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ABSTRACT

BENCHMARKS is intended as an aid to the proper use of Georgia Statewide Testing Program scores. It provides information about the program and the tests; reading and understanding the various reports; understanding what the scores mean; and applying test results for the improvement of learning opportunities for Georgia children and youth. It is organized into nine sections; each providing answers to these questions: (1) What are the objectives of the Georgia Statewide Testing Program?; (2) Who is tested? What tests are used? What do the tests test?; (3) What scores are reported? What do the scores mean? What are some uses of the scores? What are some limitations of the scores?; (4) What reports are provided for use at various levels? What do the reports look like? How may the reports be read and understood?; (5) How may the test results be assessed and interpreted?; (6) What may be done to improve students' learning?; (7) How may scores be released to the general public?; (8) How may a local inservice program be conducted?; and (9) How may students be prepared for testing? Test scores seen often to be misused or not used at all. Perhaps, this is due either to misunderstanding of testing terminology or to a lack of knowledge of what the scores mean. In this guide special attention has been paid to communicating in a simple, straight-forward manner by using words common to most educators and by making liberal use of samples, examples and illustrations. (Author/BJG)

BENCHMARKS

UTILIZATION GUIDE FOR GEORGIA STATEWIDE TEST SCORES

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INTRODUCTION

Test scores provide a wealth of information for improving education. They can be used as a tool for the teacher, principal, curriculum specialist or other school staff to diagnose areas where improvement may be needed. Following a diagnosis, prescriptions for improvement may be developed and applied.

BENCHMARKS is intended as an aid to the proper use of Georgia Statewide Testing Program scores. It provides information about the program and the tests; reading and understanding the various reports; understanding what the scores mean; and applying test results for the improvement of learning opportunities for Georgia children and youth. It is organized into nine sections, each of which provides answers to questions posed in the table of contents on the following page.

Test scores seem often to be misused or not used at all. Perhaps, this is due either to misunderstanding of testing terminology or to a lack of knowledge of what the scores mean. In this GUIDE special attention has been paid to communicating in a simple, straight-forward manner by using words common to most educators and by making liberal use of samples, examples and illustrations.

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WHERE MAY ANSWERS TO QUESTIONS LIKE THESE BE FOUND?

What are the Objectives of the Georgia Statewide Testing Program?

The overall goal of the Georgia Statewide Testing Program is to improve education for all Georgia children and youth. For the achievement of this goal, the State Board of Education has adopted ten objectives. They are:

1. To provide basic information for helping the student assess his own progress through the educational system of the State so he can become increasingly mature in understanding himself, his educational needs, and his future possibilities.
2. To help teachers understand their students in terms of their capabilities and achievements so that teachers can prescribe effective instructional programs for them.
3. To identify students with special needs who may require adjusted programs and maintain continuing attention to their progress.
4. To provide local systems with basic information for assessing the effectiveness of the principal phases of educational programs in sufficient detail to indicate specific steps required for continually strengthening those programs.
5. To provide information to parents to help them understand their children in order that they may realistically help them plan ahead.
6. To provide the Georgia Department of Education with basic information needed for equalizing educational opportunities for all children in all school systems of the State.
7. To provide research agencies at both the State and local levels with data for generating and testing hypotheses concerning all aspects of the educational process.
8. To provide every school system with strong incentives to experiment at least on a modest scale with new and promising educational programs, materials, devices and organizational arrangements.
9. To provide the State Legislature and General Public with readily interpretable information concerning the status of the State system of education as a whole and individual schools within systems to be consistent with requirements of State Law.
10. To assist school systems to use generally recommended practices relative to test administration and utilization of test results.

As can be seen from the above objectives, the Georgia Statewide Testing Program is not an accountability system where test results are used as a means of holding an individual teacher, administrator, school or system accountable for student performance on tests. To do so is an improper use of the test results and any conclusions drawn from such uses of the test results are unsupportable.

In addition to the above objectives, the State Board of Education has adopted nine major utilization objectives for improving instruction at the local school and system levels. They are:

1. Identify individual weaknesses in skill development in Vocabulary, Reading, Language, Work Study and Mathematics.
2. Diagnose strengths and weaknesses of groups.
3. Individualize instruction.
4. Report progress to parents.
5. Select curriculum materials.
6. Set the pace of instruction.
7. Select methods of instruction.
8. Counsel students.
9. Help determine changes needed in the curriculum of previous grades for basic skill development.

Who is Tested? What Tests are Used? What do the Tests Test?

In accordance with State Board of Education policies, all students in Grades 4, 8, and 11 are tested except for students in programs for the mentally retarded.

The Iowa Tests of Basic Skills (ITBS) is used in Grades 4 and 8; Form 5 Level 10 for Grade 4; Form 5 Level 14 for Grade 8. The Tests of Academic Progress (TAP), Form S is used for Grade 11.

The ITBS examines the fundamentals of elementary school instruction: The basic skills essential to success in all types of learning. Since the test battery measures a student's ability to use his acquired skills, it does not focus on repetition or identifying formal facts or rules. While taking the test the student uses his skills as he might in day-to-day classroom activities.

The ITBS tests 5 general areas. They are:

Test V — Vocabulary

Test R — Reading Comprehension

Test L — Language Skills (Subtest L-1 spelling; Subtest L-2 capitalization; Subtest L-3 punctuation; Subtest L-4 usage)

Test W — Work Study Skills (Subtest W-1 map reading; Subtest W-2 reading graphs and tables; Subtest W-3 knowledge and use of reference materials)

Test M — Mathematics Skills (Subtest M-1 math concepts; Subtest M-2 math problem solving)

Within each test and subtest of the ITBS, test questions are referenced to skills. Table 1 on page 7 lists the skills measured by each subtest for Grade 4; Table 2 on page 8 for Grade 8.

The Tests of Academic Progress (TAP) provide an appraisal of students progress toward general secondary school goals. Each subtest measures the extent to which objectives of a basic area of high school instruction have been achieved by students. The three subtests of the TAP used in the Georgia Statewide Testing Program are Composition, Reading and Mathematics. The skills measured in each subtest are listed in Table 3 on page 9.

TABLE 1

Skills Measured by

ITBS Grade 4

V VOCABULARY
- Human relationships
  - Verb
  - Noun
  - Adjective
  - Other
- World of practical affairs
  - Verb
  - Noun
  - Adjective
- Science
  - Verb
  - Noun
  - Adjective
- Aesthetics
  - Noun
  - Adjective

R READING
- Main idea
- Supporting detail
  - Explicit
  - Inferred
- Application
- Evaluation

L-1 SPELLING
- Errors in endings
- Reversing Letters
- Omission of letters
- Unnecessary letters
- Incorrect vowel
- Incorrect consonant
- Spelling by sound alone
- Common mispronunciation
- No error

L-2 CAPITALIZATION
- Beginning of sentence
- Pronoun "I"
- Opening and closing of letter
- Proper nouns
- Unnecessary capitalization of common noun
- No error

L-3 PUNCTUATION
- Quotation mark
- Question mark
- Colon
- Apostrophe
- Comma
  - Date
  - Series
  - City and state
  - Closing of letter
  - Unnecessary
- Period
  - End of sentence
  - Abbreviation or initial
  - Unnecessary
- No error

