.5	65.8	43.3	72.2	62.8	62.8	40.6	67.6
Kinston	42.7	71.1	37.8	63.0	41.5	74.1	38.6	58.5	38.6	64.4	37.9	63.1	60.4	60.4	39.8	66.4
New Hanover County	37.3	62.1	35.3	65.5	39.1	69.9	40.4	61.2	39.0	65.0	38.2	63.7	68.3	68.3	46.0	76.6
Onslow County	42.0	69.9	36.6	61.0	33.6	60.1	40.1	60.7	39.1	65.2	36.7	61.1	64.3	64.3	41.9	69.8
Pamlico County	42.1	70.2	40.3	67.2	39.1	69.9	44.7	67.7	35.8	59.7	39.0	65.0	62.1	62.1	38.4	64.0
Pender County	36.5	60.8	35.4	58.9	34.4	61.4	37.5	56.8	36.7	61.1	33.9	56.6	63.4	63.4	41.0	68.4
Sampson County	37.3	62.2	34.5	57.5	33.7	60.1	39.8	60.5	36.4	60.7	42.2	70.4	61.0	61.0	43.2	72.0
Clinton City	35.5	59.1	35.1	58.5	41.0	73.1	34.8	52.7	36.1	60.2	30.9	51.5	60.9	60.9	42.4	70.7
Wayne County	38.0	63.4	36.7	61.2	35.0	62.5	40.5	61.3	35.2	58.7	38.7	64.6	63.2	63.2	42.2	70.3
Goldsboro City	37.5	62.5	33.8	56.3	33.0	58.9	36.9	56.0	32.1	53.5	37.2	62.1	58.1	58.1	39.5	65.8

End-of-course tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items.

Average Performance on 1989-90 End-of-Course Tests by School System

CENTRAL REGION / School System	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Durham County	41.7	69.4	41.3	68.8	40.3	71.9	43.7	68.3	42.2	70.3	40.8	67.9	67.8	67.8	44.0	73.3
Durham City	33.1	55.2	29.0	48.4	25.4	45.4	33.6	50.8	28.8	48.0	31.7	52.8	54.1	54.1	36.2	60.4
Edgecombe County	35.9	53.8	37.3	62.2	31.8	56.8	38.7	58.7	37.8	63.0	33.8	56.4	60.0	60.0	39.4	65.6
Tarboro City	43.7	72.8	36.0	59.9	36.1	64.5	39.1	59.3	35.5	59.1	36.9	61.5	67.1	67.1	39.4	65.6
Franklin County	43.4	72.4	37.9	63.2	36.1	64.4	38.7	58.7	38.1	63.5	35.9	59.9	64.0	64.0	41.0	68.3
Franklinton City	34.5	57.5	41.4	68.9	30.0	53.6	38.3	58.1	41.5	69.2	40.3	67.2	59.3	59.3	40.8	61.0
Granville County	36.0	63.3	35.9	59.9	36.0	64.4	37.3	56.5	37.3	62.1	38.1	63.5	62.3	62.3	41.4	69.0
Halifax County	32.5	54.2	28.1	46.9	28.6	47.5	31.7	48.0	34.6	57.6	28.6	47.6	52.1	52.1	35.5	59.1
Roanoke Rapids City	40.5	67.4	42.7	71.1	36.6	65.3	45.9	69.0	43.6	72.6	40.4	67.4	72.5	72.5	44.0	73.3
Weldon City	32.2	53.6	28.4	47.4	26.2	46.8	30.6	46.3	27.3	45.4	24.0	39.9	45.1	45.1	29.5	49.2
Johnston County	41.4	69.0	38.6	64.3	39.2	70.0	42.0	63.6	39.6	66.1	36.3	60.5	64.1	64.1	41.8	69.6
Nash County	40.7	67.8	39.6	66.1	38.5	68.8	38.6	58.5	38.7	64.5	42.8	71.4	62.6	62.6	42.4	70.6
Rocky Mount City	43.3	72.1	38.9	64.8	41.4	73.9	39.0	59.1	42.5	70.8	42.0	70.1	58.4	58.4	40.6	67.7
Northampton County	38.4	63.9	30.1	50.2	29.6	52.9	36.5	55.3	32.8	54.6	34.1	56.8	56.3	56.3	38.4	64.0
Vance County	38.6	64.4	34.0	56.6	33.7	60.2	35.6	53.9	34.9	58.1	38.0	63.3	56.8	56.8	41.0	68.3
Wake County	46.4	77.3	43.6	72.6	41.8	74.7	45.2	68.5	42.9	71.4	42.0	70.0	70.6	70.6	46.7	77.8
Warren County	37.2	62.1	33.6	55.9	30.0	53.6	39.5	59.9	34.7	57.9	**	**	56.9	56.9	41.9	69.9
Wilson County	44.3	73.8	39.8	66.3	39.1	69.8	40.7	61.7	42.2	70.3	41.7	69.5	63.6	63.6	42.6	71.1

End-of-course tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items.
**Only 1 student took the Physics Test in Warren County.

Average Performance on 1989-90 End-of-Course Tests by School System

SOUTH CENTRAL REGION	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
School System	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Bladen County	37.1	61.8	39.1	65.2	32.8	58.1	37.3	55.5	33.7	56.1	34.2	57.0	0.8	60.8	37.4	62.4
Columbus County	39.4	65.7	36.3	60.5	36.4	64.9	36.1	54.6	36.7	61.2	• •	• •	56.7	56.7	40.2	67.0
Whiteville City	36.8	61.4	37.0	61.6	35.2	62.8	41.0	62.1	38.7	64.4	35.2	58.8	73.0	73.0	43.8	73.0
Cumberland County	38 5	64 1	35 7	59 5	36.1	64.5	40.2	61.0	36.5	60.9	37.5	62.5	64.0	64.0	40.7	67.8
Hoke County	40.4	67.4	36.8	61.3	37.9	67.8	38.0	59.1	38.1	60.2	34.8	58.0	64.4	64.4	41.2	68.7
Robeson County	38 9	64.9	38.0	63 3	38 7	69.1	37.9	57.4	39.0	65.0	38.6	64.3	62.9	62.9	38.7	64.5
Lee County	39.1	65.2	37.5	62.6	37.8	67.4	38.4	58.2	37.8	62.7	40.8	68.0	62.2	62.2	42.8	71.3
Montgomery County	37 9	63 2	34 7	57 8	36 9	65.8	38.4	58.1	36.8	61.3	34.0	56.7	66.2	66.2	46.3	77.2
Moore County	38.5	65.4	36.8	60.8	38.2	68.2	37.4	56.6	39.2	65.4	37.6	62.6	61.8	61.8	42.5	70.8
Richmond County	37 3	62 2	34 3	57 1	33 2	59 2	39.3	59.6	33.2	55.4	33.6	56.0	60.1	60.1	43.2	71.9
Robeson County	36.6	61.0	33.4	55.7	31.3	55.9	35.4	53.6	34.8	58.0	33.4	55.6	57.0	57.0	38.2	63.6
Scotland County	38 5	64 1	36 5	60 9	34 1	60 8	36.9	55.9	40.7	67.8	35.6	59.7	59.7	59.7	43.8	72.9

[illegible] Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items. Algebra II contains 56 items, Biology, 66 items, and English I, 100 items

[illegible]

Average Performance on 1989-90 End-of-Course Tests by School System

NORTH CENTRAL REGION	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
School System	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Alamance County	40.4	67.3	38.6	64.3	35.3	63.0	39.6	60.3	39.7	66.1	37.9	63.1	65.4	65.4	42.1	70.2
Burlington City	42.0	69.9	41.5	69.1	40.6	72.5	43.9	66.5	40.3	67.1	40.9	68.1	72.0	72.0	44.4	74.0
Caswell County	34.7	57.8	35.5	59.2	30.3	54.1	37.3	56.8	33.4	55.7	36.2	60.3	56.8	56.8	40.0	66.7
Chatham County	40.3	67.1	39.7	66.2	42.4	75.6	40.8	61.8	39.6	65.9	39.3	65.4	64.1	64.1	43.6	72.7
Davidson County	39.0	64.9	36.8	61.3	33.0	58.8	41.7	63.1	36.2	60.4	33.7	56.1	65.8	65.8	42.5	70.8
Lexington City	35.7	59.4	34.2	57.0	27.7	49.4	37.0	56.1	35.1	58.5	32.5	54.2	65.5	65.5	40.6	67.6
Thomasville City	43.6	72.6	37.7	62.8	39.0	69.6	38.1	57.8	40.8	68.0	39.1	65.2	60.8	60.8	39.9	66.5
Forsyth County	42.8	71.3	39.5	65.9	40.5	72.3	41.0	62.1	39.8	66.4	39.7	66.2	66.6	66.6	41.8	69.6
Guilford County	43.2	71.9	40.2	67.0	39.8	71.1	42.2	63.9	39.3	65.5	37.7	62.8	66.8	66.8	43.8	73.1
Greensboro City	40.1	66.9	38.4	64.0	37.5	66.9	41.1	62.2	38.4	64.0	36.8	64.6	66.9	66.9	42.5	70.9
High Point City	41.2	68.7	38.6	64.4	39.0	69.6	40.6	61.5	41.4	69.0	41.4	68.9	65.8	65.8	42.9	71.5
Orange County	39.7	66.1	34.6	57.7	31.8	56.9	40.7	61.6	37.3	62.1	32.4	53.9	66.7	66.7	43.0	71.7
Chapel Hill City	50.6	84.4	47.6	79.3	48.6	86.9	48.8	74.0	42.2	70.4	45.6	76.0	74.0	74.0	44.6	74.3
Person County	42.3	70.5	38.8	64.7	38.7	69.1	42.7	64.8	40.7	67.9	33.6	56.0	65.0	65.0	42.5	70.8
Randolph County	42.1	70.1	39.4	65.7	37.4	66.8	40.1	60.8	36.0	60.1	39.1	65.1	66.1	66.1	44.2	73.6
Asheboro City	42.0	70.0	39.5	65.9	37.3	66.6	43.7	66.2	39.4	65.7	45.1	75.2	68.5	68.5	43.4	72.3
Rockingham County	39.5	65.8	38.6	64.3	37.5	67.0	42.0	65.0	38.0	63.3	41.3	68.8	62.9	62.9	41.5	69.1
Eden City	40.2	67.0	39.6	65.9	40.8	72.8	39.4	59.8	35.4	58.9	34.9	58.2	63.9	63.9	39.9	66.6
West, Rockingham	39.7	66.2	36.7	61.1	36.5	65.2	41.3	62.6	35.7	59.5	34.8	58.0	66.8	66.8	42.4	70.6
Reidsville City	38.3	63.9	37.1	61.9	33.7	60.2	37.6	56.9	34.2	56.9	35.8	59.7	65.4	65.4	39.8	66.4
Stokes County	38.6	64.4	37.5	62.5	35.5	63.6	37.5	56.8	36.6	61.0	37.2	61.9	61.5	61.5	40.1	66.8

End-of-course tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items.

Average Performance on 1989-90 End-of-Course Tests by School System

SOUTHWEST REGION	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
School System	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Anson County	38.1	63.5	32.8	54.7	27.7	46.4	33.9	51.3	31.5	52.5	37.6	62.7	61.8	61.8	36.4	60.7
Cabarrus County	42.0	70.0	41.0	68.3	39.6	70.7	43.8	66.3	38.8	64.6	42.0	69.9	68.9	68.9	44.4	74.0
Kannapolis City	33.8	56.9	33.2	55.4	32.4	57.9	38.5	58.4	39.1	65.2	37.6	62.7	61.9	61.9	40.2	67.0
Cleveland County	38.1	63.5	37.2	62.1	37.3	66.6	38.7	58.6	36.3	60.5	38.7	64.5	60.0	60.0	40.3	67.2
Kings Mountain City	39.8	66.3	38.0	63.4	39.3	70.1	38.2	57.9	39.5	65.8	42.9	71.5	62.3	62.3	39.6	66.0
Shelby City	39.7	66.2	36.1	60.2	33.6	60.0	40.3	61.1	36.6	61.0	39.7	66.1	67.9	67.9	41.7	69.6
Gaston County	36.4	64.0	35.9	59.8	33.9	60.5	37.7	57.1	35.3	58.8	34.3	57.2	61.7	61.7	40.1	66.9
Lincoln County	36.8	61.3	34.1	56.9	38.3	68.5	38.3	58.1	37.3	62.1	40.8	67.9	63.8	63.8	41.3	68.8
Mecklenburg County	40.8	69.2	39.2	65.3	37.9	67.7	40.5	61.4	38.7	64.5	38.2	63.7	63.2	63.2	41.5	69.2
Rowan County	40.7	67.8	37.4	62.4	34.7	61.9	40.8	61.8	36.9	61.5	35.7	59.5	62.3	62.3	42.1	70.2
Stanly County	40.0	66.6	35.0	58.4	35.9	64.1	41.2	62.4	40.5	67.6	36.0	60.1	63.6	63.6	43.3	72.2
Albemarle City	43.2	72.0	42.3	70.5	41.9	74.9	43.2	65.4	40.4	67.3	43.0	71.7	68.5	68.5	42.2	70.3
Union County	42.4	70.7	39.8	66.4	39.5	70.6	42.6	64.5	42.3	70.5	40.5	67.5	67.1	67.1	44.4	74.0
Monroe City	37.6	62.6	37.2	61.9	31.2	55.7	38.1	57.8	36.0	60.0	34.6	57.7	67.2	67.2	42.0	70.0

End-of-course tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items

Average Performance on 1989-90 End-of-Course Tests by School System

NORTHWEST REGION	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
School System	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Alexander County	37.6	62.7	34.9	58.1	36.4	64.9	39.4	59.7	31.4	52.4	35.9	59.8	64.3	64.3	41.0	68.3
Alleghany County	38.4	64.0	36.0	60.0	36.6	65.3	41.3	62.5	42.0	70.0	34.4	57.4	66.8	66.8	43.1	71.8
Ashe County	43.8	72.8	44.4	74.0	36.0	67.8	41.3	62.5	41.4	69.0	40.5	67.6	66.4	66.4	43.9	73.1
Avery County	43.6	72.7	35.7	59.5	33.2	59.2	37.0	56.1	38.1	63.5	37.1	61.8	65.5	65.5	41.5	69.2
Burke County	40.8	68.0	38.3	63.8	37.8	67.3	40.9	62.0	41.0	68.4	41.4	69.0	65.2	65.2	42.3	70.5
Caldwell County	39.3	65.5	39.2	65.4	37.7	67.2	42.2	63.9	40.5	67.6	37.7	62.9	63.5	63.5	42.0	70.1
Catawba County	44.5	74.2	43.9	73.1	38.6	68.9	40.8	61.7	39.2	65.3	38.2	63.7	65.8	65.8	42.9	71.5
Hickory City	42.6	71.0	42.2	70.3	39.1	69.9	46.3	70.2	41.0	68.3	39.1	65.1	72.9	72.9	45.9	76.5
Newton City	42.6	71.0	38.5	64.1	39.7	71.0	40.7	61.7	41.0	68.3	41.7	69.5	66.1	66.1	41.7	69.5
Davie County	40.9	68.2	41.4	69.0	37.5	67.0	44.5	67.4	44.4	74.0	43.4	72.3	66.2	66.2	45.7	76.1
Iredell County	38.8	64.8	37.8	62.9	33.5	59.8	38.4	58.2	36.1	60.2	36.0	60.0	61.9	61.9	41.0	68.3
Mooresville City	40.5	67.5	46.9	78.1	31.7	56.6	43.8	66.4	44.7	74.5	46.0	76.7	71.0	71.0	42.6	71.0
Statesville City	39.9	66.5	36.4	60.7	35.6	63.5	39.0	59.1	36.7	61.2	31.3	52.2	62.6	62.6	40.3	67.2
Surry County	41.9	69.8	39.5	65.8	39.8	71.0	42.5	64.4	37.5	62.5	35.9	59.9	64.8	64.8	43.2	72.0
Elkin City	44.9	74.9	39.5	65.9	40.9	73.1	45.2	68.5	44.8	74.6	42.7	71.1	75.9	75.9	45.2	75.4
Mount Airy City	40.9	68.2	40.6	67.6	39.1	69.8	44.4	67.2	40.6	67.7	38.4	64.1	69.3	69.3	42.5	70.9
Watauga County	46.8	78.0	42.0	70.0	44.7	79.8	44.4	68.0	43.4	72.3	44.6	74.4	68.5	68.5	44.6	74.3
Wilkes County	38.4	64.1	33.8	56.3	32.4	57.8	39.9	60.5	38.9	64.8	35.4	59.1	61.4	61.4	43.0	71.7
Yadkin County	36.3	60.5	38.4	64.1	35.9	64.2	39.9	60.5	34.9	58.2	34.0	56.7	63.8	63.8	43.2	72.0

End-of-course tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items.