L-4 USAGE
- Subject-verb agreement
- Substandard verb form
- Noun and pronoun form
- Pronoun case
- Comparisons
- Use of negative forms
- Diction
- Redundancy
- No error

W-1 MAPS
- Note directions and use scale to compute distances
- Use grid system to locate places
- Recognize relative locations
- Read symbols
- Make inferences from given information

W-2 GRAPHS
- Read data
- Organize information from given data
- Interpret information from given data

W-3 REFERENCES
- Alphabetize
- Use of index
- Use of table of contents
- Use of dictionary
  - Pronunciation
  - Syllabication
  - Spelling
  - Definitions
  - Usage
- Use of encyclopedia
- Use of reference materials

M-1 CONCEPTS
- Sets, numbers, numeration
  - Sets and set operation
  - Numbers
  - Numeration (Place value)
- Operations, their properties and number theory
  - Addition and subtraction
  - Multiplication and division
  - Number properties
  - Combination of operations
- Relations and functions
  - Equality and inequality
- Geometry
  - Polygons
  - Points, lines, planes, solids
- Measurement
  - Units
  - Conversions
- Application

M-2 PROBLEMS
- Operations, their properties and number theory
  - Addition and subtraction
  - Multiplication and division
  - Combination of operations
- Measurement
  - Units
  - Computation involving measures
- Application

TABLE 2

Skills Measured by

ITBS Grade 8

V VOCABULARY
- Human relationships
  - Verb
  - Noun
  - Adjective
  - Other
- World of practical affairs
  - Verb
  - Noun
  - Adjective
  - Other
- Science
  - Verb
  - Noun
  - Adjective
- Aesthetics
  - Noun

R READING
- Main idea
- Supporting detail
  - Explicit
  - Inferred
- Application
- Evaluation
- Style and tone

L-1 SPELLING
- Errors in endings
- Reversing letters
- Omission of letters
- Unnecessary letters
- Incorrect vowel
- Incorrect consonant
- Spelling by sound alone
- Common mispronounciation
- No error

L-2 CAPITALIZATION
- Beginning of sentence
- Pronoun "I"
- Beginning of quotation
- Unnecessary capitalization in quotation
- Signs
- Address
- Opening or closing of letter
- Book title
- Proper nouns
- Unnecessary capitalization of common noun
- No error

L-3 PUNCTUATION
- Quotation Mark
- Question Mark
- Colon
- Semi-colon
- Apostrophe
- Exclamation point in quotation
- Use of period with abbreviations
- Comma
  - Quotation
  - Conjunction
  - Appositive or direct address
  - Series
  - Miscellaneous
  - Unnecessary
- No error

L-4 USAGE
- Substandard verb form
- Subject-verb agreement
- Pronoun
  - Form
  - Case
  - Agreement
- Use of negative construction
- Comparative/superlative form

L-4 USAGE (Continued)
- Redundancy
- A/an
- Diction/idiom
- Adjective-adverb confusion
- No error

W-1 MAPS
- Note directions and use scale to compute distances
- Use grid system to locate places
- Recognize relative locations
- Read symbols
- Make inferences from given information

W-2 GRAPHS
- Read data
- Organize information from given data
- Interpret information from given data

W-3 REFERENCES
- Alphabetize
- Use of index
- Use of dictionary
  - Guide words
  - Syllabication
  - Pronunciation
  - Spelling
  - Definitions
  - Usage
- Use of encyclopedia
  - Key words
  - Guide words
- Use of Reference Materials

M-1 CONCEPTS
- Sets, numbers, numeration
  - Sets and set operations
  - Numbers
  - Numeration (Place value)
- Operations, their properties and number theory
  - Addition and subtraction
  - Multiplication and division
  - Number properties
  - Combination of operations
- Relations and functions
  - Graphing
  - Relations
  - Equality and inequality
  - Ratios
- Geometry
  - Polygons
  - Circles
  - Angles
  - Points, lines, planes, solids
- Measurement
  - Units
  - Dry and liquid
  - Angle measure
- Probability and statistics
  - Central tendency
- Application

M-2 PROBLEMS
- Operations, their properties and number theory
  - Addition and subtraction
  - Multiplication and division
  - Combination of operations
- Measurement
  - Units
  - Computation involving measures
- Probability and statistics
  - Central tendency
  - Interpretation of graphs and tables

TABLE 3

Objectives Measured

By TAP Grade 11

COMPOSITION
- Spelling
- Capitalization and/or punctuation
- Usage
- Style
- Sentence structure
- Logical ordering and relationship of ideas

READING
- Main idea
- Supporting detail
  - Explicit
  - Inferred
- Application
- Evaluation
- Style and tone

MATHEMATICS
- Sets, numbers, numeration
  - Sets and set operations
  - Numbers
  - Numeration (place value)

MATHEMATICS (Continued)
- Operations, their properties and number theory
  - Addition and subtraction
  - Multiplication and division
  - Number properties (Divisibility)
  - Algebra
- Relations and functions
  - Graphs
  - Relations, correspondence, sequence
  - Equality and inequality
- Geometry
  - Polygons
  - Circles
  - Angles
  - Geometric relations
  - Points, lines, planes, solids
- Measurement
  - Units of measure (area, perimeter)
  - Angle measure
- Probability and statistics
  - Average
  - Interpretation of graphs
- Application

What Scores are Reported? How May These Scores be Used? What are the Limitations of the Scores?

The section that follows contains a description, some uses and some limitations of scores reported in the Georgia Statewide Testing Program. It may be helpful when analyzing the various reports to refer to this section so that a clearer understanding of the scores may be gained. In so doing, perhaps some of the pitfalls often associated with evaluating standardized test scores may be avoided.

Two general comments about the reports and scores are in order. The first is that in many of the reports supplied as a part of the Georgia Statewide Testing Program scores which compare a student's performance to another group by way of norms are provided in abundance (i.e., percentile ranks, grade equivalents, standard scores). While these scores when used with caution provide valuable information, the Student Item Response Report for Grades 4 and 8 focuses on the student's own performance on individual questions and questions grouped into skill areas without reference to other students. This information allows a teacher to focus on the student, taking into consideration the student's own interests, abilities, motivations and aspirations. Armed with all this information, the teacher can then seek ways of providing learning experiences especially designed for the student. In so doing, the goal of instructional improvement which is the focus of the Georgia Statewide Testing Program will more nearly be reached.

Going hand in hand with the student's own Item Response Report are the Class, School and System Response Summary Reports provided for Grades 4, 8 and 11. Here as in the Student Item Response Report the focus is on the individual test question and test questions grouped into skills. The scores on these reports are reported as percents of correct responses by test question in the class, school or system. Since these reports allow examination of test performance on individual questions and questions grouped into skills rather than to an outside norm group, ways of providing learning experiences especially designed for students in the class, school or system may be sought. Once again, instructional improvement, which is the goal of the Georgia Statewide Testing Program may more nearly be reached.

It should be remembered, however, that the greater the number of questions testing a skill, objective, subject, etc., the greater the possibility that scores are reliable. Therefore it is wise to not base a conclusion on a student's performance solely on his or her response to a small number of test questions. The ITBS and TAP are survey-type tests. They are not diagnostic tests. As a survey-type test they can be used as a "flagging device". This means that results may point to a potential problem area. Ideally, when a potential problem has been identified additional evaluation should follow to determine: 1) If the problem really exists; and 2) What is the specific nature of the problem. Then, when this course of action has been followed, additional information is available to the teacher for taking developmental action for students now in the classroom and preventative action for future students.

Conversely, a survey type test may point to particular areas of strength. Ideally, when such an analysis has been made additional evaluation should follow to seek answers to the questions: Are these indeed strengths? What am I (or we in the case of a school or system) doing in the way of teaching techniques, use of learning materials and curricular design to have helped students learn? What can be done to continue or even do better?

The second general comment has to do with measurement error.

Inherent in all tests is some "error". Because of this, reported scores may be different from "true" or error free scores. No test is perfectly reliable which means that if the test were to be administered five times to a student assuming similar conditions, scores are likely to be different each time.

Errors in measurement may be caused by the test instruments itself, the test administrator or fluctuations in students. It is possible to estimate this error statistically. As a "rule of thumb" estimate, in the Grade 4 ITBS the error of Grade Equivalents and Standard Scores is from 4-6 score intervals in each of the subtests and from 2-3 points in composite (Language, Work Study, Math, Battery) scores. In the ITBS Grade 8 a "rule of thumb" estimate of error for Grade Equivalents in each subtest is from 5-9 score intervals; for the composite scores (Language, Work Study, Math, Battery) from 3-5 grade equivalent intervals. For Grade 8 standard scores, a "rule of thumb" estimate of error is from 4-7 score intervals in each subtest and from 2-4 score intervals in composite scores. In the TAP a "rule of thumb" estimate for error is 3 standard score points for each of the subtests (Composition, Reading, Mathematics).

As an example of the importance of error in evaluating scores, let us say an 8th Grade student receives a standard score of 97 on the Use of Reference Materials subtest of the ITBS Based on the "rule of thumb" above the estimated standard error is from 4-7 score points. We would conclude then, that if this student were administered the test repeatedly, two out of three of his standard scores would fall within 4-7 points above and 4-7 score points below or between 90-104. Now let us look at another 8th Grade student whose standard score on the Use of Reference Materials subtest is 91. For this student the "band" into which his scores would fall 2 out of 3 times is from 84 to 98. When looking at both of the above students together we see that their standard score "bands" overlap. Student A's band is from 90 to 104; student B's from 84 to 98. This means that the chance for error-free or "true" scores to be the same for both students is great enough so that they should be regarded as not really being "different".

Scores

Raw Score (RS). The raw score is arrived at by totaling the number of questions a student answers correctly in each subtest. Since the subtest may contain a varied number of questions the raw score is not on a scale common to all subtests and therefore has little value for reporting. It is used, however, as the basis for score conversions in all of the other student scores in the Georgia Statewide Testing Program.

Grade Equivalent (GE). Two numbers are used in expressing grade equivalents. The first indicates the school year and the second the school month; for this purpose, the school year is divided into ten months. For example, grade equivalents for the fourth grade range from 4.0 through 4.9.

If a student's score on the reading subtest indicates a grade equivalent of 4.1, this should be interpreted to mean that the student achieved at the same level as the average student in the norm group in the first month of the fourth grade. It should be remembered, however, that "average" means half of the students in the norm group are either above or below this level of achievement. For this reason, all students should not be expected to attain a particular grade equivalent. Whether students as a group in a classroom or school compare favorably with the norm group depends, for instance, on whether half or more of those currently tested are above the grade equivalent appropriate for the first month of the school year (i.e., 4.1 for fourth grade, 8.1 for 8th grade). As a part of the Georgia Statewide Testing Program school and system grade equivalent frequency tables are provided. They should be examined to see if the 50th percentile falls at 4.1 or above for the fourth grade or 8.1 or above for the 8th grade. If they do, the school or system compares favorably with the norm group.

Although it appears that grade equivalents are easy to understand and interpret, they have some limitations. Perhaps the most serious is that each unit on the scale of 1.0 through 12.9 does not reflect an equal amount of student growth. Since growth in the development of reading skills, for example, is rapid at certain grade levels and slow at others, some differences between grade equivalent units will indicate a greater amount of achievement than others. A year of growth in reading from grade 1.0 to 2.0 is likely to be a larger difference in achievement than an increase from 8.0 to 9.0. It would be incorrect to assume that the same amount of growth in reading has taken place.

Another limitation of the grade equivalent is the common misinterpretation that earning a particular grade equivalent indicates a student's readiness for work at that level. For example, a fourth grade student earning a grade equivalent of 8.5 in the Vocabulary subtest does not mean his Vocabulary is at the eighth grade level. Such a conclusion would overlook the design of the test especially for fourth graders with a range of test question difficulty appropriate for fourth graders.

Still another limitation of grade equivalents in the ITBS is that GE's are not comparable between and among subtests. For example, both the Grade 4 Language Usage subtest and the Map Reading subtest have 32 questions. Hence, raw scores are comparable. Yet a raw score of 14 on the Usage subtest converts to a grade equivalent of 4.2 while the same raw score of 14 on the Reading subtest converts to a grade equivalent of 4.4.

Standard Score (SS). A standard score is a raw score which has undergone a statistical conversion to a scale common to all subtests. The ITBS standard score scale for all grades (3 through 8) ranges from 0 to 150 with a mean of 80 and a standard deviation of 20. Since the ITBS scale is common for

all grades (3 through 8), the range of standard scores and averages are different for each grade. In Grade 4 the standard score range is from 12 to 107 with an average of between 66 and 71. In Grade 8 the range of standard scores is from 33 to 150 with an average of 98 and 103. For the TAP in Grade 11 the standard score scale ranges from 16 to 88 with an average between 48 and 52 and standard deviation of 10. It should be remembered that average in this instance is the arithmetic mean which is obtained by dividing the sum of a set of scores by the number of scores in the set.

Standard scores allow comparisons between and among subtests. For example, a student receives a standard score of 74 on the Reading subtest and a 61 on the Vocabulary subtest. Since both scores are on a common scale, one could say that this student performed better on the Reading subtest than on the Vocabulary subtest.

The major limitation of standard scores is that they are not on a scale of equal measuring units. For example, in the TAP Grade 11 Mathematics subtest a student answering 21 questions correctly will obtain a standard score of 54, the same standard score as a student answering 22 questions correctly. In the same subtest one student can answer 5 questions correctly and obtain a standard score of 30 while another student answering 6 or only one more question correctly, will obtain a score of 3 intervals higher, or a standard score of 33.

National Percentile Rank (NPR). A national percentile rank indicates a student's relative position to the national norm sample in terms of the percent of students with lower scores. For example, when a student receives a NPR of 75 on the Mathematics Concepts subtest, the indication is that 75% of the students in the national norm sample obtained a score lower than his. In other words, this student's Mathematics Concepts achievement as measured by the test surpasses that of 75 percent of the national norm sample.

A major limitation of percentile ranks is that they are not on a scale of equal measuring units. The difference between the percentile ranks of 5 and 10 or between 90 and 95 is likely to be much greater than the difference between the ranks of 50 and 55. For example, in the 8th grade Reading subtest a raw score of 38 converts to a NPR of 50, while an increase of only 2 raw score intervals converts to a NPR of 55. In the same subtest a raw score of 60 converts to a NPR of 90, while an increase of 4 raw score intervals is needed to increase the NPR by 5 score intervals to 95. This is true because large numbers of students tend to achieve scores near the middle or 50th percentile, while relatively few students obtain extremely high scores.