Average Performance on 1989-90 End-of-Course Tests by School System

WESTERN REGION	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
School System	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct	Average Core	Percent Correct
Buncombe County	43.2	71.9	41.0	68.4	39.2	69.9	41.7	63.2	38.6	66.0	38.4	60.5	68.0	68.0	42.2	70.3
Asheville City	41.2	68.6	39.7	66.2	38.6	68.9	39.4	59.6	38.8	64.6	40.8	67.9	65.9	65.9	41.6	69.4
Cherokee County	44.1	73.4	38.8	66.0	39.7	70.9	42.1	63.7	39.8	66.0	38.8	64.7	69.9	69.9	43.9	73.2
Clay County	40.8	68.1	36.9	61.6	35.6	63.6	41.3	62.1	37.5	62.5	43.4	72.3	65.3	65.3	43.6	72.6
Graham County	36.9	61.5	36.0	60.0	37.9	67.6	35.8	54.3	34.6	57.7	35.2	58.7	64.8	64.8	41.5	69.1
Haywood County	42.1	70.1	37.7	62.9	33.3	59.4	39.8	60.3	38.8	64.7	38.6	64.3	65.3	65.3	43.7	72.8
Henderson County	43.0	71.6	41.6	69.9	39.6	70.8	41.8	63.0	41.0	68.3	43.0	71.6	65.5	65.5	44.2	73.7
Hendersonville City	42.4	70.6	42.0	69.9	40.8	72.9	45.2	68.4	39.7	66.2	41.0	68.3	71.7	71.7	44.3	73.8
Jackson County	41.7	69.5	41.2	68.5	37.0	66.1	41.0	62.1	41.1	68.4	36.3	60.4	65.5	65.5	43.6	72.7
Macon County	40.9	66.1	43.4	72.3	37.2	66.5	44.0	66.6	38.8	64.7	35.5	59.2	65.9	65.9	44.5	74.1
Madison County	40.3	67.1	38.4	63.8	39.3	70.2	38.1	59.3	33.0	55.0	40.4	67.9	58.0	58.0	43.9	73.2
McDowell County	37.7	62.9	34.8	58.1	38.0	67.9	38.6	58.4	40.0	66.7	35.6	59.3	61.2	61.2	40.4	67.4
Mitchell County	38.1	63.5	37.0	61.6	33.8	60.3	38.7	58.6	42.3	70.5	43.2	71.9	68.9	68.9	42.9	71.5
Polk County	38.9	64.8	39.8	66.4	31.1	55.5	41.8	63.3	33.8	56.3	32.0	53.3	67.8	67.8	39.0	65.1
Rutherford County	41.4	69.0	38.0	63.3	39.5	70.5	42.3	64.2	42.3	70.4	44.2	73.6	64.1	64.1	40.8	68.0
Swain County	38.0	63.4	35.6	59.3	34.6	61.8	41.0	62.1	37.7	62.8	39.7	66.2	64.3	64.3	42.6	71.0
Transylvania County	39.5	65.9	40.5	67.4	38.8	69.2	42.8	64.9	43.2	72.1	35.2	58.7	64.8	64.8	43.1	71.9
Yancey County	43.2	72.0	42.1	70.2	32.4	57.8	38.4	58.2	38.3	63.8	40.1	66.9	60.0	60.0	40.0	66.7

End-of-course tests vary in length: Algebra I, Geometry, Chemistry, Physics, and U.S. History contain 60 items; Algebra II contains 56 items; Biology, 66 items; and English I, 100 items.

Number Tested and Participation Indices for 1989-90 End-of Course Tests

NORTHEAST REGION	Algebra I			Geometry			Algebra II			US History	
School System	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Beaufort County	202	60.8%	64.1%	125	38.8%	40.2%	113	34.1%	43.8%	241	72.8%	92.1%
Washington City	194	64.0%	60.8%	159	57.0%	58.0%	122	42.8%	52.1%	253	88.8%	106.1%
Bertie County	185	80.0%	42.2%	177	49.8%	51.6%	85	28.8%	27.4%	236	83.5%	104.8%
Camden County	64	79.0%	71.1%	37	49.3%	46.8%	43	51.2%	57.3%	73	86.9%	97.3%
Chowan County	158	78.4%	71.2%	76	39.0%	39.0%	79	43.4%	54.5%	144	79.1%	99.3%
Currituck County	104	70.7%	61.2%	78	42.7%	42.9%	59	35.3%	41.5%	148	89.2%	104.9%
Dare County	184	73.5%	67.8%	97	48.2%	43.5%	98	51.3%	52.1%	190	98.5%	101.1%
Gates County	89	66.4%	66.4%	56	47.9%	52.8%	44	37.0%	43.1%	109	91.6%	106.9%
Hertford County	183	58.5%	47.0%	145	47.6%	49.3%	111	31.8%	45.9%	274	78.1%	113.2%
Hyde County	34	43.6%	37.4%	34	53.1%	58.6%	21	28.4%	31.3%	75	101.4%	111.9%
Martin County	318	87.6%	76.3%	260	69.0%	66.2%	178	38.2%	47.7%	272	81.9%	99.7%
Pasquotank County	282	73.6%	71.0%	215	54.7%	59.7%	182	47.3%	59.1%	314	81.6%	101.9%
Perquimans County	116	65.3%	65.9%	79	67.5%	65.9%	48	36.8%	44.7%	91	72.8%	88.3%
Pitt County	864	67.3%	60.3%	740	58.5%	63.2%	476	38.7%	48.5%	989	80.3%	100.7%
Tyrrell County	28	50.0%	48.3%	20	41.7%	40.8%	28	43.1%	50.0%	56	86.2%	112.0%
Washington County	195	87.8%	80.9%	121	57.1%	63.0%	82	33.7%	39.6%	192	79.0%	92.8%

School System	Biology			Chemistry			Physics			English I	
	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90
Beaufort County	281	82.8%	90.4%	111	33.8%	42.9%	28	8.8%	10.8%	302	91.0%	95.9%
Washington City	246	88.2%	89.8%	136	47.7%	58.1%	34	12.3%	14.8%	285	94.1%	89.1%
Bertie County	278	78.3%	81.5%	81	21.4%	28.9%	11	3.8%	4.0%	233	79.2%	83.9%
Camden County	77	102.7%	97.5%	33	39.3%	44.0%	18	20.0%	25.0%	85	104.9%	94.4%
Chowan County	204	104.8%	104.8%	71	39.0%	49.0%	9	5.6%	6.0%	198	98.5%	89.2%
Currituck County	155	87.1%	87.8%	36	21.8%	25.4%	24	12.8%	15.1%	129	87.8%	75.9%
Dare County	170	81.0%	76.2%	96	49.7%	50.5%	22	10.9%	11.8%	216	96.4%	88.8%
Gates County	106	90.6%	100.0%	70	58.8%	68.8%	29	19.0%	24.8%	127	94.8%	94.8%
Hertford County	272	88.2%	92.5%	121	34.8%	50.0%	15	4.6%	5.8%	268	85.0%	88.4%
Hyde County	48	75.0%	82.8%	21	28.4%	31.3%	8	11.5%	13.8%	75	96.2%	82.4%
Martin County	364	82.5%	92.6%	169	41.4%	50.4%	68	17.1%	21.8%	339	93.4%	81.3%
Pasquotank County	332	84.5%	92.2%	144	37.4%	46.8%	14	3.5%	5.0%	361	94.3%	90.9%
Perquimans County	73	62.4%	60.8%	39	31.2%	37.9%	8	5.8%	7.1%	118	86.8%	87.4%
Pitt County	1143	90.4%	97.6%	467	37.9%	47.6%	222	18.1%	24.5%	1284	100.1%	89.7%
Tyrrell County	54	112.6%	110.2%	24	36.9%	48.0%	12	23.6%	22.6%	54	96.4%	93.1%
Washington County	196	92.5%	102.1%	87	35.8%	42.0%	8	3.7%	4.7%	195	87.8%	80.9%

Number Tested and Participation Indices for 1989-90 End-of-Course Tests

SOUTHEAST REGION	Algebra I			Geometry			Algebra II			US History		
School System	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Brunswick County	521	80.2%	72.6%	339	48.3%	51.4%	209	29.1%	38.4%	511	71.1%	93.9%
Carteret County	442	74.3%	72.2%	318	55.7%	62.0%	236	39.3%	50.0%	446	74.3%	94.5%
Craven County	670	87.4%	80.7%	518	51.6%	55.2%	420	42.3%	51.8%	901	80.6%	96.6%
Duplin County	383	66.6%	62.7%	264	48.2%	50.7%	238	37.3%	43.4%	509	79.8%	92.9%
Greene County	123	47.5%	45.1%	95	44.3%	49.2%	78	34.4%	45.8%	172	75.8%	100.6%
Jones County	93	66.9%	65.5%	70	68.6%	67.3%	28	23.0%	29.5%	80	65.5%	84.2%
Lenoir County	338	63.5%	59.6%	257	50.7%	54.4%	232	43.4%	53.1%	426	79.8%	97.8%
Kinston City	264	73.9%	67.5%	179	48.2%	54.7%	139	34.4%	41.6%	325	80.4%	97.3%
New Hanover County	1284	90.7%	78.6%	1020	70.9%	74.9%	708	48.1%	55.2%	1250	81.7%	96.0%
Onslow County	946	81.5%	71.9%	653	55.8%	60.0%	569	46.4%	53.8%	1030	84.1%	97.4%
Pamlico County	111	78.2%	67.3%	79	51.9%	56.4%	49	30.4%	34.5%	126	78.3%	88.7%
Pender County	240	67.6%	60.6%	170	50.7%	49.1%	142	34.1%	39.3%	347	83.4%	96.1%
Sampson County	354	63.1%	57.2%	252	47.0%	51.0%	180	38.0%	42.1%	419	88.4%	97.9%
Clinton City	131	67.2%	60.4%	103	45.2%	51.0%	85	40.1%	48.8%	172	81.1%	98.3%
Wayne County	774	73.4%	73.7%	564	58.3%	59.8%	478	48.2%	51.0%	912	87.9%	97.0%
Goldsboro City	232	70.1%	67.1%	132	43.0%	46.6%	164	46.7%	56.9%	258	73.5%	89.6%

School System	Biology			Chemistry			Physics			English I		
	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90
Brunswick County	502	85.8%	91.4%	244	33.8%	44.9%	73	11.0%	14.5%	567	87.2%	78.0%
Carteret County	528	92.5%	102.9%	246	41.0%	52.1%	45	7.2%	10.3%	505	84.9%	82.5%
Craven County	793	78.3%	83.5%	313	31.5%	38.6%	116	11.0%	15.1%	905	91.0%	82.0%
Duplin County	524	89.0%	93.6%	237	37.1%	43.2%	50	7.8%	9.5%	496	86.3%	81.2%
Greene County	160	76.6%	82.9%	58	26.8%	33.9%	20	8.4%	12.0%	237	91.8%	88.8%
Jones County	81	89.2%	87.5%	37	30.3%	36.9%	10	7.5%	11.4%	122	87.6%	85.9%
Lenoir County	468	92.3%	99.2%	213	39.9%	49.7%	18	3.6%	4.7%	470	88.3%	82.9%
Kinston City	299	80.6%	91.4%	118	29.2%	35.3%	43	11.1%	15.9%	299	83.8%	76.5%
New Hanover County	2063	143.4%	150.3%	824	53.9%	64.6%	279	17.3%	23.7%	1350	94.7%	82.0%
Onslow County	1130	96.6%	103.8%	516	42.1%	48.8%	140	11.3%	13.9%	1132	97.5%	86.0%
Pamlico County	133	86.9%	95.0%	45	28.0%	31.7%	16	9.5%	12.6%	147	103.5%	89.1%
Pender County	347	103.6%	100.3%	133	32.0%	36.6%	47	11.2%	14.6%	312	88.1%	78.6%
Sampson County	467	87.1%	94.5%	162	34.2%	37.9%	18	3.4%	4.2%	509	90.7%	82.2%
Clinton City	194	85.1%	96.0%	79	37.3%	45.1%	9	4.5%	5.8%	177	90.8%	81.6%
Wayne County	928	92.7%	95.0%	529	51.0%	56.3%	125	12.3%	16.1%	1010	95.7%	96.2%
Goldsboro City	269	87.6%	95.4%	167	47.6%	58.0%	13	3.2%	4.2%	277	83.7%	80.1%

Number Tested and Participation Indices for 1989-90 End-of-Course Tests

CENTRAL REGION	Algebra I			Geometry			Algebra II			US History		
School System	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1988-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Durham County	1178	87.2%	78.7%	930	67.6%	69.8%	726	54.2%	63.7%	1081	90.7%	94.9%
Durham City	427	77.6%	64.2%	258	45.9%	57.1%	203	33.7%	52.9%	340	56.4%	88.5%
Edgecombe County	266	73.9%	60.9%	152	37.4%	40.6%	120	30.5%	42.3%	288	73.3%	101.4%
Tarboro City	183	75.8%	70.3%	121	47.1%	56.8%	89	40.6%	51.1%	186	75.8%	95.4%
Franklin County	212	58.2%	54.9%	155	45.5%	47.0%	124	29.6%	43.2%	329	78.5%	114.6%
Franklinton City	73	62.9%	56.2%	37	34.3%	34.6%	38	30.9%	44.7%	94	76.4%	110.6%
Granville County	408	80.3%	77.4%	288	52.6%	58.8%	165	28.5%	37.0%	434	79.1%	97.3%
Halifax County	332	68.5%	57.2%	158	30.4%	35.8%	149	26.8%	34.4%	400	71.8%	92.4%
Roanoke Rapids City	183	81.8%	81.9%	99	52.1%	49.7%	128	59.0%	64.8%	172	79.3%	86.9%
Weldon City	72	65.5%	64.3%	27	26.5%	35.5%	35	42.7%	54.7%	83	76.8%	98.4%
Johnston County	800	87.0%	83.7%	536	47.6%	52.7%	423	37.0%	46.1%	924	80.8%	100.7%
Nash County	596	82.6%	84.9%	422	48.3%	49.5%	374	40.3%	47.2%	739	79.6%	93.3%
Rocky Mount City	238	84.7%	87.0%	168	40.8%	43.8%	116	25.6%	34.6%	305	87.2%	91.8%
Northampton County	187	86.1%	86.6%	158	52.7%	60.1%	132	41.9%	53.4%	250	79.4%	101.2%
Vance County	309	85.6%	86.1%	198	37.1%	41.8%	171	29.5%	38.8%	444	76.8%	100.7%
Wake County	3958	88.4%	91.3%	2907	65.2%	68.7%	2755	65.2%	71.1%	3589	84.9%	92.8%
Warren County	172	87.7%	87.0%	95	38.4%	43.4%	70	29.3%	37.8%	177	74.1%	95.7%
Wilson County	602	87.3%	87.7%	406	46.2%	51.3%	326	34.5%	41.3%	751	79.5%	95.1%