State Percentile Rank (SPR). As is the case with a national percentile rank, the state percentile rank indicates a student's relative position to a group. In the Georgia Statewide Testing Program the comparison group for the state percentile rank is all students in either Grades 4, 8 and 11 administered the ITBS or TAP in the Fall of the previous year (i.e. 1975 SPR's are based on 1974 test results). Interpretation of the SPR is the same as that for the national percentile rank except that ranks are in relation to students in the State of Georgia. Limitations for the SPR are the same as those for the national percentile rank.

Local Percentile Rank (LPR). As with the national and state percentile rank, the LPR indicates a student's relative position to a group. The comparison group for the LPR is all students in a school system in either Grades 4, 8 and 11 administered the ITBS or TAP in the current year. Interpretation of the LPR is the same as that for the national and state percentile rank except that ranks are in relation to students in the local system. Limitations in the use of the LPR are also the same as those for the national and state percentile rank.

Percent Correct (PC). In the Georgia Statewide Testing Program the percent of questions correctly answered is reported. The percent of correct individual student responses in each Grade 4 and 8 ITBS subtest is reported in such a way so that comparisons between the student and the average of correct responses for all students in the classroom, school and system may be made.

The PC for the student in a subtest is computed by first finding out the number of correct responses made by the student. This number is then divided by the number of questions in the subtest. For example, if a student answers 21 questions correctly in the 4th grade Vocabulary subtest, this number is divided by the number of test questions or 38, for a PC of 35.

The average PC for the class in a subtest is computed by first adding the number of correct responses for all students in the class. Then, the number of correct responses for the class arrived at in Step 1 above is divided by the number of students in the class for the average number of correct responses for students in the class. Finally, the average number of correct responses for students in the class as determined in Step 2 above is divided by the number of test questions in the subtest for the average class PC. For example, a 4th grade class of 28 students takes the Vocabulary subtest. The number of correct responses for each of the 28 students is summed, for a total number of correct responses of 616. This number (616) is then divided by 28, the number of students in the class, for the average number of correct responses of all students, or 22. This number (22) is then divided by the number of questions in the 4th grade Vocabulary subtest (38), for an average class PC of 57.9 which would be rounded to 58.

The PC for the school is computed in much the same way as the PC for the class except the student base is all students in the school. For example, 205 students in a school take the 8th grade Spelling subtest. The number of correct responses for each of the 205 students is summed, for a total number of correct responses of 6355. This number (6355) is then divided by 205, for the average number of correct responses for all students, or 31. This number (31) is then divided by the number of questions in the Spelling subtest (48), for a school average PC of 64.6 which would be rounded to 65.

The PC for the system is computed much the same way as the PC for the class and the school except the student base is all students tested at the grade in the total system.

In the Georgia Statewide Testing Program, Class, School and System Summary Reports for Grades 4, 8 and 11 are also provided. These reports show on a test question by test question basis the average percent of correct response to each question for the class, the school and the system. In addition test questions are grouped by skills. Therefore, it is possible to not only examine each test question individually but also questions grouped into skills.

The average PC for a test question is arrived at in much the same way as the average group PC for a subtest as described above. For the average class PC a count of students answering a question correctly is made. This number is then divided by the total number of students in the class taking the test. For example, 21 out of 28 students in a class answered a question correctly. When dividing 21 by 28 we find the average PC for the class is 75.

For a school, the average PC is arrived at by getting a count of the students in the school answering a question correctly and then dividing this number by the total number of students at the grade taking the test in the school. For example, 234 out of 470 students in a school answered a question correctly. When dividing 234 by 470 we get 49.8 percent for an average school PC, when rounded, of 50.

The average PC for the system is arrived at the same way as for the class and the school except that the student base is all the students tested at the grade in the entire system.

As noted above the PC for a student on a subtest is helpful in assessing how that student performed on a subtest in relation to the class, the school and the system. By looking at the difficulty of the question, students' performance can also be examined in relation to State performance. State performance (difficulty) is used as a general guide in estimating the relative difficulty of the question. As a "rule of thumb" guide the following table may be used in judging the difficulty of the test question.

TABLE 4

The Relationship of Percent Correct to Question Difficulty

Percent Correct	Difficulty
85-100	Easy
60-85	Easy to Medium
40-60	Medium
15-40	Medium to Hard
1-15	Hard

Caution should be exercised when comparing the PC on one subtest with the PC on other subtests. The reason for exercising caution is that subtests have a varied number of test questions, therefore, the base may differ from one subtest to another. For example, a student may answer 10 questions correctly in the 8th grade Vocabulary subtest and 10 questions correctly in the 8th grade Reading subtest. In the Vocabulary subtest with its 48 questions, a PC of 21 would be reported, while in the Reading subtest with its 80 questions, a PC of 13 would be reported.

WHAT REPORTS ARE PROVIDED FOR USE AT VARIOUS LEVELS? WHAT DO THE REPORTS LOOK LIKE? HOW MAY THE REPORTS BE READ AND UNDERSTOOD?

The section that follows contains samples of Grade 4 and Grade 11 reports prepared as a result of the September, 1975 administration of the ITBS and TAP. Grade 8 reports are much the same as Grade 4, so the Grade 4 sample reports should also be used for Grade 8.

Accompanying each sample is a brief description of the report and a visual system of "keying" major points to the narrative describing the scores or other information appearing in the reports. The sample reports are grouped by grade, with Grade 4 (also useable with Grade 8) starting on page 18. and Grade 11 on page 38. Table 5 on page 17 lists all the reports by grade with the recipient in a school system most likely to find the data useful.

Data in the reports are real in that they reflect actual students, schools and systems in Georgia. However, names have been changed so as to protect the confidentiality of the data.

It is possible that when examining the number of students actually tested in a class, school or system there is a difference between these numbers and numbers appearing in the reports. The guide used for determining whether a student's answer sheet should be scored and reports prepared was:

1) A 4th or 8th Grade student needed to "try" at least 10 questions in 8 of the 11 ITBS subtests; and

2) an 11th Grade student needed to "try" at least 10 questions in two out of the three TAP subtests.

If a student failed to meet these guidelines, a report was not prepared and data were not included in summaries.