School System	Biology			Chemistry			Physics			English I		
	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 8th Grade 1988-88	Percent 9th Grade 1989-90
Durham County	1327	96.4%	99.1%	621	46.4%	54.5%	265	16.8%	23.8%	1218	90.3%	91.5%
Durham City	410	73.0%	90.7%	251	41.6%	65.4%	52	8.2%	16.6%	415	75.5%	82.4%
Edgecombe County	314	77.3%	84.0%	174	44.3%	61.3%	58	13.0%	18.6%	332	92.2%	76.0%
Tarboro City	214	83.3%	100.5%	113	51.6%	64.9%	44	16.9%	25.1%	190	88.4%	91.9%
Franklin County	292	85.6%	88.5%	120	28.9%	41.8%	30	8.1%	10.0%	328	90.1%	85.0%
Franklinton City	99	91.7%	92.5%	21	17.1%	24.7%	9	6.9%	8.7%	101	87.1%	77.7%
Granville County	498	96.2%	96.1%	244	42.2%	54.7%	43	8.5%	11.0%	458	90.2%	96.9%
Halifax County	124	81.7%	96.1%	127	22.8%	29.3%	43	8.5%	13.1%	433	89.3%	74.7%
Roanoke Rapids City	173	91.1%	96.9%	98	48.8%	50.6%	17	8.5%	8.8%	185	92.5%	93.0%
Weldon City	68	66.7%	69.5%	40	48.8%	62.5%	25	24.0%	32.1%	88	80.0%	78.6%
Johnston County	1018	90.5%	100.1%	367	32.1%	40.0%	149	12.2%	16.3%	1095	91.7%	97.2%
Nash County	799	91.4%	93.6%	333	35.9%	42.0%	88	9.5%	12.9%	863	90.7%	94.0%
Rocky Mount City	334	90.7%	96.5%	122	26.9%	36.7%	67	14.7%	22.9%	393	91.4%	95.4%
Northampton County	248	82.7%	94.3%	136	43.2%	55.1%	30	9.1%	12.9%	251	84.2%	84.8%
Vance County	428	90.3%	90.3%	170	29.4%	38.8%	71	11.3%	16.7%	498	90.8%	91.0%
Wake County	4106	92.1%	97.0%	2488	58.9%	64.2%	1132	25.2%	29.3%	4188	93.0%	95.6%
Warren County	222	92.1%	101.4%	65	27.2%	35.1%	1	0.4%	0.6%	226	89.0%	74.8%
Wilson County	740	84.2%	93.4%	283	29.9%	35.8%	78	8.0%	12.0%	784	87.7%	75.2%

Number Tested and Participation Indices for 1989-90 End-of-Course Tests

SOUTH CENTRAL REGION	Algebra I			Geometry			Algebra II			US History	
School System	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Bladen County	304	72.9%	67.1%	259	55.9%	55.6%	185	37.2%	45.8%	369	74.2%	90.9%
Columbus County	323	51.4%	49.5%	241	36.5%	39.9%	160	24.3%	28.6%	545	82.8%	97.3%
Whiteville City	169	85.4%	77.2%	118	58.9%	64.0%	99	50.5%	61.1%	188	95.7%	101.7%
Cumberland County	2486	80.2%	78.9%	1864	59.5%	56.9%	1457	44.8%	51.1%	2772	85.3%	97.3%
Harnett County	863	82.3%	80.3%	403	43.6%	46.6%	255	28.8%	34.0%	723	81.6%	96.4%
Hoke County	280	69.8%	66.7%	162	39.7%	45.4%	102	26.9%	35.5%	283	74.7%	98.6%
Lee County	435	78.0%	80.1%	291	53.8%	59.3%	203	37.8%	49.3%	408	76.6%	99.8%
Montgomery County	257	78.8%	71.6%	168	52.8%	56.6%	161	45.2%	55.9%	265	74.4%	92.0%
Moore County	477	87.3%	83.7%	306	48.1%	50.8%	229	36.2%	42.0%	505	77.7%	92.7%
Richmond County	473	71.9%	71.1%	352	49.2%	54.9%	224	31.2%	44.7%	482	67.0%	96.2%
Robeson County	1087	87.2%	84.8%	751	38.5%	49.1%	509	26.1%	34.9%	1318	85.1%	90.5%
Scotland County	403	70.6%	60.9%	190	32.5%	39.2%	272	47.2%	67.2%	369	64.1%	91.1%

School System	Biology			Chemistry			Physics			English I	
	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90
Bladen County	414	89.4%	88.8%	175	35.2%	43.1%	30	5.9%	7.4%	378	90.6%	83.4%
Columbus County	561	89.6%	92.9%	222	33.7%	39.6%	0	0.0%	0.0%	578	91.9%	88.5%
Whiteville City	168	91.7%	86.7%	113	57.7%	69.8%	64	29.4%	36.8%	189	96.5%	86.3%
Cumberland County	2834	90.4%	86.6%	1246	38.3%	43.7%	338	9.9%	12.2%	2808	90.6%	89.1%
Harnett County	840	96.6%	97.4%	275	31.0%	36.7%	42	4.6%	6.3%	814	90.1%	87.2%
Hoke County	297	72.6%	83.2%	125	33.0%	43.6%	29	7.6%	10.6%	333	83.0%	79.3%
Lee County	475	87.8%	96.7%	157	29.2%	38.1%	43	7.3%	10.2%	523	93.7%	86.9%
Montgomery County	295	92.8%	99.3%	171	48.0%	59.4%	54	16.5%	21.1%	300	92.0%	83.8%
Moore County	512	91.6%	100.5%	288	44.3%	52.8%	66	12.2%	15.3%	617	88.5%	83.3%
Richmond County	522	73.0%	81.4%	225	31.3%	44.9%	36	4.9%	7.0%	574	87.2%	86.3%
Robeson County	1550	79.4%	89.0%	568	33.0%	45.6%	151	7.2%	11.3%	1524	82.4%	79.0%
Scotland County	510	87.2%	105.2%	139	24.1%	34.3%	28	4.5%	6.6%	529	92.6%	79.8%

Number Tested and Participation Inc. .s for 1989-90 End-of-Course Tests

NORTH CENTRAL REGION	Algebra I			Geometry			Algebra II			US History	
School System	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Alamance County	549	72.1%	84.8%	485	60.2%	66.5%	315	40.3%	47.3%	677	86.4%	101.7%
Burlington City	401	80.0%	74.8%	304	68.5%	73.1%	232	44.7%	53.2%	427	82.3%	87.9%
Caswell County	200	88.1%	84.1%	119	40.2%	41.5%	113	38.7%	47.3%	205	70.2%	86.8%
Chatham County	365	93.4%	85.3%	265	66.9%	69.2%	180	40.0%	49.2%	369	82.0%	100.9%
Davidson County	881	73.8%	89.2%	736	57.8%	61.9%	582	45.3%	51.9%	1040	80.7%	92.5%
Lexington City	200	92.2%	96.2%	130	50.8%	64.0%	75	27.9%	38.8%	184	68.4%	95.3%
Thomasville City	107	68.8%	58.2%	80	43.2%	48.5%	69	35.2%	43.4%	147	76.0%	92.8%
Forsyth County	2108	78.9%	70.0%	1488	54.8%	53.0%	1433	52.8%	56.5%	458	16.8%	18.1%
Guilford County	1446	78.4%	78.2%	1220	66.8%	70.8%	933	47.7%	56.8%	1628	83.3%	96.7%
Greensboro City	1166	81.0%	76.5%	1000	64.3%	67.1%	797	50.5%	61.8%	1143	72.4%	88.6%
High Point City	445	78.5%	71.5%	258	41.8%	51.8%	239	40.1%	53.6%	444	74.8%	99.8%
Orange County	270	70.7%	65.2%	247	58.2%	78.7%	185	44.4%	62.1%	303	72.7%	101.7%
Chapel Hill City	360	83.9%	83.1%	311	86.8%	77.8%	242	58.6%	66.1%	389	93.5%	104.8%
Person County	310	72.1%	74.0%	227	55.8%	57.9%	148	34.8%	42.8%	328	77.4%	95.1%
Randolph County	684	83.9%	49.9%	428	40.1%	48.1%	291	27.4%	37.8%	767	72.2%	96.7%
Asheboro City	188	80.8%	80.2%	174	66.9%	78.1%	135	47.0%	58.7%	205	71.4%	89.1%
Rockingham County	182	87.4%	84.1%	141	46.2%	51.8%	96	37.8%	44.7%	197	77.0%	91.8%
Eden City	236	76.3%	81.9%	152	47.1%	48.0%	132	44.1%	48.1%	260	87.0%	96.7%
West. Rockingham	303	74.8%	78.8%	133	49.4%	54.7%	104	38.9%	44.8%	224	78.9%	96.8%
Reidsville City	177	84.4%	82.3%	104	36.7%	40.9%	131	42.8%	55.5%	214	68.9%	90.7%
Stokes County	289	88.8%	88.6%	229	45.3%	50.0%	186	33.1%	42.4%	421	78.3%	96.8%

School System	Biology			Chemistry			Physics			English I	
	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90
Alamance County	784	97.4%	107.5%	321	40.9%	48.2%	90	10.5%	12.3%	739	97.1%	97.2%
Burlington City	438	96.2%	104.8%	237	45.7%	54.4%	132	22.1%	29.3%	488	97.4%	91.0%
Caswell County	274	92.6%	95.5%	132	49.2%	58.2%	33	10.8%	14.5%	293	92.2%	90.7%
Chatham County	372	93.9%	97.1%	147	32.7%	40.2%	32	6.8%	8.8%	376	96.2%	97.9%
Davidson County	1096	92.6%	96.0%	608	47.2%	54.1%	224	16.8%	22.4%	1118	93.1%	97.8%
Lexington City	205	90.1%	101.0%	76	26.3%	39.4%	48	17.2%	25.1%	188	85.7%	89.4%
Thomasville City	150	91.1%	90.9%	88	28.8%	35.2%	18	7.9%	10.6%	149	96.8%	91.9%
Forsyth County	2474	90.8%	88.0%	1078	39.5%	42.4%	438	14.3%	17.0%	2560	85.7%	85.0%
Guilford County	1603	90.2%	92.8%	940	48.1%	57.0%	224	11.3%	13.6%	1887	92.6%	91.3%
Greensboro City	1306	84.0%	87.7%	766	48.5%	59.4%	288	18.4%	22.7%	1278	88.6%	83.8%
High Point City	484	79.2%	97.0%	179	30.0%	40.1%	40	6.8%	9.1%	507	89.4%	91.3%
Orange County	302	72.4%	96.2%	178	42.7%	59.7%	37	9.1%	12.4%	323	84.6%	78.0%
Chapel Hill City	352	96.1%	87.8%	235	56.4%	69.2%	173	46.0%	47.3%	401	93.0%	92.6%
Person County	347	85.0%	88.5%	96	22.6%	27.7%	62	16.4%	23.4%	381	88.6%	90.9%
Randolph County	793	74.7%	89.5%	303	28.5%	39.4%	69	8.0%	8.3%	873	84.7%	78.3%
Asheboro City	244	93.8%	110.9%	131	45.6%	57.0%	17	6.1%	8.9%	220	89.1%	88.7%
Rockingham County	257	84.3%	93.8%	114	44.6%	63.0%	18	8.0%	7.6%	246	92.8%	87.2%
Eden City	298	92.3%	96.1%	161	53.9%	59.9%	93	26.6%	37.1%	277	88.8%	95.2%
West. Rockingham	234	87.0%	96.3%	113	36.8%	48.7%	30	9.1%	12.4%	222	81.9%	93.8%
Reidsville City	230	81.3%	90.6%	110	35.9%	46.6%	17	4.9%	7.3%	268	87.5%	94.4%
Stokes County	490	97.0%	107.0%	193	34.5%	44.3%	19	3.3%	4.3%	488	90.6%	96.1%

Number Tested and Participation Indices for 1989-90 End-of-Course Tests

SOUTHWEST REGION	Algebra I			Geometry			Algebra II			US History		
School System	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Anson County	227	53.6%	55.6%	158	40.5%	42.9%	163	41.6%	50.5%	328	83.9%	101.8%
Cabarrus County	700	74.6%	73.7%	553	59.5%	65.0%	526	52.6%	66.6%	834	83.7%	105.6%
Kannapolis City	225	66.8%	62.0%	216	65.3%	80.6%	201	56.5%	75.0%	257	72.6%	95.9%
Cleveland County	459	67.1%	67.7%	264	42.9%	46.5%	221	33.1%	40.6%	521	78.1%	95.6%
Kings Mountain City	190	64.9%	61.1%	170	59.0%	69.6%	97	19.6%	27.1%	244	72.0%	99.9%
Shelby City	175	70.6%	67.0%	154	61.1%	60.6%	141	59.7%	63.5%	197	83.5%	88.7%
Gaston County	1558	63.7%	66.9%	1236	49.6%	54.2%	864	32.4%	42.6%	2028	73.6%	96.3%
Lincoln County	479	70.6%	74.1%	419	63.5%	65.3%	290	39.6%	48.3%	556	76.5%	92.6%
Mecklenburg County	3656	72.1%	72.0%	3318	62.2%	61.6%	2450	42.6%	51.3%	4460	77.5%	83.6%
Rowan County	891	70.2%	70.0%	762	63.4%	68.5%	511	43.4%	56.0%	849	72.1%	93.1%
Stanly County	434	66.2%	66.4%	307	59.7%	63.3%	233	45.4%	54.2%	400	78.0%	93.0%
Albemarle City	163	121.2%	101.7%	104	74.3%	73.8%	69	50.7%	50.7%	132	97.1%	97.1%
Union County	816	62.4%	55.3%	470	51.9%	55.2%	370	37.6%	43.0%	792	80.4%	92.1%
Monroe City	169	74.1%	68.7%	98	44.5%	54.4%	91	35.8%	55.5%	150	59.1%	81.5%

School System	Biology			Chemistry			Physics			English I		
	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 8th Grade 1986-88	Percent 9th Grade 1989-90
Anson County	353	90.5%	95.9%	92	23.8%	28.8%	30	7.7%	10.8%	392	92.9%	96.1%
Cabarrus County	776	83.4%	91.2%	390	39.2%	49.4%	110	10.5%	13.2%	825	88.1%	96.8%
Kannapolis City	249	79.2%	92.9%	136	39.0%	51.9%	33	10.2%	12.7%	294	87.2%	91.0%
Cleveland County	556	84.3%	91.3%	257	38.5%	47.2%	42	6.3%	9.1%	654	95.6%	96.5%
Kings Mountain City	283	81.9%	92.3%	93	27.4%	37.7%	13	3.8%	5.8%	290	80.8%	80.8%
Shelby City	234	92.9%	92.1%	153	84.8%	88.9%	19	7.0%	8.2%	217	87.5%	83.1%
Gaston County	2140	86.6%	93.6%	972	38.2%	48.2%	387	13.8%	20.0%	2179	89.1%	93.8%
Lincoln County	571	86.5%	88.9%	265	36.4%	44.1%	33	4.3%	5.8%	561	82.9%	96.8%
Mecklenburg County	4482	84.1%	83.3%	2527	43.9%	52.9%	789	13.6%	17.2%	4698	85.7%	88.5%
Rowan County	1007	83.6%	90.5%	476	40.4%	52.2%	151	11.0%	14.6%	1090	85.9%	85.6%
Stanly County	447	87.0%	92.2%	203	39.6%	47.2%	71	12.0%	17.1%	421	87.5%	87.7%
Albemarle City	149	106.4%	105.7%	89	65.4%	65.4%	20	13.2%	14.3%	156	103.3%	96.7%
Union County	902	86.6%	94.1%	330	33.5%	38.4%	109	10.8%	13.9%	907	91.9%	81.4%
Monroe City	178	90.9%	96.9%	113	44.5%	66.9%	17	8.7%	9.8%	190	83.3%	77.2%