Table 5

Reports by Title

Recipient and Grade

Title	Grade 4	8	11
For the Teacher			
Student Item Response Report	X	X	
Pupil Score Report (Roster)	X	X	X
Student Cumulative Record Label	X	X	X
Classroom Summary Report	X	X	X
For the Principal			
Pupil Score Report	X	X	X
Classroom Summary Report	X	X	X
School Summary Report	X	X	X
School Grade Equivalent Frequency Distribution	X	X	
School Standard Score Frequency Distribution	X	X	X
* School Question and Answer Report	X	X	X
For the System			
Classroom Summary Report	X	X	X
School Summary Report	X	X	X
System Summary Report	X	X	X
School Grade Equivalent Frequency Distribution	X	X	
School Standard Score Frequency Distribution	X	X	X
System Grade Equivalent Frequency Distribution	X	X	
System Standard Score Frequency Distribution	X	X	X
* School Question and Answer Report	X	X	X
For the State			
School Grade Equivalent Frequency Distribution	X	X	
School Standard Score Frequency Distribution	X	X	X
System Grade Equivalent Frequency Distribution	X	X	
System Standard Score Frequency Distribution	X	X	X
Educational Planning District Grade Equivalent Frequency Distribution	X	X	
Educational Planning District Standard Score Frequency Distribution	X	X	X
State Grade Equivalent Frequency Distribution	X	X	
State Standard Score Frequency Distribution	X	X	X
* Educational Planning District Question and Answer Report	X	X	X
* State Question and Answer Report	X	X	X

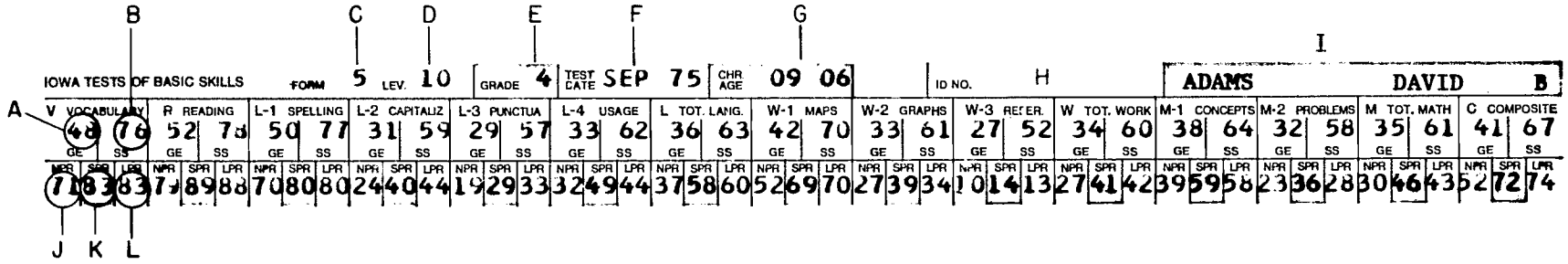
* These reports are not discussed in this document. A separate document will be prepared and distributed along with the reports.

Note: In instances where the same report is distributed to more than one recipient, multiple copies are printed with the original for the first listed recipient and second and third copies to recipients following. For example, the original Classroom Summary Report is for the teacher, the second for the principal, the third for the system.

Grade 4

Student Cumulative Record Label

This is a pressure sensitive label that may be placed in the Student's Cumulative Record folder. One copy for each student is furnished. Labels are grouped by classroom.



Key

A Grade Equivalent (GE) of raw score (number of correct answers) obtained by David Adams. David's score in Vocabulary (V) is equivalent to a score that would be obtained by the "average" student in the eighth month of the fourth grade. It would be inappropriate to compare David's 4.8 GE in Vocabulary (V) with his 5.2 in Reading (R), 5.0 in Spelling (L-1) and so on. (See GE on page 12.)

B Standard Score (SS) represents a statistics conversion of the raw score to a scale common to all subtests. This permits comparison among subtests. David's SS of 76 in Vocabulary (V) when compared with his SS of 59 in Capitalization (L-2) indicates he did better in Vocabulary than in Capitalization. (See SS on page 12.)

C & D The Form and Level of the test.

E David's grade when the test was taken.

F Date on which the test was administered, e.g., September, 1975.

G David's age at the time the test was taken, e.g., 9 years 6 months.

H An optional number, filled in only if it was coded on David's answer sheet.

I David's name as it appeared on his answer sheet.

J National Percentile Rank (NPR) which represents David's standing in relation to the national sample on which the test was normed. In Vocabulary (V) David scored as well or better than 71 percent of the students in the national sample. (See NPR on page 13.)

K State Percentile Rank (SPR) which represents David's standing in relation to Georgia 4th graders who took the test in 1974. In Vocabulary (V), David scored as well or better than 83 percent of Georgia 4th graders in 1974. (See SPR on page 13.)

L Local Percentile Rank (LPR) which represents David's standing in relation to other 4th grade students in the system (in this instance, Jefferson County), who took the test in September, 1975. In Vocabulary (V), David scored as well as or better than 83 percent of 4th graders in Jefferson County. (See LPR on page 13.)

GEORGIA STATEWIDE TESTING PROGRAM

PUPIL SCORE REPORT

A — GRADE 4, CLASS JOHN KENDALL

B — SEPTEMBER 1975

C — SCHOOL ANDERSON ELEM.

D — SYSTEM JEFFERSON COUNTY

E — SCHOOL CODE 320-4171

			VOCAB (F)	READ (F)	SPELL	CAPIT	PUNC	USAGE	LANG TOTAL (G)	MAPS	GRAPH	REF	WK-STDY TOTAL (H)	CONC	PROB	MATH TOTAL (I)	ITBS TOTAL (J)
ADAMS	DAVID	G.E.			5.0	3.1	2.9	3.3	3.6	4.2	3.3	2.7	3.4	3.8	3.2	3.5	4.1
C A 09/06		S.S.			77	59	57	62	63	70	61	52	60	64	58	61	67
SEX M		L PR			80	44	33	44	60	70	34	13	42	58	28	43	74
		S PR			80	40	29	49	58	69	39	14	41	59	36	46	72
BYERS	JERALD	G.E.			3.1	3.3	4.4	3.5	3.6	2.4	2.2	3.6	2.7	3.7	3.5	3.6	2.8
C A 10/06		S.S.			59	61	72	64	63	48	47	63	49	63	62	62	51
SEX M		L PR			36	55	80	52	60	11	6	45	7	52	40	47	11
		S PR			37	48	73	56	58	12	9	44	10	52	46	50	18
COHEN	DICK	G.E.			3.7	3.3	4.2	3.8	3.8	3.5	3.3	3.0	3.3	3.3	2.9	3.1	3.0
C A 10/08		S.S.			65	61	71	67	65	62	61	56	59	59	54	56	55
SEX M		L PR			56	55	74	60	66	47	34	22	36	33	17	17	21
		S PR			55	48	68	63	63	46	39	25	36	37	26	26	30
NUMBER TESTED	28 (S)	MEAN G.E.	3.4	3.9	3.7	3.3	3.5	3.4	3.5	3.6	3.8	3.5	3.6	3.8	3.8	3.8	3.6
		MEAN S.S. (T)	60.2	64.1	64.1	60.2	62.8	62.5	60.6	61.6	64.4	60.6	61.0	63.3	64.6	63.6	61.0

(K, L, M, N, O, P, Q, R, U)

Grade 4

Pupil Score Report

The Pupil Score Report is a roster of all students in the classroom showing the same information appearing on each student's Cumulative Record Label. In addition, the final entry for a class in this report shows summaries for all students in the class taking the test in September, 1975. The number of pages for a classroom depends upon the number of students. Each page shows scores for 7 students. Only part of one page is shown above. It is reduced. Actual size of each page is 11" × 14". The Vocabulary and Reading columns and NPR line are highlighted by shading.

Key

A The teacher's name as it appeared on the classroom cover sheet accompanying student answer sheets, e.g., John Kendall.

B Date test was administered, e.g., September, 1975.

C Name of the school, e.g., Anderson Elementary.

D Name of the system, e.g., Jefferson County.

E Code for Anderson Elementary School in Jefferson County, e.g., 320-4171.

F Subtests in the ITBS, e.g., Vocabulary (V), Reading (R), Spelling (L-1), etc.

G Average for Language (L) which includes Spelling, Capitalization, Punctuation and Usage subtests.

H Average for Work Study Skills (W) which includes Map Reading, Reading Graphs and Tables, Knowledge and Use of Reference Materials subtests.

I Average for Mathematics (M) which includes Math Concepts and Math Problem Solving subtests.

J Average for entire test battery, e.g., Vocabulary and Reading subtests; Language, Work Study and Mathematics composites.

K Name of student, e.g., David Adams, Jerald Byers, Dick Cohen, etc.

L The age of the student when the test was taken. For example, David was 9 years 6 months; Jerald, 10 years and 6 months; Dick, 10 years and 8 months.

M The sex of the student, e.g., David is a boy; Jerald, a boy; Dick, a boy.

N Grade Equivalent (GE) of raw score (number of correct answers) obtained by David Adams. David's score in Vocabulary (V) is equivalent to a score that would be obtained by the "average" student in the eighth month of the fourth grade. It would be inappropriate to compare David's 4.8 GE in Vocabulary (V) with his 5.2 in Reading (R), 5.0 in Spelling (L-1) and so on. (See GE on page 12.)

O Standard Score (SS) represents a statistical conversion of the raw score to a scale common to all subtests. This permits comparison among subtests. David's SS of 76 in Vocabulary (V) when compared with his SS of 59 in Capitalization (L-2) indicates he did better in Vocabulary than in Capitalization. (See SS on page 12.)

P Local Percentile Rank (LPR) which represents David's standing in relation to other 4th grade students in the system (in this instance, Jefferson County), who took the test in September, 1975. In Vocabulary (V), David scored as well as or better than 83 percent of 4th graders in Jefferson County. (See LPR on page 13.)

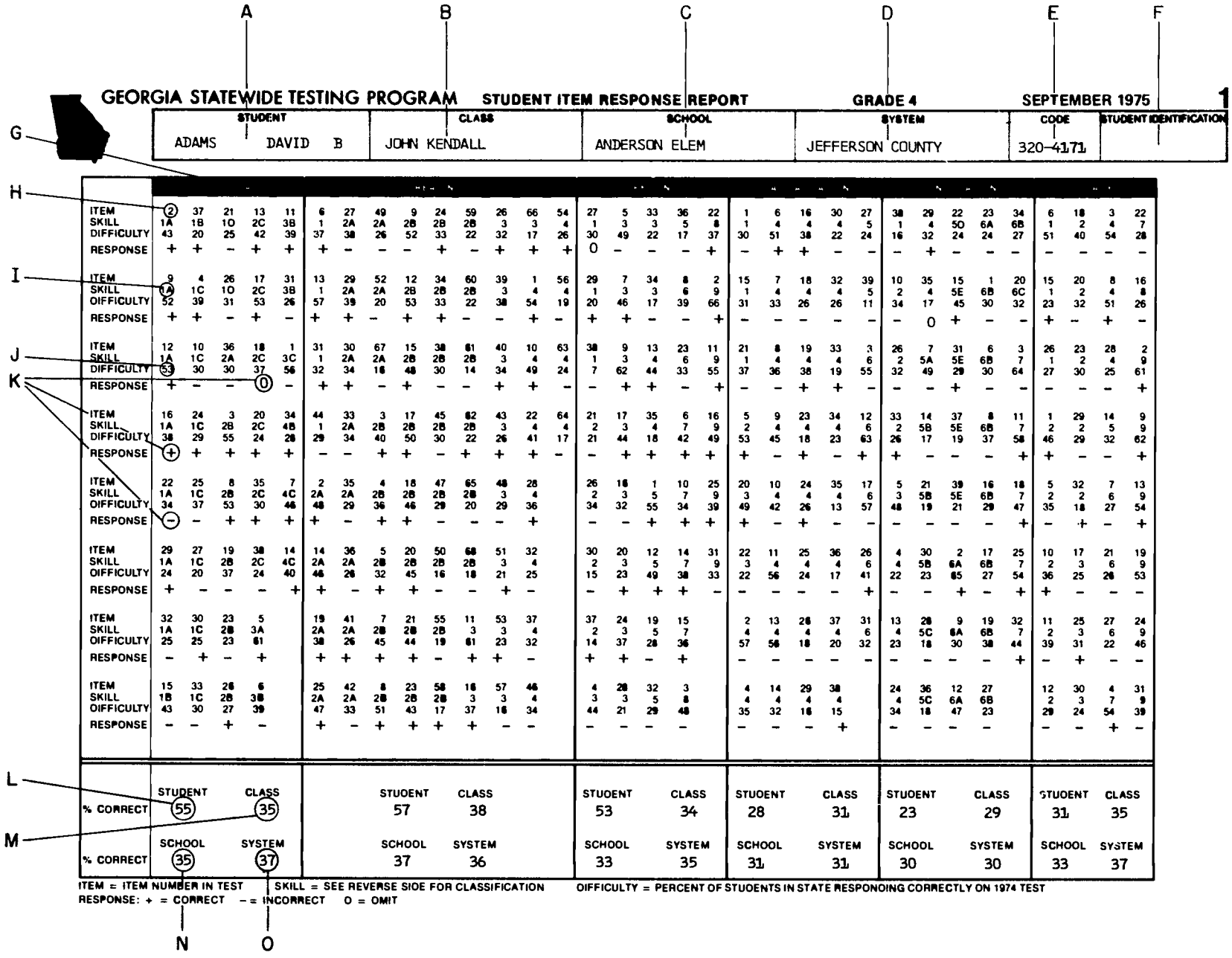
Q State Percentile Rank (SPR) which represents David's standing in relation to Georgia 4th graders who took the test in 1974. In Vocabulary (V), David scored as well or better than 83 percent of Georgia 4th graders in 1974. (See SPR on page 13.)

R National Percentile Rank (NPR) which represents David's standing in relation to the national sample on which the test was normed. In Vocabulary (V), David scored as well or better than 71 percent of the students in the national sample. (See NPR on page 13.)

S The number of students tested in the class represented on the roster, e.g., 28 students in John Kendall's class.

T The mean grade equivalent (GE) for John Kendall's class. The mean was determined by adding the GE of each student in a subtest or composite together and dividing the sum for all students by the number of students in the class. In Mr. Kendall's class the Vocabulary GE of David (4.8) was added to that of Jerald (1.8), Dick (2.2), and so on through all 28 students. The sum for all 28 students was then divided by 28 for a class mean GE of 3.4. The class mean GE may be used to compare David's or any other student's GE to the average of the class. For example, David's Vocabulary GE of 4.8 as compared to the class mean GE of 3.4 shows he did better than the class average.

U The mean standard score (SS) for John Kendall's class. The mean was determined by adding the SS of each student in a subtest or composite together and dividing the sum for all students by the number of students in the class. In Mr. Kendall's class the Vocabulary SS of David (76) was added to that of Jerald (41), Dick (48), and so on through all 28 students. The sum for all 28 students was then divided by 28 for a class mean SS in Vocabulary (V) of 60.2. The class mean SS may be used to compare David's or any other student's SS to the average of the class. For example, David's Vocabulary SS of 76 as compared to the class mean SS of 60.2 shows he did better than the class average. The mean SS for the class in one subtest may also be used to compare this subtest with others. For example, the class mean SS in Vocabulary (V) of 60.2 indicates that the average class performance was lower than that in Reading, Punctuation, and the other SS class means above 60.2. On the other hand the class mean SS of 64.6 on Math Problem Solving was higher than the class SS means on all the other subtests.