Number Tested and Participation Indices for 1989-90 End-of-Course Tests

NORTHWEST REGION	Algebra I			Geometry			Algebra II			US History		
School System	Number Tested	Percent 8th Grade 1988-89	Percent 8th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Alexander County	280	71.8%	71.4%	190	49.6%	49.5%	153	43.0%	54.0%	294	77.6%	97.4%
Alleghany County	63	50.4%	47.0%	65	51.2%	54.8%	64	48.2%	56.1%	99	78.2%	86.8%
Ashe County	172	80.4%	88.8%	123	58.6%	65.1%	144	48.0%	89.3%	246	82.0%	101.2%
Avery County	108	56.5%	59.0%	98	45.8%	50.8%	65	26.7%	35.3%	178	73.3%	96.7%
Burke County	838	82.8%	86.4%	472	48.0%	60.7%	261	38.9%	48.8%	781	78.7%	96.9%
Caldwell County	525	58.5%	56.3%	411	42.9%	53.0%	261	28.8%	42.8%	663	70.2%	100.9%
Catawba County	867	88.8%	86.8%	397	39.7%	41.3%	478	47.8%	66.4%	787	78.8%	100.1%
Hickory City	283	85.8%	78.0%	214	53.3%	73.5%	204	52.4%	85.8%	298	78.8%	96.1%
Newton City	208	84.2%	80.3%	118	61.1%	82.4%	118	49.2%	58.9%	198	81.7%	99.8%
Davie County	256	70.5%	72.9%	210	65.7%	68.2%	147	35.1%	43.2%	312	74.5%	91.8%
Iredell County	572	74.9%	71.2%	370	43.8%	48.3%	358	43.8%	52.7%	823	79.9%	91.8%
Mooresville City	118	83.0%	83.0%	79	54.9%	52.0%	101	50.8%	60.1%	152	78.4%	90.5%
Statesville City	160	80.2%	90.8%	123	48.8%	68.4%	117	48.8%	60.3%	187	77.6%	96.4%
Surry County	394	67.0%	63.0%	287	45.8%	50.4%	238	36.8%	45.4%	488	78.4%	94.7%
Elkin City	88	84.2%	79.7%	88	74.7%	87.8%	60	76.8%	78.8%	88	100.0%	100.8%
Mount Airy City	158	102.8%	100.0%	90	87.2%	71.4%	82	56.8%	65.8%	107	73.8%	85.8%
Watauga County	296	98.8%	92.3%	192	65.8%	68.8%	131	38.7%	43.2%	281	78.7%	92.7%
Wilkes County	488	81.4%	58.4%	430	61.8%	67.7%	313	38.4%	48.0%	828	73.0%	92.4%
Yadkin County	296	98.8%	81.4%	208	53.3%	58.8%	133	34.7%	40.8%	317	82.8%	98.8%

School System	Biology			Chemistry			Physics			English I		
	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 8th Grade 1988-89	Percent 8th Grade 1990-90
Alexander County	348	98.1%	89.8%	117	30.8%	38.7%	88	18.8%	28.2%	378	88.8%	98.7%
Alleghany County	109	85.8%	81.6%	65	50.0%	57.0%	18	10.3%	13.8%	113	90.4%	84.3%
Ashe County	287	83.4%	94.1%	88	29.7%	36.8%	28	9.0%	11.2%	284	92.8%	87.1%
Avery County	175	81.4%	90.7%	70	28.8%	38.0%	17	7.5%	10.7%	165	86.4%	90.2%
Burke County	880	84.8%	95.8%	281	28.0%	35.8%	119	10.8%	18.2%	908	88.2%	94.8%
Caldwell County	705	73.5%	81.0%	199	21.1%	30.3%	48	4.5%	7.0%	718	80.1%	77.1%
Catawba County	857	85.8%	89.1%	324	32.4%	41.2%	116	10.8%	13.4%	878	90.3%	87.7%
Hickory City	268	78.7%	81.4%	163	41.8%	52.4%	55	14.4%	20.8%	288	87.3%	78.8%
Newton City	209	90.8%	110.8%	92	38.3%	48.7%	18	8.8%	11.8%	228	98.1%	90.7%
Davie County	292	77.5%	80.8%	147	35.1%	43.2%	25	6.2%	8.7%	330	90.9%	94.0%
Iredell County	738	86.8%	90.1%	223	29.3%	47.8%	65	6.4%	7.8%	700	81.8%	87.2%
Mooresville City	183	113.2%	107.2%	52	26.1%	31.0%	11	6.5%	7.3%	168	89.4%	89.4%
Statesville City	181	79.7%	87.4%	97	40.4%	50.0%	7	2.4%	3.2%	191	71.8%	72.8%
Surry County	558	88.8%	98.2%	282	43.2%	53.5%	32	4.8%	8.1%	556	94.8%	89.0%
Elkin City	77	102.7%	92.8%	33	50.8%	56.8%	3	3.0%	4.5%	70	100.0%	94.8%
Mount Airy City	138	103.7%	110.3%	52	35.8%	41.8%	32	18.5%	29.1%	137	88.4%	98.2%
Watauga County	288	98.8%	97.0%	103	26.8%	34.0%	38	10.3%	14.1%	288	94.1%	88.2%
Wilkes County	728	97.2%	87.4%	274	31.8%	40.3%	83	8.0%	12.5%	746	92.0%	88.8%
Yadkin County	381	90.0%	86.8%	154	40.2%	47.0%	20	8.0%	7.0%	388	98.5%	88.8%

Number Tested and Participation Indices for 1989-90 End-of-Course Tests

WESTERN REGION	Algebra I			Geometry			Algebra II			US History		
School System	Number Tested	Percent 8th Grade 1988-89	Percent 9th Grade 1989-90	Number Tested	Percent 8th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90	Number Tested	Percent 8th Grade 1986-87	Percent 11th Grade 1989-90
Buncombe County	1330	79.5%	72.3%	844	50.6%	53.1%	987	50.1%	50.0%	1474	83.2%	99.7%
Asheville City	256	82.1%	82.8%	197	58.5%	57.9%	136	43.2%	52.9%	254	80.6%	98.8%
Cherokee County	178	58.7%	88.7%	132	41.8%	49.3%	189	58.9%	69.8%	244	82.2%	100.0%
Clay County	44	50.0%	46.8%	86	85.1%	81.5%	40	32.8%	40.0%	99	81.1%	99.0%
Graham County	88	84.8%	82.4%	53	58.4%	61.8%	56	49.1%	62.2%	88	77.2%	97.8%
Haywood County	428	73.8%	77.3%	313	51.6%	56.2%	258	38.5%	45.6%	559	83.1%	96.4%
Henderson County	408	69.7%	81.0%	288	44.1%	47.2%	288	43.3%	56.6%	494	71.8%	92.2%
Hendersonville City	152	153.5%	118.8%	52	45.2%	41.3%	127	105.0%	90.7%	134	110.7%	95.7%
Jackson County	258	83.8%	90.9%	173	58.8%	62.8%	110	36.5%	43.5%	241	80.1%	96.2%
Macon County	172	64.4%	59.9%	102	37.2%	44.0%	131	53.8%	63.9%	187	81.1%	96.1%
Madison County	142	65.4%	63.4%	68	28.8%	33.8%	66	26.5%	34.9%	180	72.3%	96.2%
McDowell County	344	63.9%	68.3%	243	42.0%	43.8%	194	33.3%	43.0%	386	68.0%	87.8%
Mitchell County	148	102.1%	86.5%	92	43.2%	52.2%	89	34.8%	46.3%	137	89.2%	91.9%
Polk County	108	62.6%	58.8%	59	35.8%	41.0%	65	46.7%	66.4%	119	65.4%	93.0%
Rutherford County	547	69.7%	88.2%	311	37.6%	43.2%	253	31.1%	40.4%	588	73.7%	96.5%
Swain County	81	72.2%	65.0%	66	79.8%	82.7%	75	48.1%	66.4%	109	69.9%	96.5%
Transylvania County	262	81.4%	78.4%	182	54.2%	60.3%	163	50.8%	58.4%	247	82.1%	94.3%
Yancey County	152	68.2%	62.0%	81	38.2%	43.5%	90	40.2%	46.8%	177	79.0%	92.2%

School System	Biology			Chemistry			Physics			English I		
	Number Tested	Percent 9th Grade 1987-88	Percent 10th Grade 1989-90	Number Tested	Percent 9th Grade 1988-87	Percent 11th Grade 1989-90	Number Tested	Percent 9th Grade 1985-86	Percent 12th Grade 1989-90	Number Tested	Percent 9th Grade 1988-89	Percent 2th Grade 1989-90
Buncombe County	1543	92.8%	97.0%	141	36.2%	43.4%	170	9.5%	11.8%	1558	93.1%	84.7%
Asheville City	298	88.7%	87.9%	133	42.2%	51.8%	49	15.6%	18.8%	289	92.6%	93.2%
Cherokee County	258	81.8%	88.0%	104	36.0%	49.0%	58	18.4%	24.1%	260	88.2%	86.7%
Clay County	98	87.0%	104.3%	47	38.5%	47.0%	10	11.8%	12.0%	83	94.3%	88.3%
Graham County	98	102.1%	111.6%	28	24.6%	31.1%	19	8.8%	14.3%	100	95.2%	92.8%
Haywood County	552	90.9%	99.1%	258	38.3%	45.4%	59	8.0%	11.2%	513	88.3%	92.4%
Henderson County	569	83.9%	99.7%	182	27.9%	38.8%	43	5.8%	7.6%	598	88.2%	90.1%
Hendersonville City	148	127.0%	115.9%	77	83.8%	55.0%	21	20.2%	16.7%	118	119.2%	92.2%
Jackson County	269	96.9%	97.1%	109	36.2%	43.1%	35	11.3%	14.6%	265	99.0%	92.3%
Macon County	228	83.2%	96.3%	83	34.2%	40.5%	31	12.0%	15.0%	249	93.3%	96.8%
Madison County	167	70.8%	83.1%	77	30.9%	40.7%	20	9.3%	12.7%	202	93.1%	90.2%
McDowell County	493	85.1%	98.0%	161	27.7%	35.7%	69	11.8%	16.2%	473	87.9%	93.8%
Mitchell County	228	118.9%	143.9%	97	18.7%	24.6%	13	7.4%	10.1%	131	90.3%	94.6%
Polk County	131	79.4%	91.0%	80	44.0%	62.5%	21	11.9%	18.4%	160	92.0%	96.0%
Rutherford County	669	80.9%	92.9%	179	22.0%	26.5%	47	5.5%	8.2%	717	91.3%	96.9%
Swain County	98	90.7%	94.2%	68	44.2%	61.1%	11	8.2%	11.2%	121	96.0%	96.4%
Transylvania County	338	100.6%	111.9%	93	30.9%	28.5%	92	26.6%	33.6%	308	95.0%	89.2%
Yancey County	171	80.7%	91.9%	43	19.2%	22.4%	18	7.5%	11.7%	208	92.4%	84.1%

Participation in Next Course in Math and Science Sequence by School System

NORTHEAST REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Beaufort County	331	196	59.2%	131	66.8%	113	86.3%	328	346	105.5%	77	22.3%	28	36.4%
Washington City	285	230	80.7%	159	69.1%	122	76.7%	310	279	90.0%	135	48.4%	38	28.1%
Bertie County	285	227	79.6%	127	55.9%	85	66.9%	286	298	104.2%	68	28.1%	11	16.3%
Camden County	84	78	92.9%	28	35.9%	43	153.6%	90	85	94.4%	35	41.2%	18	51.4%
Chowan County	182	136	74.7%	106	77.9%	79	74.5%	168	164	102.5%	83	50.6%	9	10.8%
Currituck County	167	112	67.1%	81	72.3%	59	72.8%	190	160	84.2%	51	31.9%	24	47.1%
Dare County	191	132	69.1%	123	93.2%	98	79.7%	201	160	79.6%	88	55.0%	22	25.0%
Gates County	119	88	73.9%	55	62.5%	44	80.0%	153	127	83.0%	60	47.2%	29	48.3%
Hertford County	391	222	63.2%	138	62.2%	111	80.4%	327	383	117.1%	155	40.5%	15	9.7%
Hyde County	74	39	52.7%	30	76.9%	21	70.0%	78	70	89.7%	16	22.9%	9	56.3%
Martin County	454	306	67.4%	229	74.8%	178	77.7%	403	366	90.8%	148	40.4%	69	46.6%
Pasquotank County	385	304	79.0%	229	75.3%	182	79.5%	396	354	89.4%	148	41.8%	14	9.5%
Perquimans County	125	96	76.8%	64	66.7%	46	71.9%	137	123	89.8%	58	47.2%	8	13.8%
Pitt County	1231	783	63.6%	581	74.2%	476	81.9%	1227	1324	107.9%	595	44.9%	222	37.3%
Tyrrell County	65	44	67.7%	32	72.7%	28	87.5%	91	89	98.8%	17	34.0%	12	70.6%
Washington County	243	168	69.1%	106	63.1%	82	77.4%	218	187	85.8%	76	40.6%	8	10.5%

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Participation in Next Course in Math and Science Sequence by School System

SOUTHEAST REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Brunswick County	719	420	58.4%	278	66.2%	209	75.2%	662	600	90.6%	236	39.3%	73	30.9%
Carteret County	600	367	61.2%	293	79.8%	236	80.5%	627	532	84.8%	234	44.0%	45	19.2%
Craven County	994	759	76.4%	579	76.3%	428	73.9%	1058	899	85.0%	361	40.2%	116	32.1%
Duplin County	638	403	63.2%	272	67.5%	238	87.5%	660	567	85.9%	197	34.7%	50	25.4%
Greene County	227	136	59.9%	92	67.6%	78	84.8%	239	187	78.2%	86	46.0%	28	23.3%
Jones County	122	97	79.5%	48	49.5%	28	58.3%	134	114	85.1%	48	42.1%	10	20.8%
Lenoir County	535	356	66.5%	282	79.2%	232	82.3%	495	436	88.1%	174	39.9%	18	10.3%
Kinston City	404	236	58.4%	179	75.8%	139	77.7%	389	309	79.4%	103	33.3%	43	41.7%
New Hanover County	1530	1150	75.2%	891	77.5%	706	79.2%	1609	1369	85.1%	730	53.3%	279	38.2%
Onslow County	1225	821	67.0%	622	75.8%	569	91.5%	1239	1199	96.8%	383	31.9%	140	36.6%
Pamlico County	161	103	64.0%	75	73.8%	49	65.3%	168	153	91.1%	52	34.0%	16	30.8%
Pender County	416	253	60.8%	175	69.2%	142	81.1%	418	394	94.3%	92	23.4%	47	51.1%
Sampson County	676	300	43.3%	218	72.7%	180	82.6%	526	474	90.1%	126	26.6%	18	14.3%
Clinton City	212	145	68.4%	99	68.3%	85	85.9%	200	161	80.5%	41	25.5%	9	22.0%
Wayne County	1037	684	66.0%	605	88.5%	479	79.2%	1028	938	91.2%	424	45.6%	118	29.5%
Goldsboro City	351	265	75.5%	206	77.7%	164	79.6%	411	338	82.2%	125	37.0%	13	10.4%

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Participation in Next Course in Math and Science Sequence by School System