GEORGIA STATEWIDE TESTING PROGRAM — STUDENT ITEM RESPONSE REPORT — GRADE 4 — SEPTEMBER 1975 — 1

STUDENT	CLASS	SCHOOL	SYSTEM	CODE	STUDENT IDENTIFICATION
ADAMS DAVID B	JOHN KENDALL	ANDERSON ELEM	JEFFERSON COUNTY	320-4171	

ITEM	(2)	37	21	13	11	6	27	49	9	24	59	26	66	54	27	5	33	36	22	1	6	16	30	27	38	29	22	23	34	6	18	3	22
SKILL	1A	1B	1D	2C	3B	1	2A	2A	2B	2B	2B	3	3	4	1	3	3	5	8	1	4	4	4	5	1	4	5D	6A	6B	1	2	4	7
DIFFICULTY	43	20	25	42	39	37	38	26	52	33	22	32	17	26	30	49	22	17	37	30	51	38	22	24	16	32	24	24	27	51	40	54	28
RESPONSE	+	+	−	+	+	+	−	−	−	+	−	+	+	+	0	−	−	−	+	−	+	+	−	−	−	+	−	−	−	−	−	−	−
ITEM	9	4	26	17	31	13	29	52	12	34	60	39	1	56	29	7	34	8	2	15	7	18	32	39	10	35	15	1	20	15	20	8	16
SKILL	(1A)	1C	1D	2C	3B	1	2A	2A	2B	2B	2B	3	4	4	1	3	3	6	9	1	4	4	4	5	2	4	5E	6B	6C	1	2	4	8
DIFFICULTY	52	39	31	53	26	57	39	20	53	33	22	38	54	19	20	46	17	39	66	31	33	26	26	11	34	17	45	30	32	23	32	51	26
RESPONSE	+	+	−	+	−	+	+	−	+	+	−	−	+	−	+	+	−	−	+	−	−	−	−	−	−	0	+	−	−	+	−	+	−
ITEM	12	10	36	18	1	31	30	67	15	38	61	40	10	63	38	9	13	23	11	21	8	19	33	3	26	7	31	6	3	26	23	28	2
SKILL	(1A)	1C	2A	2C	3C	1	2A	2A	2B	2B	2B	3	4	4	1	3	4	6	9	1	4	4	4	6	2	5A	5E	6B	7	1	2	4	9
DIFFICULTY	(53)	30	30	37	56	32	34	16	48	30	14	34	49	24	7	62	44	33	55	37	36	38	19	55	32	49	29	30	64	27	30	25	61
RESPONSE	+	−	−	(0)	−	+	+	−	+	−	−	+	+	−	−	+	+	−	+	−	−	+	+	−	−	−	+	−	−	−	−	−	+
ITEM	16	24	3	20	34	44	33	3	17	45	62	43	22	64	21	17	35	6	16	5	9	23	34	12	33	14	37	8	11	1	29	14	9
SKILL	1A	1C	2B	2C	4B	1	2A	2B	2B	2B	2B	3	4	4	2	3	4	7	9	2	4	4	4	6	2	5B	5E	6B	7	2	2	5	9
DIFFICULTY	38	29	55	24	28	29	34	40	50	30	22	26	41	17	21	44	18	42	49	53	45	18	23	63	26	17	19	37	58	46	29	32	62
RESPONSE	(+)	+	+	+	+	−	−	+	+	−	+	+	+	−	−	+	+	+	+	+	−	+	−	+	+	−	−	−	+	+	−	−	+
ITEM	22	25	8	35	7	2	35	4	18	47	65	48	28		26	16	1	10	25	20	10	24	35	17	5	21	39	16	18	5	32	7	13
SKILL	1A	1C	2B	2C	4C	2A	2A	2B	2B	2B	2B	3	4		2	3	5	7	9	3	4	4	4	6	3	5B	5E	6B	7	2	2	6	9
DIFFICULTY	34	37	53	30	46	48	29	36	46	29	20	29	36		34	32	55	34	39	49	42	26	13	57	48	19	21	29	47	35	18	27	54
RESPONSE	(−)	−	+	+	+	+	−	+	+	−	−	−	+		−	−	+	+	+	+	−	+	−	−	−	−	−	−	+	−	+	−	+
ITEM	29	27	19	38	14	14	36	5	20	50	68	51	32		30	20	12	14	31	22	11	25	36	26	4	30	2	17	25	10	17	21	19
SKILL	1A	1C	2B	2C	4C	2A	2A	2B	2B	2B	2B	3	4		2	3	5	7	9	3	4	4	4	6	4	5B	6A	6B	7	2	3	6	9
DIFFICULTY	24	20	37	24	40	46	26	32	45	16	18	21	25		15	23	49	38	33	22	56	24	17	41	22	23	65	27	54	36	25	26	53
RESPONSE	+	−	−	−	+	+	−	+	+	−	−	+	−		−	+	+	+	−	−	−	−	−	+	−	−	+	−	+	+	−	−	−
ITEM	32	30	23	5		19	41	7	21	55	11	53	37		37	24	19	15		2	13	26	37	31	13	28	9	19	32	11	25	27	24
SKILL	1A	1C	2B	3A		2A	2A	2B	2B	2B	3	3	4		2	3	5	7		4	4	4	4	6	4	5C	6A	6B	7	2	3	6	9
DIFFICULTY	25	25	23	61		38	26	45	44	19	61	23	32		14	37	28	36		57	56	18	20	32	23	18	30	38	44	39	31	22	46
RESPONSE	−	+	−	+		+	+	+	+	−	+	+	−		+	+	−	+		−	−	−	−	−	−	−	−	−	+	−	+	−	−
ITEM	15	33	26	6		25	42	8	23	58	16	57	46		4	28	32	3		4	14	29	38		24	36	12	27		12	30	4	31
SKILL	1B	1C	2B	3B		2A	2A	2B	2B	2B	3	3	4		3	3	5	8		4	4	4	4		4	5C	6A	6B		2	3	7	9
DIFFICULTY	43	30	27	39		47	33	51	43	17	37	16	34		44	21	29	48		35	32	16	15		34	18	47	23		29	24	54	39
RESPONSE	−	−	+	−		+	−	+	+	+	+	−	−		−	−	−	−		−	−	−	+		−	−	−	−		−	−	+	−

	STUDENT	CLASS	STUDENT	CLASS	STUDENT	CLASS	STUDENT	CLASS	STUDENT	CLASS	STUDENT	CLASS
% CORRECT	(55)	(35)	57	38	53	34	28	31	23	29	31	35
	SCHOOL	SYSTEM	SCHOOL	SYSTEM	SCHOOL	SYSTEM	SCHOOL	SYSTEM	SCHOOL	SYSTEM	SCHOOL	SYSTEM
% CORRECT	(35)	(37)	37	36	33	35	31	31	30	30	33	37

ITEM = ITEM NUMBER IN TEST | SKILL = SEE REVERSE SIDE FOR CLASSIFICATION | DIFFICULTY = PERCENT OF STUDENTS IN STATE RESPONDING CORRECTLY ON 1974 TEST

RESPONSE: + = CORRECT − = INCORRECT 0 = OMIT

Grade 4

Student Item Response Report

A Student Item Response Report is provided for each student. It is 2 pages long. The above sample of page 1 is reduced from its actual size of 8 1/2" × 12". Page 2 is the same size and similar in format as page 1 above except that it contains information for the Map Reading, Graphs and Tables, Reference Materials, Mathematics Concepts and Mathematics Problems subtests. For each student and each test question within a subtest, the report shows the number of the test question (item), the skill measured, the difficulty of the question and the response of the student ("+" is a correct response; "−" means incorrect; and, "O" means omitted). Test questions are not in numerical order; rather, they are grouped by skill and should be read down the page, not across. At the bottom of each subtest the report shows the percent of correct responses made by the student and the average percent correct of his or her classroom, his or her school and his or her school system. On the reverse side of the report the skills are listed along with their codes. (The above sample does not have the skills printed on the reverse side.)