CENTRAL REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Durham County	1339	1067	79.7%	832	78.0%	726	87.3%	1411	1332	94.4%	643	48.3%	265	41.2%
Durham City	603	432	71.6%	248	57.4%	203	81.9%	638	459	71.9%	241	52.5%	52	21.6%
Edgecombe County	393	245	62.3%	163	66.5%	120	73.6%	454	367	80.8%	173	47.1%	59	34.1%
Tarboro City	219	133	60.7%	114	85.7%	89	78.1%	233	209	89.7%	114	54.5%	44	38.6%
Franklin County	419	258	61.6%	163	63.2%	124	76.1%	369	333	90.2%	96	28.8%	30	31.3%
Franklinton City	123	68	55.3%	48	70.6%	38	79.2%	131	105	80.2%	19	18.1%	9	47.4%
Granville County	578	335	58.0%	220	65.7%	165	75.0%	505	443	87.7%	221	49.9%	43	19.5%
Halifax County	557	407	73.1%	188	46.2%	149	79.3%	507	425	83.8%	145	34.1%	43	29.7%
Roanoke Rapids City	217	190	87.6%	158	83.4%	128	82.6%	200	217	108.5%	54	24.9%	17	31.5%
Weldon City	82	69	84.1%	57	82.6%	35	61.4%	104	87	83.7%	42	48.3%	25	59.5%
Johnston County	1143	777	68.0%	577	74.3%	423	73.3%	1217	1118	91.9%	463	41.4%	149	32.2%
Nash County	928	632	68.1%	481	76.1%	374	77.8%	922	798	86.6%	329	41.2%	88	26.7%
Rocky Mount City	454	216	47.6%	158	73.1%	116	73.4%	456	345	75.9%	142	41.0%	67	47.2%
Northampton County	315	245	77.8%	146	59.6%	132	90.4%	328	310	94.5%	130	41.9%	30	23.1%
Vance County	578	360	62.3%	236	65.6%	171	72.5%	630	572	90.8%	172	30.1%	71	41.3%
Wake County	4227	3628	85.8%	2820	77.7%	2755	97.7%	4491	4211	93.8%	2589	61.5%	1132	43.7%
Warren County	239	148	61.9%	101	68.2%	70	69.3%	239	249	104.2%	40	16.1%	1	2.5%
Wilson County	945	607	64.2%	427	70.3%	326	76.3%	969	850	87.7%	377	44.4%	78	20.7%

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Participation in Next Course in Math and Science Sequence by School System

SOUTH CENTRAL REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Bladen County	497	345	69.4%	245	71.0%	185	75.5%	506	452	89.3%	168	37.2%	30	17.9%
Columbus County	658	362	55.0%	217	59.9%	160	73.7%	693	574	82.8%	106	18.5%	0	0.0%
Whiteville City	196	160	81.6%	118	73.8%	99	83.9%	218	182	83.5%	78	42.9%	64	82.1%
Cumberland County	3251	2625	80.7%	2003	76.3%	1457	72.7%	3414	3216	94.2%	1479	46.0%	338	22.9%
Harnett County	886	527	59.5%	335	63.6%	255	76.1%	917	837	91.3%	279	33.3%	42	15.1%
Hoke County	379	202	53.3%	123	60.9%	102	82.9%	374	315	84.2%	99	31.4%	29	29.3%
Lee County	537	445	82.9%	287	64.5%	203	70.7%	589	510	86.6%	196	38.4%	63	21.5%
Montgomery County	356	308	86.5%	227	73.7%	161	70.9%	328	291	88.7%	156	53.6%	54	34.6%
Moore County	650	465	71.5%	328	70.5%	229	69.8%	704	626	88.9%	255	40.7%	86	33.7%
Richmond County	719	501	69.7%	331	66.1%	224	67.7%	742	545	73.5%	215	39.4%	36	16.7%
Robeson County	2026	1034	51.0%	717	69.3%	509	71.0%	2095	1655	79.0%	688	41.6%	151	21.9%
Scotland County	576	479	83.2%	213	44.5%	272	127.7%	621	530	85.3%	119	22.5%	28	23.5%

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Participation in Next Course in Math and Science Sequence by School System

NORTH CENTRAL REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Alamance County	784	555	70.8%	428	77.1%	315	73.6%	917	826	90.1%	358	43.3%	96	26.8%
Burlington City	519	381	73.4%	305	80.1%	232	76.1%	597	532	89.1%	263	49.4%	132	50.2%
Caswell County	292	225	77.1%	149	66.2%	113	75.8%	305	281	92.1%	131	46.6%	33	25.2%
Chatham County	450	296	65.8%	190	64.2%	180	94.7%	483	370	76.6%	153	41.4%	32	20.9%
Davidson County	1288	903	70.1%	717	79.4%	583	81.3%	1334	1195	89.6%	587	49.1%	224	38.2%
Lexington City	269	161	59.9%	120	74.5%	75	62.5%	279	235	84.2%	74	31.5%	48	64.9%
Thomasville City	196	146	74.5%	100	68.5%	69	69.0%	191	169	88.5%	66	39.1%	15	22.7%
Forsyth County	2724	2077	76.2%	1598	76.9%	1433	89.7%	3070	2873	93.6%	1134	39.5%	439	38.7%
Guilford County	1954	1364	69.9%	1083	79.3%	933	86.1%	1985	1777	89.5%	903	50.8%	224	24.8%
Greensboro City	1579	1422	90.1%	1056	74.3%	797	75.5%	1757	1436	81.7%	809	56.3%	288	35.6%
High Point City	596	354	59.4%	269	76.0%	239	88.8%	606	506	83.5%	193	38.1%	40	20.7%
Orange County	417	316	75.8%	238	75.3%	185	77.7%	405	304	75.1%	130	42.8%	37	28.5%
Chapel Hill City	417	346	83.0%	300	86.7%	242	80.7%	376	366	97.3%	299	81.7%	173	57.9%
Person County	425	318	74.8%	195	61.3%	148	75.9%	499	432	86.6%	122	28.2%	82	67.2%
Randolph County	1063	635	59.7%	399	62.8%	291	72.9%	1152	944	81.9%	306	32.4%	69	22.5%
Asheboro City	287	202	70.4%	165	81.7%	135	81.8%	280	234	83.6%	112	47.9%	17	15.2%
Rockingham County	256	259	101.2%	121	46.7%	96	79.3%	303	250	82.5%	110	44.8%	15	13.6%
Eden City	299	232	77.6%	167	72.0%	132	79.0%	325	262	80.6%	150	57.3%	93	62.0%
West. Rockingham	316	221	69.9%	142	64.3%	104	73.2%	331	275	83.1%	129	46.9%	30	23.3%
Reidsville City	306	209	68.3%	137	65.6%	131	95.6%	345	284	82.3%	84	29.6%	17	20.2%
Stokes County	559	295	52.8%	224	75.9%	185	82.6%	571	525	91.9%	185	35.2%	19	10.3%

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Participation in Next Course in Math and Science Sequence by School System

SOUTHWEST REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Anson County	392	255	65.1%	190	74.5%	163	85.8%	390	380	97.4%	139	36.6%	38	21.6%
Cabarrus County	996	863	86.6%	620	71.8%	526	84.8%	1043	876	84.0%	412	47.0%	110	26.7%
Kannapolis City	354	282	79.7%	214	75.9%	201	93.9%	324	279	86.1%	144	51.6%	33	22.9%
Cleveland County	667	374	56.1%	284	75.9%	221	77.8%	668	558	83.5%	240	43.0%	42	17.5%
Kings Mountain City	339	173	51.0%	105	60.7%	67	63.8%	361	267	74.0%	106	39.7%	13	12.3%
Shelby City	236	184	78.0%	153	83.2%	141	92.2%	272	284	104.4%	198	69.7%	19	9.6%
Gaston County	2760	1723	62.4%	1226	71.2%	894	72.9%	2784	2358	84.7%	986	41.8%	387	39.2%
Lincoln County	729	497	68.2%	366	73.6%	290	79.2%	775	700	90.3%	224	32.0%	33	14.7%
Mecklenburg County	8756	4260	74.8%	3205	75.2%	2450	76.4%	6007	5012	83.4%	2653	52.9%	769	29.0%
Rowan County	1178	852	72.3%	563	66.1%	511	90.8%	1376	1081	78.6%	524	48.5%	151	28.8%
Stanly County	513	370	72.1%	305	82.4%	233	76.4%	592	253	42.7%	156	61.7%	71	45.5%
Albemarle City	136	122	89.7%	88	72.1%	69	78.4%	152	159	104.6%	75	47.2%	20	26.7%
Union County	985	594	60.3%	489	82.3%	370	75.7%	997	925	92.8%	355	38.4%	109	30.7%
Monroe City	254	140	55.1%	107	76.4%	91	85.0%	252	204	81.0%	92	45.1%	17	18.5%

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Participation in Next Course in Math and Science Sequence by School System

NORTHWEST REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Alexander County	379	329	86.8%	219	66.6%	163	74.4%	424	393	92.7%	180	45.8%	80	44.4%
Alleghany County	130	112	86.2%	85	75.9%	64	75.3%	156	138	88.5%	58	42.0%	16	27.6%
Ashe County	308	188	62.7%	130	69.1%	144	110.8%	312	270	86.5%	75	27.8%	28	37.3%
Avery County	243	160	65.8%	112	70.0%	65	58.0%	227	187	82.4%	54	28.9%	17	31.5%
Burke County	1005	623	62.0%	429	68.9%	361	84.1%	1092	965	88.4%	279	28.9%	119	42.7%
Caldwell County	944	575	60.9%	415	72.2%	281	67.7%	1074	777	72.3%	197	25.4%	48	24.4%
Catawba County	1001	617	61.6%	394	63.9%	475	120.6%	1068	929	87.0%	343	36.9%	116	33.8%
Hickory City	389	347	89.2%	228	65.7%	204	89.5%	381	313	82.2%	141	45.0%	55	39.0%
Newton City	240	166	66.7%	115	71.9%	118	102.6%	205	178	86.8%	83	46.6%	18	21.7%
Davie County	419	290	69.2%	210	72.4%	147	70.0%	404	321	79.5%	141	43.9%	25	17.7%
Iredell County	822	743	90.4%	478	64.3%	358	74.9%	866	735	84.9%	337	45.9%	55	16.3%
Mooresville City	199	110	55.3%	82	74.5%	101	123.2%	169	194	114.8%	52	26.8%	11	21.2%
Statesville City	240	168	70.0%	132	78.6%	117	88.6%	296	251	84.8%	110	43.8%	7	6.4%
Surry County	653	454	69.5%	321	70.7%	239	74.5%	692	655	94.7%	287	43.8%	32	11.1%
Elkin City	65	74	113.8%	58	78.4%	50	86.2%	100	88	88.0%	36	40.9%	3	8.3%
Mount Airy City	145	102	70.3%	74	72.5%	82	110.8%	164	105	64.0%	77	73.3%	32	41.6%
Watauga County	357	264	73.9%	166	62.9%	131	78.9%	378	306	82.7%	113	36.9%	38	33.6%
Wilkes County	860	515	59.9%	364	70.7%	313	86.0%	920	831	90.3%	292	35.1%	83	28.4%
Yadkin County	383	249	65.0%	175	70.3%	133	76.0%	401	371	92.5%	123	33.2%	20	16.3%

Percent ADM taking Algebra I (or Biology) is the estimated percentage of students in an eighth-grade class who will take Algebra I (or Biology). Other percentages represent the estimated percentage of students in one course taking the next course in the sequence. All calculations are based on the assumption that students take courses in the following sequence: Algebra I, Geometry, Algebra II; or Biology, Chemistry, Physics.

Participation in Next Course in Math and Science Sequence by School System

WESTERN REGION

School System	Eighth Grade ADM 1986-87	N Tested Algebra I 1987-88	Percent ADM Taking Algebra I	N Tested Geometry 1988-89	Percent Algebra I Taking Geometry	N Tested Algebra II 1989-90	Percent Geometry Taking Algebra II	Eighth Grade ADM 1985-86	N Tested Biology 1987-88	Percent ADM Taking Biology	N Tested Chemistry 1988-89	Percent Biology Taking Chemistry	N Tested Physics 1989-90	Percent Chemistry Taking Physics
Buncombe County	1771	1342	75.8%	992	73.9%	887	89.4%	1784	1536	86.1%	674	43.9%	178	25.2%
Asheville City	315	212	67.3%	175	82.5%	136	77.7%	315	275	87.3%	133	48.4%	49	36.8%
Cherokee County	297	185	62.3%	165	89.2%	169	102.4%	299	279	93.3%	137	49.1%	55	40.1%
Clay County	122	63	51.6%	61	96.8%	40	65.6%	85	87	102.4%	23	26.4%	10	43.5%
Graham County	114	94	82.5%	47	50.0%	56	119.1%	114	88	77.2%	41	46.6%	10	24.4%
Haywood County	673	480	71.3%	345	71.9%	259	75.1%	654	573	87.6%	221	38.6%	59	26.7%
Henderson County	688	418	60.3%	316	76.1%	298	94.3%	746	577	77.3%	236	40.9%	43	18.2%
Hendersonville City	121	138	114.0%	106	76.8%	127	119.8%	104	149	143.3%	76	51.0%	21	27.6%
Jackson County	301	202	67.1%	129	63.9%	110	85.3%	309	266	86.1%	145	54.5%	35	24.1%
Macon County	243	183	75.3%	136	74.3%	131	96.3%	259	233	90.0%	137	58.8%	31	22.6%
Madison County	249	129	51.8%	73	56.6%	66	90.4%	214	192	89.7%	94	49.0%	20	21.3%
McDowell County	582	406	69.8%	313	77.1%	194	62.0%	579	494	85.3%	190	38.5%	69	36.3%
Mitchell County	198	192	97.0%	92	47.9%	69	75.0%	176	187	106.3%	54	28.9%	13	24.1%
Polk County	182	140	76.9%	70	50.0%	85	121.4%	176	132	75.0%	50	37.9%	21	42.0%
Rutherford County	813	442	54.4%	303	68.6%	253	83.5%	851	706	83.8%	199	28.2%	47	23.6%
Swain County	156	115	73.7%	101	87.8%	75	74.3%	134	124	92.5%	73	58.9%	11	15.1%
Transylvania County	301	255	84.7%	223	87.5%	153	68.6%	343	358	104.4%	172	48.0%	92	53.5%
Yancey County	224	116	51.8%	62	53.4%	90	145.2%	241	177	73.4%	75	42.4%	18	24.0%

Percent ADM taking Algebra I (or Biology) is the estimated percentage of students in an eighth-grade class who will take Algebra I (or Biology). Other percentages represent the estimated percentage of students in one course taking the next course in the sequence. All calculations are based on the assumption that students take courses in the following sequence: Algebra I, Geometry, Algebra II; or Biology, Chemistry, Physics.

Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

NORTHEAST REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Beaufort County	202	36.3	28.6	125	22.4	20.2	113	21.3	18.3	111	21.7	20.7	28	4.6	4.2
Washington City	194	43.9	38.5	159	33.6	28.6	122	28.4	24.2	136	29.1	25.5	38	7.0	6.3
Bertie County	155	32.6	31.1	177	30.1	25.8	65	15.0	10.4	61	13.6	13.1	11	1.7	1.1
Camden County	64	59.1	58.2	37	33.7	32.8	43	33.8	29.1	33	24.7	24.7	18	13.2	13.2
Chowan County	158	56.7	55.2	76	26.9	25.5	79	32.2	30.2	71	24.9	23.9	9	4.2	4.2
Currituck County	104	55.1	54.5	76	30.1	29.7	59	27.3	26.8	36	14.8	14.8	24	8.5	8.5
Dare County	164	60.3	58.8	97	39.2	39.2	90	40.6	40.2	95	34.5	33.7	23	7.5	7.5
Gates County	89	45.9	43.9	56	33.3	32.1	44	27.0	25.2	70	34.3	28.9	29	10.6	8.7
Hertford County	183	37.6	32.5	145	25.0	20.7	111	19.4	16.8	121	19.8	17.4	15	2.8	2.8
Hyde County	34	29.4	25.1	34	33.5	29.5	21	20.1	19.1	21	19.7	19.7	9	6.5	6.5
Martin County	318	52.4	42.8	260	35.2	30.2	178	26.1	23.4	188	26.8	25.3	69	9.9	9.3
Pasquotank County	282	50.7	47.7	215	32.5	27.8	182	30.4	26.7	144	23.1	21.3	14	2.6	2.6
Perquimans County	116	59.7	55.6	79	44.7	43.8	46	28.8	28.2	39	22.2	21.7	8	3.7	3.7
Pitt County	864	48.2	45.7	740	38.0	35.4	476	28.5	27.4	467	25.0	24.4	222	12.1	12.0
Tyrrell County	28	39.6	39.6	20	31.2	31.2	28	28.8	26.8	24	23.7	23.7	12	11.7	9.8
Washington County	195	54.3	44.9	121	31.2	24.5	82	20.8	17.5	87	20.8	18.4	8	2.6	2.6

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Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

SOUTHEAST REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Brunswick County	521	47.4	37.2	339	28.5	25.3	289	18.1	15.1	244	19.8	17.9	73	6.8	6.7
Carteret County	442	52.9	49.9	318	37.3	35.5	236	29.5	28.5	246	27.2	26.4	45	5.3	5.2
Craven County	670	46.3	42.6	518	33.4	30.2	420	29.5	27.9	313	21.0	20.5	116	7.2	7.1
Duplin County	383	43.6	38.2	284	28.5	23.4	238	23.5	20.7	237	22.8	20.4	50	4.8	4.7
Greene County	123	32.0	28.9	95	30.1	28.8	78	25.6	25.6	58	17.6	17.6	20	5.3	5.3
Jones County	93	41.5	34.8	70	40.3	36.9	28	14.2	13.2	37	17.7	16.2	10	4.5	4.5
Lenoir County	338	42.6	37.7	257	31.7	29.0	232	26.3	21.3	213	26.2	24.8	18	2.6	2.6
Kinston City	264	52.6	49.8	179	30.4	27.8	139	25.5	24.6	118	18.8	17.4	43	7.0	6.3
New Hanover County	1294	56.4	45.9	1020	46.4	42.7	796	32.3	29.4	824	36.0	33.3	279	11.1	10.6
Onslow County	946	57.9	52.2	653	34.1	29.8	569	27.9	22.1	516	27.5	26.2	140	6.9	6.6
Pamlico County	111	54.9	52.4	79	34.7	32.5	49	21.3	20.4	45	16.7	15.2	16	6.2	6.2
Pender County	240	41.2	34.9	170	29.9	26.0	142	21.0	17.6	133	19.5	17.8	47	6.4	6.1
Sampson County	354	39.3	32.9	252	27.0	23.4	180	22.8	17.8	162	20.6	19.1	18	2.4	2.4
Clinton City	131	39.7	29.7	103	26.4	21.3	85	29.3	28.6	79	22.4	21.3	9	2.3	1.5
Wayne County	774	46.5	40.1	584	35.7	31.9	479	28.9	23.8	529	30.0	25.8	125	7.9	7.7
Goldsboro City	232	43.8	37.4	132	24.2	19.8	164	27.5	21.2	167	25.4	20.9	13	2.0	2.0

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Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

CENTRAL REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Durham County	1176	60.5	55.4	930	46.5	44.1	726	39.0	36.6	621	32.6	31.6	265	12.8	12.6
Durham City	427	42.9	28.5	258	22.2	14.8	203	15.3	7.8	251	20.0	12.8	52	4.3	3.6
Edgecombe County	266	44.1	37.2	152	23.3	21.1	120	17.3	14.0	174	27.9	26.0	59	7.3	7.0
Tarboro City	163	55.2	52.5	121	28.2	24.0	89	26.2	23.3	113	30.5	27.8	44	11.6	11.3
Franklin County	212	42.2	39.2	155	28.7	25.0	124	19.1	17.2	120	18.2	17.7	38	4.9	4.9
Franklinton City	73	36.2	28.2	37	23.6	23.6	38	16.6	11.3	21	11.8	11.8	9	4.6	4.6
Granville County	488	50.9	44.1	286	31.5	28.6	165	18.4	15.3	244	26.2	23.8	43	5.4	5.4
Halifax County	332	37.1	26.0	158	14.3	9.7	149	12.7	7.5	127	13.1	11.6	43	4.0	3.0
Roanoke Rapids City	163	54.9	49.2	99	37.1	35.6	128	38.5	34.6	99	33.1	32.8	17	5.7	5.7
Weldon City	72	35.1	23.4	27	12.5	8.4	35	20.0	10.8	40	22.2	13.5	25	9.6	5.0
Johnston County	800	46.3	43.8	536	30.6	28.8	423	25.9	24.1	367	21.2	20.5	149	7.4	7.2
Nash County	596	42.4	37.7	422	31.9	30.0	374	27.7	24.1	333	23.1	22.0	88	6.8	6.7
Rocky Mount City	235	39.4	36.1	168	26.3	25.6	116	18.9	18.4	122	19.8	18.9	67	18.3	10.1
Northampton County	197	42.3	38.0	158	26.4	20.1	132	22.1	15.1	136	23.6	19.2	30	5.2	5.0
Vance County	306	36.8	32.9	198	21.0	18.1	171	17.8	14.8	170	17.1	15.4	71	7.1	7.1
Wake County	3959	68.3	65.7	2907	47.3	45.8	2755	48.7	46.3	2488	42.0	41.3	1132	17.6	17.5
Warren County	172	42.0	35.2	95	22.0	19.3	70	15.7	11.7	65	15.7	14.5	1	0.3	0.3
Wilson County	602	49.7	47.7	406	30.6	29.5	326	24.1	21.1	283	21.1	20.8	78	5.6	5.5

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Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

SOUTH CENTRAL REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Bladen County	304	45.9	37.0	259	36.5	34.9	185	21.6	16.8	175	19.8	16.0	30	3.4	3.3
Columbus County	323	33.7	28.0	241	23.3	20.1	160	15.8	13.8	222	20.6	19.2	0	0.0	0.0
Whiteville City	169	52.4	42.8	119	36.3	33.6	99	31.7	27.2	113	37.1	35.2	64	17.2	16.1
Cumberland County	2486	51.5	43.9	1864	35.4	29.8	1457	28.9	24.9	1246	23.3	20.6	338	6.2	5.9
Harnett County	563	42.0	38.4	403	26.3	23.7	255	19.5	18.3	275	18.7	17.6	42	2.7	2.6
Hoke County	280	45.3	40.9	162	25.1	23.0	102	18.6	17.3	125	21.4	20.4	29	5.0	5.0
Lee County	436	50.8	44.7	291	37.6	31.1	203	25.5	23.5	157	18.3	17.6	43	5.0	5.0
Montgomery County	257	49.8	42.2	168	30.5	25.1	161	29.8	25.1	171	29.4	26.9	54	9.3	8.3
Moore County	472	44.2	39.5	308	28.0	25.1	229	24.0	21.9	288	29.0	27.7	86	7.6	7.5
Richmond County	473	44.7	35.9	352	28.1	24.1	224	18.4	14.8	225	17.3	14.1	36	2.7	2.6
Robeson County	1057	34.9	28.3	751	21.4	17.3	589	14.0	10.6	668	19.1	16.4	151	4.8	3.8
Scotland County	403	45.2	39.3	190	19.8	17.5	272	28.7	24.9	139	16.3	15.9	28	2.7	2.7

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122

Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

NORTH CENTRAL REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Alamance County	549	48.6	43.9	485	38.7	36.2	315	25.3	21.7	321	27.1	24.2	96	6.6	6.5
Burlington City	401	56.0	51.8	304	47.3	45.4	232	32.4	29.9	237	30.6	29.6	132	15.1	14.8
Caswell County	200	37.7	28.1	119	23.8	20.8	113	20.9	15.2	132	25.2	21.8	33	6.5	5.9
Chatham County	365	62.7	56.3	265	44.3	41.6	180	30.3	28.2	147	21.5	21.1	32	4.3	4.2
Davidson County	881	47.8	41.7	736	35.4	32.3	583	26.6	21.6	608	28.5	25.8	224	9.4	8.7
Lexington City	200	54.8	41.9	130	28.9	22.9	75	13.8	7.9	76	16.5	14.6	48	9.3	8.0
Thomasville City	197	49.8	49.8	80	27.1	23.1	69	24.5	24.2	56	19.4	18.7	15	5.1	5.1
Forsyth County	2108	56.1	51.8	1488	36.0	33.3	1433	38.1	36.0	1076	26.2	25.3	439	9.5	9.2
Guilford County	1446	57.1	54.0	1220	46.0	43.4	933	34.8	31.7	940	31.5	29.8	224	7.1	6.6
Greensboro City	1169	54.2	48.0	1000	41.2	36.3	797	33.8	28.9	766	31.0	29.3	288	10.6	10.3
High Point City	448	53.9	49.3	259	26.9	25.3	239	27.9	26.3	179	28.7	28.1	40	4.8	4.8
Orange County	270	46.7	46.7	247	34.2	29.8	185	25.2	19.6	178	26.5	24.1	37	4.9	4.4
Chapel Hill City	360	70.8	65.4	311	68.7	64.7	242	50.4	50.4	235	39.7	38.0	173	35.8	34.8
Person County	310	50.8	47.4	227	36.0	33.9	148	24.1	22.6	96	15.3	15.2	82	9.2	8.4
Randolph County	556	37.8	35.6	426	26.3	25.4	291	18.3	16.6	303	17.1	14.7	69	3.9	3.9
Asheboro City	199	56.4	53.0	174	44.1	41.5	135	31.3	28.8	131	30.0	28.4	17	4.6	4.6
Rockingham County	152	37.7	33.5	141	29.7	28.0	96	25.1	23.3	114	28.2	27.0	15	3.4	3.4
Eden City	238	51.1	47.2	152	31.0	29.6	132	32.1	29.7	161	31.7	27.4	93	16.6	15.7
West Rockingham	203	49.6	43.3	133	30.2	25.7	104	21.5	19.2	113	21.3	19.8	30	5.3	4.7
Reidsville City	177	41.1	35.1	104	22.7	19.7	131	25.8	20.9	110	20.5	19.0	17	2.9	2.9
Stokes County	299	36.0	32.0	229	28.3	26.0	185	21.1	19.1	193	21.1	18.6	19	2.1	2.1

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Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

SOUTHWEST REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Anson County	227	34.2	29.8	158	22.2	17.1	163	20.5	13.6	92	12.3	9.4	30	4.8	4.5
Cabarrus County	700	52.4	49.4	553	40.6	38.5	526	37.3	35.3	390	25.3	24.1	110	7.4	7.2
Kannapolis City	225	37.3	25.7	216	36.1	30.3	201	32.9	25.8	138	25.4	24.5	33	6.4	6.4
Cleveland County	459	42.6	35.7	284	26.6	23.6	221	22.1	19.6	257	23.3	21.0	42	4.1	4.0
Kings Mountain City	198	36.4	33.5	170	33.6	31.4	67	13.9	13.9	93	18.1	17.3	13	2.6	2.6
Shelby City	175	46.7	41.9	154	36.8	32.5	141	35.8	26.7	153	39.6	35.2	19	4.6	4.6
Gaston County	1588	40.8	33.1	1236	29.6	24.9	894	19.6	16.3	972	20.7	17.8	387	7.9	7.2
Lincoln County	479	43.3	35.5	419	36.1	29.6	290	27.2	24.9	265	22.6	20.9	33	2.9	2.9
Mecklenburg County	3956	49.2	43.1	3316	40.6	37.2	2450	28.8	25.2	2527	28.3	26.5	769	8.2	7.9
Rowan County	891	47.6	42.9	762	39.5	35.2	511	26.9	21.3	476	24.8	22.9	151	6.5	6.3
Stanly County	434	60.1	53.7	307	34.9	31.7	233	29.1	24.4	203	26.7	26.2	71	7.2	6.9
Albemarle City	183	72.0	72.0	104	52.4	50.9	69	38.0	36.3	89	44.0	44.0	20	9.4	9.4
Union County	616	44.1	41.8	470	34.5	32.8	378	26.5	24.2	330	23.6	23.2	109	7.4	7.2
Monroe City	169	46.4	36.5	98	27.6	25.0	91	20.0	13.4	113	26.7	23.9	17	3.9	3.7

Yield is an index of the effectiveness of a program which takes into account both participation and performance. It is calculated by multiplying the participation in a course by the average percent of core items answered correctly and then multiplying by 100. Effective yield is a similar index but it counts as "participating" in the course only those students whose achievement is above a cutoff point estimating that they will pass the course.

Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

NORTHWEST REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Alexander County	280	44.9	39.1	190	28.8	24.9	163	27.9	24.2	117	16.2	13.1	59	11.3	10.6
Alleghany County	63	32.2	29.2	65	30.7	27.9	64	32.1	26.6	65	35.0	35.0	16	5.9	5.2
Ashe County	172	43.8	41.8	123	29.5	29.1	144	32.5	28.3	89	20.5	20.2	28	6.1	6.1
Avery County	108	41.1	38.4	98	27.1	24.4	65	15.8	12.9	70	18.3	17.2	17	4.6	4.6
Burke County	635	42.6	39.3	472	28.7	26.9	361	24.3	22.6	281	19.1	18.7	119	7.5	7.5
Caldwell County	525	38.3	32.6	411	28.0	26.5	281	20.0	18.4	199	14.2	13.7	48	2.8	2.8
Catawba County	667	50.9	48.7	397	29.8	28.6	475	32.7	29.9	324	21.1	20.3	116	6.9	6.7
Hickory City	283	60.7	54.9	214	44.5	43.4	204	36.7	34.5	163	28.6	28.3	55	9.4	9.2
Newton City	200	59.5	57.5	118	32.6	31.9	118	34.9	33.4	92	26.2	25.3	18	6.1	6.1
Davie County	256	48.1	43.4	210	38.4	37.3	147	23.5	21.4	147	26.0	25.8	25	4.5	4.5
Iredell County	572	48.4	43.0	370	27.4	24.8	358	26.0	21.5	323	23.6	21.0	55	3.8	3.5
Mooresville City	119	42.5	37.5	79	42.8	42.3	101	28.7	20.8	52	19.5	19.5	11	5.0	5.0
Statesville City	168	40.8	35.8	123	29.2	25.6	117	31.0	25.1	97	24.7	21.7	7	1.2	1.1
Surry County	394	46.7	44.5	287	30.0	28.2	239	26.0	24.1	282	27.0	25.5	32	2.8	2.6
Elkin City	59	63.1	63.1	56	49.2	46.5	50	56.2	52.9	33	37.9	37.9	3	2.1	2.1
Mount Airy City	159	68.2	65.5	90	45.4	41.9	82	39.5	38.5	52	24.3	21.5	32	12.5	11.7
Watauga County	208	53.0	51.7	182	38.8	36.9	131	29.3	29.1	103	20.9	20.7	38	7.6	7.4
Wilkes County	498	39.3	35.2	430	29.1	24.5	313	21.0	15.6	274	20.6	19.5	83	5.3	4.9
Yadkin County	266	39.9	30.9	208	34.2	31.2	133	22.3	18.3	154	23.4	21.4	28	2.8	2.7

Yield is an index of the effectiveness of a program which takes into account both participation and performance. It is calculated by multiplying the participation in a course by the average percent of core items answered correctly and then multiplying by 100. Effective yield is a similar index but it counts as "participating" in the course only those students whose achievement is above a cutoff point estimating that they will pass the course.

Yield and Effective Yield on Selective 1989-90 End-of-Course Tests by School System

WESTERN REGION	Algebra I			Geometry			Algebra II			Chemistry			Physics		
School System	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield	Number Tested	Yield	Effective Yield
Buncombe County	1330	57.1	52.8	844	34.7	33.0	887	35.0	31.5	641	23.9	22.4	170	5.8	5.4
Asheville City	256	56.3	47.9	197	38.7	34.6	136	29.7	26.2	133	27.3	25.4	49	10.6	10.4
Cherokee County	179	43.1	40.2	132	27.6	25.8	169	40.4	38.2	104	23.1	23.1	55	11.9	11.5
Clay County	44	34.0	33.3	86	52.4	49.4	40	20.9	18.8	47	24.1	23.6	10	8.5	8.5
Graham County	89	52.1	41.6	53	33.8	30.9	56	33.2	28.8	28	14.2	12.1	10	5.1	5.1
Haywood County	429	31.8	47.4	313	32.4	29.9	259	22.9	18.6	258	24.8	23.7	59	5.8	5.8
Henderson County	405	42.8	40.7	299	30.8	30.3	298	30.6	27.7	193	19.1	18.8	43	4.1	4.1
Hendersonville City	152	70.6	70.6	52	31.6	31.0	127	72.9	72.9	77	42.1	38.3	21	13.8	13.8
Jackson County	288	58.3	53.7	173	38.2	35.3	118	24.2	20.4	109	24.8	23.6	35	6.8	6.6
Macon County	172	43.9	40.5	102	26.9	26.7	131	35.8	34.2	83	22.1	22.1	31	7.1	6.2
Madison County	142	43.9	38.8	68	18.4	16.9	66	17.6	16.3	77	17.8	16.1	20	6.3	6.0
McDowell County	344	40.2	34.7	243	24.4	22.2	194	22.6	20.5	161	18.4	17.8	69	7.1	6.2
Mitchell County	148	63.8	57.8	82	26.6	25.3	69	21.0	16.1	37	13.2	12.5	13	5.3	5.3
Polk County	109	40.6	36.1	59	23.7	22.1	85	25.9	18.6	80	24.7	20.1	21	6.4	5.4
Rutherford County	547	48.1	45.1	311	23.8	22.1	253	21.9	20.5	179	15.5	15.3	47	4.1	4.1
Swain County	91	45.8	38.7	86	47.2	39.0	75	29.7	24.5	69	27.8	26.1	11	5.4	4.9
Transylvania County	262	53.6	46.9	182	36.5	33.9	153	35.2	31.5	93	22.3	22.0	92	15.7	13.9
Yancey County	152	49.1	46.8	81	26.8	26.2	90	23.2	17.5	43	12.2	11.4	18	5.0	5.0

Yield is an index of the effectiveness of a program which takes into account both participation and performance. It is calculated by multiplying the participation in a course by the average percent of core items answered correctly and then multiplying by 100. Effective yield is a similar index but it counts as "participating" in the course only those students whose achievement is above a cutoff point estimating that they will pass the course.

Average Core Scores and Participation Indices for School Systems Grouped by 1989-90 8th Grade California Achievement Test Total Battery Scores: 65th Percentile and Above

School System	Algebra I Average Core	Algebra I Participation Index	Geometry Average Core	Geometry Participation Index	Algebra II Average Core	Algebra II Participation Index	Biology Average Core	Biology Participation Index	Chemistry Average Core	Chemistry Participation Index	Physics Average Core	Physics Participation Index	English I Average Core	English I Participation Index	U.S. History Average Core	U.S. History Participation Index
Ashe County	43.6	60.4%	44.4	36.9%	38.0	46.0%	41.3	83.4%	41.4	29.7%	40.5	9.0%	66.4	92.6%	43.9	82.0%
Burlington City	42.0	80.0%	41.5	68.5%	40.6	44.7%	43.9	98.2%	40.3	45.7%	40.9	22.1%	72.0	97.4%	44.4	82.3%
Cabarrus County	42.6	74.8%	41.0	59.5%	39.6	52.8%	43.8	83.4%	38.8	39.2%	42.0	10.5%	68.9	88.1%	44.4	83.7%
Camden County	44.9	79.0%	41.0	49.3%	37.0	51.2%	40.6	102.7%	37.8	39.3%	39.6	20.0%	66.8	104.9%	42.3	86.9%
Chapel Hill City	50.6	83.5%	47.8	86.6%	46.6	58.0%	48.6	98.1%	42.2	56.4%	45.6	46.0%	74.0	93.0%	44.8	93.3%
Cherokee County	44.1	58.7%	39.6	41.9%	39.7	56.9%	42.1	81.9%	39.6	35.0%	38.8	18.4%	69.9	85.2%	43.9	82.2%
Chowan County	42.8	79.4%	41.4	39.0%	41.6	43.4%	39.2	104.6%	38.3	39.0%	44.4	5.6%	67.4	99.5%	41.9	79.1%
Clay County	40.6	50.0%	36.9	85.1%	35.6	32.6%	41.0	97.0%	37.5	38.5%	43.4	11.8%	65.3	94.3%	43.6	81.1%
Dare County	49.2	73.5%	50.9	48.2%	44.3	51.3%	47.7	81.0%	41.6	49.7%	41.1	10.9%	66.8	96.4%	46.1	88.5%
Davie County	40.9	70.5%	41.4	55.7%	37.5	35.1%	44.5	77.5%	44.4	35.1%	43.4	6.2%	66.2	90.9%	45.7	74.5%
Durham County	41.7	87.2%	41.3	87.6%	40.3	54.2%	43.7	96.4%	42.2	46.4%	40.8	18.8%	67.6	90.2%	44.0	86.7%
Forsyth County	42.8	78.8%	39.5	54.6%	40.5	52.6%	41.6	90.6%	39.8	39.5%	39.7	14.3%	66.8	95.7%	41.8	16.6%
Hickory City	42.6	85.5%	42.3	63.3%	39.1	52.4%	44.3	78.7%	41.0	41.9%	39.1	14.4%	72.6	87.3%	45.9	79.9%
Jackson County	41.7	83.8%	41.2	55.6%	37.0	36.5%	41.0	86.5%	41.1	36.2%	36.3	11.3%	65.5	86.0%	43.6	80.1%
Mount Airy City	40.9	102.5%	40.6	67.2%	38.1	56.6%	44.4	103.7%	40.6	35.9%	38.4	15.5%	69.3	88.4%	42.8	73.6%
Stanly County	40.0	90.2%	35.0	59.7%	35.9	45.4%	41.2	87.0%	40.5	39.6%	36.0	12.0%	66.6	87.5%	43.3	78.0%
Wake County	46.4	88.4%	43.6	85.2%	41.8	65.2%	45.2	92.1%	42.8	58.9%	42.0	25.2%	70.6	93.0%	46.7	84.9%
Watauga County	46.8	68.0%	42.0	55.5%	44.7	36.7%	44.9	89.9%	43.4	26.9%	44.6	10.3%	68.5	94.1%	44.6	78.7%

Note: School systems are arranged in alphabetical order. Participation Index is based on the 8th grade ADM the year most students were in the 8th grade

Average Core Score and Participation Index for School Systems Grouped by 1989-90 8th Grade California Achievement Test Total Battery Scores: 60 to 64th Percentile

School System	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S.History	
	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index
Alamance County	40.4	72.1%	38.8	60.2%	38.3	40.2%	39.8	97.4%	39.7	40.9%	37.9	10.8%	65.4	97.1%	42.1	86.4%
Albemarle City	43.2	121.2%	42.3	74.3%	41.9	50.7%	43.2	106.4%	40.4	65.4%	43.0	13.2%	68.5	103.3%	42.2	97.1%
Alleghany County	38.4	50.4%	38.0	51.2%	38.5	49.2%	41.3	85.8%	42.0	50.0%	34.4	10.3%	66.8	90.4%	43.1	76.2%
Asheboro City	42.0	80.6%	39.5	66.9%	37.3	47.0%	43.7	93.8%	39.4	45.6%	45.1	6.1%	68.5	89.1%	43.4	71.4%
Asheville City	41.2	82.1%	39.7	58.5%	38.6	43.2%	39.4	88.7%	38.8	42.2%	40.8	15.6%	66.9	92.6%	41.8	80.8%
Buncombe County	43.2	79.5%	41.0	50.8%	39.2	50.1%	41.7	92.6%	39.6	36.2%	36.4	9.5%	68.0	93.1%	42.2	83.2%
Catawba County	44.5	68.6%	43.9	39.7%	38.6	47.8%	40.8	85.6%	39.2	32.4%	38.2	10.9%	65.8	90.3%	42.9	78.6%
Davidson County	39.0	73.6%	36.8	57.8%	33.0	45.3%	41.7	82.9%	36.2	47.2%	33.7	16.8%	65.8	93.1%	42.5	80.7%
Elkin City	44.9	84.3%	39.5	74.7%	40.9	76.5%	45.2	102.7%	44.8	50.8%	42.7	3.0%	75.9	100.0%	45.2	100.0%
Graham County	36.9	84.8%	36.0	56.4%	37.9	49.1%	35.8	102.1%	34.6	24.6%	35.2	8.8%	64.8	95.2%	41.5	77.2%
Greensboro City	40.1	81.0%	38.4	64.3%	37.5	50.5%	41.1	84.0%	38.4	48.5%	38.8	16.4%	66.9	88.6%	42.5	72.4%
Guilford County	43.2	79.4%	40.2	66.6%	39.8	47.7%	42.2	90.2%	39.3	48.1%	37.7	11.3%	68.8	92.6%	43.8	83.3%
Haywood County	42.1	73.0%	37.7	51.6%	39.3	38.5%	39.8	90.9%	38.8	38.3%	38.6	9.0%	65.3	88.3%	43.7	83.1%
Hendersonville City	42.4	153.5%	42.0	45.2%	40.8	105.0%	45.2	127.0%	39.7	63.6%	41.0	20.2%	71.7	119.2%	44.3	110.7%
Macon County	40.9	64.4%	43.4	37.2%	37.2	53.9%	44.0	81.2%	38.8	34.2%	35.8	12.0%	68.9	93.3%	44.5	81.1%
Mitchell County	38.1	102.1%	37.0	43.2%	33.8	34.6%	38.7	116.9%	42.3	18.7%	43.2	7.4%	66.9	90.3%	42.9	69.2%
Moore County	39.3	87.8%	36.5	48.1%	38.2	35.2%	37.4	91.6%	39.2	44.3%	37.8	12.2%	61.8	88.3%	42.5	77.7%
Mooresville City	40.5	63.0%	46.9	54.9%	31.7	50.6%	43.8	113.2%	44.7	26.1%	46.0	6.5%	71.0	89.4%	42.6	76.4%
New Hanover County	37.3	90.7%	39.3	70.9%	39.1	46.1%	40.4	143.4%	39.0	53.9%	38.2	17.3%	68.2	94.7%	46.9	81.7%
Pamlico County	42.1	78.2%	40.3	51.6%	39.1	30.4%	44.7	86.9%	35.8	28.0%	39.0	9.5%	62.1	103.5%	38.4	78.3%
Roanoke Rapids City	40.5	81.5%	42.7	52.1%	36.6	59.0%	45.5	91.1%	43.6	45.6%	40.4	8.5%	72.5	92.5%	44.0	79.3%
Rockingham County	39.5	57.4%	38.6	46.2%	37.5	37.5%	42.9	84.3%	38.0	44.5%	41.3	5.0%	62.9	92.5%	41.5	77.0%
Shelby City	39.7	70.6%	38.1	61.1%	33.6	59.7%	40.3	92.9%	36.6	64.8%	39.7	7.0%	67.9	87.5%	41.7	83.5%
Swain County	38.0	72.2%	35.6	79.6%	34.6	48.1%	41.0	90.7%	37.7	44.2%	39.7	8.2%	64.3	96.0%	42.6	69.9%
Tyrrell County	47.6	50.0%	44.9	41.7%	37.5	43.1%	38.6	112.5%	38.5	36.9%	29.9	23.5%	65.8	96.4%	40.2	66.2%
Union County	42.4	62.4%	39.8	51.9%	39.5	37.6%	42.6	88.6%	42.3	33.5%	40.5	10.9%	67.1	91.9%	44.4	80.4%
Yadkin County	36.3	66.0%	36.4	53.3%	35.9	34.7%	39.6	90.0%	34.9	40.2%	34.0	5.0%	63.6	96.5%	43.2	62.6%

Note: School systems are arranged in alphabetical order. Participation Index is based on the 8th grade ADM the year most students were in the 8th grade.

Average Core Score and Participation Index for School Systems Grouped by 1989-90 8th Grade California Achievement Test Total Battery Scores: 55 to 59th Percentile

School System	Algebra I Average Core	Algebra I Participation Index	Geometry Average Core	Geometry Participation Index	Algebra II Average Core	Algebra II Participation Index	Biology Average Core	Biology Participation Index	Chemistry Average Core	Chemistry Participation Index	Physics Average Core	Physics Participation Index	English I Average Core	English I Participation Index	U.S. History Average Core	U.S. History Participation Index
Alexander County	37.6	71.8%	34.9	49.6%	36.4	43.0%	39.4	90.1%	31.4	30.9%	35.9	18.9%	64.3	95.9%	41.0	77.6%
Avery County	43.6	56.5%	35.7	45.6%	33.2	26.7%	37.0	81.4%	38.1	28.8%	37.1	7.5%	65.5	86.4%	41.5	73.3%
Bertie County	39.1	50.0%	36.2	49.9%	28.1	29.0%	37.7	76.3%	38.1	21.4%	28.6	3.8%	63.4	75.2%	35.9	63.5%
Burke County	40.8	62.6%	38.3	45.0%	37.8	35.9%	40.9	84.8%	41.0	26.0%	41.4	10.9%	65.2	89.2%	42.3	75.7%
Carteret County	42.7	74.3%	40.2	55.7%	42.0	39.3%	43.9	92.5%	39.8	41.0%	44.2	7.2%	62.4	84.9%	43.4	74.3%
Chatham County	40.3	93.4%	39.7	66.9%	42.4	40.0%	40.8	93.9%	39.6	32.7%	39.3	6.6%	64.1	96.2%	43.6	82.0%
Currituck County	46.7	70.7%	42.3	42.7%	43.3	35.3%	42.0	87.1%	41.3	21.8%	40.9	12.5%	68.9	87.6%	44.2	69.2%
Duplin County	39.3	66.6%	35.4	48.2%	35.3	37.3%	39.1	89.0%	36.9	37.1%	36.0	7.6%	64.3	86.3%	41.8	79.8%
Eden City	40.2	76.3%	39.8	47.1%	40.8	44.1%	38.4	92.3%	38.4	33.9%	34.9	28.6%	63.9	88.9%	39.9	67.0%
Harnett County	40.4	62.3%	36.8	43.0%	37.9	28.6%	39.0	89.6%	36.1	31.0%	34.8	4.6%	64.4	90.1%	41.2	81.6%
Henderson County	43.8	69.7%	41.9	44.1%	39.8	43.3%	41.8	83.9%	41.0	27.8%	43.0	8.6%	65.8	88.2%	44.2	71.9%
High Point City	41.2	78.5%	38.6	41.8%	39.0	40.1%	40.6	78.2%	41.4	30.0%	41.4	6.6%	65.8	89.4%	42.9	74.5%
Iredell County	38.8	74.9%	37.8	43.5%	33.5	43.6%	38.4	86.5%	38.1	39.3%	36.0	6.4%	61.9	91.6%	41.0	75.8%
Johnston County	41.4	67.0%	38.6	47.6%	39.2	37.0%	42.0	90.5%	39.6	32.1%	36.3	12.2%	64.1	91.7%	41.9	80.6%
Kings Mountain City	39.6	54.9%	36.0	53.0%	39.3	19.8%	36.2	81.9%	39.6	27.4%	42.9	3.8%	62.3	80.9%	39.8	72.0%
Martin County	35.9	87.6%	35.8	59.0%	37.2	39.2%	38.4	82.5%	38.4	41.4%	34.6	17.1%	61.9	93.4%	40.9	81.9%
McDowell County	37.7	83.9%	34.8	42.0%	38.0	33.3%	38.8	85.1%	40.0	27.7%	35.6	11.9%	61.2	87.9%	40.4	69.0%
Mecklenburg County	40.9	72.1%	39.2	62.2%	37.9	42.6%	40.5	84.1%	38.7	43.9%	38.2	12.8%	63.2	85.7%	41.5	77.5%
Pasquotank County	41.3	75.8%	35.7	54.7%	36.0	47.3%	42.3	84.5%	37.1	37.4%	43.9	9.5%	66.3	94.3%	41.7	81.6%
Perquimans County	42.0	65.3%	39.7	67.5%	43.8	36.8%	42.4	82.4%	42.8	31.2%	38.3	5.8%	70.1	86.8%	43.4	72.8%
Person County	42.3	72.1%	38.8	59.8%	38.7	34.8%	42.7	85.0%	40.7	22.8%	33.8	16.4%	65.0	88.6%	42.8	77.4%
Polk County	38.8	62.6%	39.8	35.8%	31.1	46.7%	41.8	79.4%	33.8	44.0%	32.0	11.9%	67.8	92.0%	39.0	65.4%
Reidsville City	38.2	64.4%	37.1	36.7%	33.7	42.8%	37.8	81.3%	34.2	38.9%	33.8	4.9%	65.4	97.5%	38.8	68.9%
Rowan County	40.7	70.2%	37.4	63.4%	34.7	43.4%	40.8	83.8%	36.9	40.4%	35.7	11.0%	62.3	85.9%	42.1	72.1%
Rutherford County	41.4	69.7%	38.0	37.6%	39.5	31.1%	42.3	80.8%	42.3	22.0%	44.2	5.5%	64.1	91.3%	40.8	73.7%
Sampson County	37.3	63.1%	34.5	47.0%	33.7	38.0%	39.9	87.1%	36.4	34.2%	42.2	3.4%	61.0	90.7%	43.2	88.4%
Statesville City	39.9	60.2%	38.4	48.0%	35.6	48.8%	38.0	70.7%	36.7	40.4%	31.3	2.4%	62.6	71.8%	40.3	77.9%
Surry County	41.9	67.0%	39.5	45.6%	39.8	36.6%	42.5	88.9%	37.5	43.2%	35.9	4.6%	64.8	94.6%	43.2	76.4%
Transylvania County	39.5	81.4%	40.5	54.2%	38.8	50.8%	42.8	100.8%	43.2	30.9%	35.2	28.8%	64.8	95.0%	43.1	82.1%
Washington City	41.2	64.0%	35.4	57.0%	37.2	42.8%	40.3	88.2%	36.7	47.7%	34.3	12.3%	61.3	94.1%	42.4	88.8%
Washington County	37.1	67.8%	32.8	57.1%	34.5	33.7%	36.5	92.5%	34.9	35.8%	42.3	3.7%	64.4	87.8%	38.8	79.0%
Wayne County	38.0	73.4%	36.7	58.3%	35.0	46.2%	40.5	92.7%	35.2	51.0%	36.7	12.3%	63.2	95.7%	42.2	87.9%
Whiteville City	36.8	88.4%	37.0	58.9%	36.2	50.8%	41.0	84.7%	38.7	57.7%	35.2	29.4%	73.0	96.6%	43.8	88.7%
Wilson County	44.3	67.3%	39.9	46.2%	39.1	34.5%	40.7	84.2%	42.2	29.9%	41.7	8.0%	63.6	87.7%	42.6	79.5%
Yancey County	43.2	58.2%	42.1	38.2%	32.4	40.2%	38.4	80.7%	38.3	19.2%	40.1	7.5%	60.0	92.4%	40.0	75.0%

Note: School systems are arranged in alphabetical order. Participation Index is based on the 8th grade ADM the year most students were in the 8th grade

Average Core Score and Participation Index for School Systems Grouped by 1989-90 8th Grade California Achievement Test Total Battery Scores: 50 to 54th Percentile

School System	Algebra I		Geometry		Algebra II		Biology		Chemistry		Physics		English I		U.S. History	
	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index	Average Core	Participation Index
Beaufort County	35.6	60.8%	36.6	36.8%	34.9	34.1%	37.5	82.6%	36.7	33.5%	32.7	6.5%	55.6	91.0%	40.1	72.6%
Bladen County	37.1	72.9%	39.1	55.9%	32.6	37.2%	37.3	89.4%	33.7	35.2%	34.2	5.9%	60.5	90.6%	37.4	74.2%
Caldwell County	36.3	68.5%	39.2	42.9%	37.7	29.8%	42.2	73.5%	40.6	21.1%	37.7	4.8%	63.5	80.1%	42.0	70.2%
Caswell County	34.7	65.1%	35.5	40.2%	30.3	38.7%	37.5	92.6%	33.4	45.2%	36.2	10.8%	56.8	92.2%	40.0	70.2%
Cleveland County	38.1	67.1%	37.2	42.9%	37.3	23.1%	38.7	84.3%	36.3	38.5%	38.7	8.3%	60.0	85.6%	40.3	78.1%
Clinton City	35.5	67.2%	35.1	45.2%	41.0	40.1%	34.6	85.1%	36.1	37.3%	30.9	4.5%	60.9	90.6%	42.4	81.1%
Columbus County	39.4	61.4%	36.3	38.5%	36.4	24.3%	36.1	89.6%	38.7	33.7%	0.0	0.0%	66.7	81.9%	40.2	87.1%
Craven County	41.2	67.4%	38.7	51.8%	39.2	42.3%	39.1	78.3%	40.0	31.5%	39.4	11.0%	65.4	91.0%	43.5	80.6%
Cumberland County	38.5	60.2%	38.7	58.5%	36.1	44.8%	40.2	90.4%	38.5	38.3%	37.5	9.9%	64.0	90.6%	40.7	84.3%
Edgecombe County	35.9	73.9%	37.3	37.4%	31.8	30.5%	38.7	77.3%	37.8	44.3%	33.8	13.0%	60.0	92.2%	39.4	73.3%
Franklin County	43.4	58.2%	37.9	45.8%	36.1	29.6%	38.7	85.6%	38.1	28.6%	35.9	8.1%	64.0	[illegible]%	41.0	78.5%
Gaston County	38.4	63.7%	35.9	49.6%	33.9	32.4%	37.7	85.6%	35.3	35.2%	34.3	13.9%	61.[illegible]	89.[illegible]%	40.1	73.5%
Granville County	38.9	60.3%	35.9	52.6%	36.0	28.5%	37.3	89.2%	37.3	42.2%	36.1	[illegible]%	62.3	90.2%	41.4	78.1%
Hertford County	38.6	58.5%	31.6	47.5%	34.3	31.6%	35.7	89.2%	34.5	34.5%	36.7	4.6%	60.2	85.0%	38.2	78.1%
Jones County	37.3	66.9%	38.3	58.6%	34.6	23.0%	40.9	89.2%	34.9	30.3%	36.4	7.5%	58.7	87.6%	40.2	86.6%
Lee County	39.1	78.0%	37.5	53.6%	37.6	37.8%	38.4	87.6%	37.6	29.2%	40.6	7.3%	62.2	93.7%	42.8	75.6%
Lenoir County	40.2	63.6%	37.6	50.7%	33.9	43.4%	38.8	92.3%	39.5	39.8%	43.3	3.6%	62.6	88.3%	40.6	78.6%
Lincoln County	36.6	70.6%	34.1	63.5%	38.3	39.6%	38.3	86.5%	37.3	36.4%	40.8	4.3%	63.8	82.9%	41.3	76.5%
Monroe City	37.6	74.1%	37.2	44.6%	31.2	35.6%	38.1	80.9%	36.0	44.6%	34.6	6.7%	57.2	83.3%	42.0	81.1%
Nash County	40.7	62.6%	39.6	48.3%	38.5	40.3%	38.6	91.4%	38.7	35.9%	42.6	9.5%	62.6	90.7%	42.4	79.7%
Newton City	42.6	64.2%	38.5	51.1%	39.7	49.2%	40.7	90.5%	41.0	36.3%	41.7	8.8%	66.1	95.1%	41.7	81.7%
Onslow County	42.0	61.5%	36.6	55.6%	33.6	46.4%	40.1	96.6%	39.1	42.1%	36.7	11.3%	64.3	97.5%	41.9	84.1%
Orange County	39.7	70.7%	34.6	59.2%	31.8	44.4%	40.7	72.4%	37.3	42.7%	32.4	9.1%	58.7	84.8%	43.0	72.7%
Pitt County	43.0	67.3%	39.0	58.5%	41.3	38.7%	41.1	90.4%	39.6	37.9%	40.2	18.1%	62.1	100.0%	43.7	80.3%
Randolph County	42.1	53.9%	39.4	40.1%	37.4	27.4%	40.1	74.7%	36.0	28.5%	39.1	6.0%	66.1	84.7%	44.2	72.2%
Richmond County	37.3	71.9%	34.3	49.2%	33.2	31.2%	39.3	73.0%	33.2	31.3%	33.6	4.9%	60.1	87.2%	43.2	67.0%
Stokes County	36.6	56.0%	37.6	45.3%	35.6	33.1%	37.5	97.0%	36.6	34.5%	37.2	3.3%	61.5	90.6%	40.1	75.3%
Tarboro City	43.7	75.6%	36.0	47.1%	36.1	40.6%	39.1	83.3%	35.5	51.6%	36.9	18.9%	67.1	88.4%	39.4	75.6%
Wilkes County	38.4	61.4%	33.8	51.6%	32.4	36.4%	38.6	87.2%	36.9	31.9%	35.4	9.0%	61.4	92.0%	43.0	73.0%

Note. School systems are arranged in alphabetical order. Participation Index is based on the 8th grade ADM the year most students were in the 8th grade.

Average Core Score and Participation Index for School Systems Grouped by 1989-90 8th Grade California Achievement Test Total Battery Scores: Less than the 50th Percentile

School System	Algebra I Average Core	Algebra I Participation Index	Geometry Average Core	Geometry Participation Index	Algebra II Average Core	Algebra II Participation Index	Biology Average Core	Biology Participation Index	Chemistry Average Core	Chemistry Participation Index	Physics Average Core	Physics Participation Index	English I Average Core	English I Participation Index	U.S. History Average Core	U.S. History Participation Index
Anson County	38.1	83.8%	32.8	40.5%	27.7	41.6%	33.9	90.5%	31.5	23.5%	37.6	7.7%	61.5	92.9%	36.4	83.9%
Brunswick County	35.5	80.2%	35.4	48.3%	34.8	29.1%	40.6	85.8%	35.0	33.9%	37.2	11.0%	60.4	87.2%	39.8	71.1%
Durham City	33.1	77.6%	29.0	45.9%	25.4	33.7%	33.6	73.0%	28.8	41.6%	31.7	8.2%	54.1	75.5%	36.2	58.4%
Franklinton City	34.5	62.9%	41.4	34.3%	30.0	30.9%	38.3	91.7%	41.5	17.1%	40.3	6.9%	59.3	87.1%	40.8	76.4%
Gates County	41.5	86.4%	41.7	47.9%	41.0	37.0%	38.2	90.6%	35.0	58.8%	33.5	18.0%	69.0	94.8%	42.0	91.6%
Goldsboro City	37.5	70.1%	33.8	43.0%	33.0	46.7%	36.9	87.6%	32.1	47.6%	37.2	3.2%	58.1	83.7%	39.5	73.5%
Greene County	40.4	47.5%	40.3	44.8%	41.7	34.4%	40.2	75.8%	41.2	25.6%	37.9	6.4%	67.8	91.5%	40.8	75.8%
Halifax County	32.5	66.5%	28.1	30.4%	26.6	26.8%	31.7	81.7%	34.6	22.8%	28.6	6.5%	52.1	89.3%	35.5	71.6%
Hoke County	38.9	89.8%	36.0	39.7%	36.7	26.9%	37.9	72.8%	39.0	33.0%	36.6	7.8%	62.9	83.0%	38.7	74.7%
Hyde County	40.5	43.6%	37.8	53.1%	39.6	28.4%	34.0	75.0%	41.7	28.4%	33.9	11.5%	59.5	96.2%	39.1	101.4%
Kannapolis City	33.6	86.6%	33.2	65.3%	32.4	56.9%	36.5	76.2%	39.1	39.0%	37.6	10.2%	61.9	87.2%	40.2	72.6%
Kinston City	42.7	73.9%	37.8	48.2%	41.5	34.4%	38.6	80.6%	38.6	29.2%	37.9	11.1%	60.4	83.6%	39.6	80.4%
Lexington City	36.7	82.2%	34.2	60.6%	27.7	27.9%	37.0	80.1%	35.1	29.3%	32.5	17.2%	66.5	88.7%	40.6	68.4%
Madison County	40.3	65.4%	38.3	28.6%	39.3	26.5%	39.1	70.6%	33.0	30.9%	40.6	9.3%	58.0	93.1%	43.9	72.3%
Montgomery County	37.9	79.9%	34.7	52.6%	36.9	45.2%	36.4	82.6%	36.8	46.0%	34.0	16.6%	66.2	92.0%	40.5	74.4%
Northampton County	38.4	66.1%	30.1	52.7%	29.6	41.9%	36.5	82.7%	32.6	43.2%	34.1	9.1%	56.3	94.2%	38.4	79.4%
Pender County	36.6	67.8%	35.4	50.7%	34.4	34.1%	37.6	103.6%	36.7	32.0%	33.8	11.2%	63.4	88.1%	41.0	83.4%
Robeson County	36.6	57.2%	33.4	38.5%	31.3	25.1%	35.4	79.4%	34.6	33.0%	33.4	7.2%	57.0	82.4%	38.2	65.1%
Rocky Mount City	43.3	84.1%	38.9	40.9%	41.4	28.9%	39.0	80.7%	42.5	26.9%	42.0	14.7%	66.4	91.4%	40.6	67.2%
Scotland County	38.5	70.6%	36.5	32.5%	34.1	47.2%	36.9	87.2%	40.7	24.1%	35.8	4.5%	59.7	92.6%	43.8	64.1%
Thomasville City	43.6	88.5%	37.7	45.2%	37.0	35.2%	38.1	81.1%	40.6	29.6%	38.1	7.9%	60.6	85.5%	39.9	75.0%
Vance County	38.6	55.8%	34.0	37.1%	33.7	29.6%	35.6	80.3%	34.9	29.4%	36.0	11.3%	56.8	90.5%	41.0	76.6%
Warren County	37.2	67.7%	33.6	39.4%	30.0	29.3%	39.5	92.1%	34.7	27.2%	**	**	56.9	89.0%	41.9	74.1%
Weldon City	32.2	65.5%	28.4	26.5%	26.2	42.7%	30.6	66.7%	27.3	46.6%	24.0	24.0%	45.1	80.0%	29.5	76.6%
West. Rockingham	39.7	74.9%	36.7	49.4%	36.5	32.9%	41.3	87.0%	35.7	35.6%	34.6	9.1%	66.6	81.9%	42.4	70.9%

Note School systems are arranged in alphabetical order. Participation Index is based on the 8th grade ADM the year most students were in the 8th grade.