Key

A David's name as it appears on his answer sheet.

B The teacher's name as it appears on the classroom cover sheet accompanying student answer sheets, e.g., John Kendall.

C Name of school, e.g., Anderson Elementary.

D Name of system, e.g., Jefferson County.

E Code for Anderson Elementary School in Jefferson County, e.g., 320-4171.

F An optional number, filled in only if it was coded on David's answer sheet.

G Name of the subtest, e.g., Vocabulary.

H The test question number, e.g., item number 2 in the Vocabulary subtest.

I The skill measured by the test question, e.g., item 12, skill 1A is Human Relationships-Verbs. (The skill classification codes and titles are listed on the reverse side of reports, not on the reverse side of this sample.)

J The difficulty of the test question as determined by the percent of Georgia 4th grade students who answered the question correctly in the 1974 administration. For example, on question 12 in Vocabulary, 53 percent of Georgia 4th grade students answered it correctly in 1974.

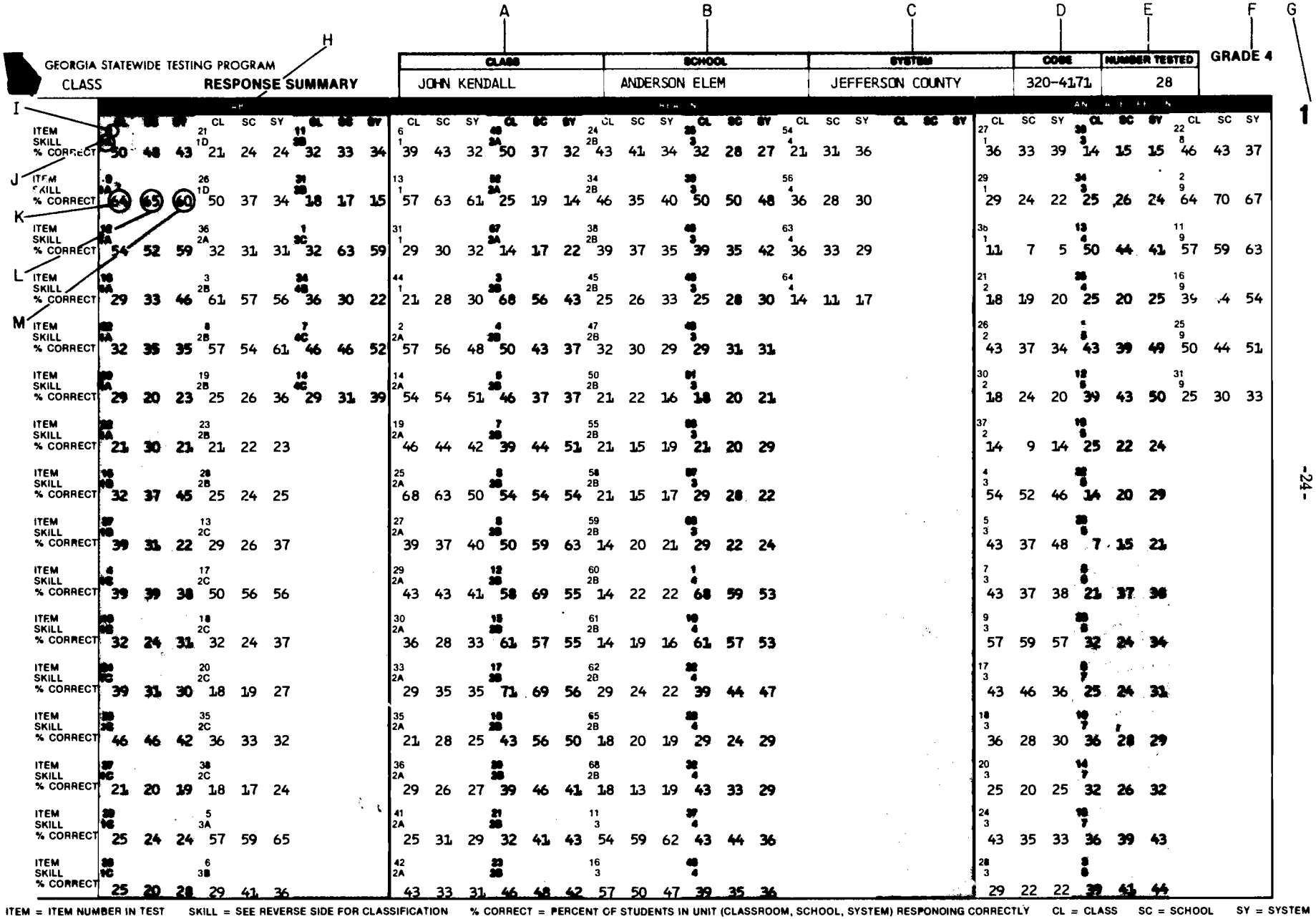
K The entry showing whether David answered the question correctly, incorrectly or omitted it. A "+" is correct; "−" is incorrect; "O" is omit. For example, David answered question 16 in Vocabulary correctly since a "+" is entered below this question number; question 22 incorrectly since a "−" appears; and question 18 omitted since an "O" appears.

L The percent of questions in the Vocabulary subtest answered correctly by David. There are 38 questions in the Vocabulary subtest. David answered 21 correctly for a percent correct of 55. (See PC on page 14.)

M The average percent of correct responses on the Vocabulary subtest of all students in Mr. Kendall's class. This percent was arrived at by first adding the number of correct responses on the Vocabulary subtest for David and all his fellow students (28 all together) in Mr. Kendall's class. Then, the number of correct responses for the class arrived at in Step 1 above was divided by the number of students (28) in Mr. Kendall's class. The average number of correct responses for students in the class arrived at in Step 2 above was finally divided by the number of test questions, for the class average of 35 percent correct. (See PC on page 14.)

N The average of correct responses of all 4th grade students in Anderson Elementary School. This percent was arrived at by first adding the number of correct responses on the Vocabulary subtest for Mr. Kendall's class and all the other 4th grade classes in Anderson Elementary School. Then the number of correct responses for the school arrived at in Step 1 above was divided by the number of 4th graders in Anderson Elementary School. The average number of correct responses for the school arrived at in Step 2 above was finally divided by the number of test questions, for the school's average of 35 percent correct shown. (See PC on page 14.)

O The average percent of correct responses of all 4th graders in the Jefferson County System. This percent was arrived at by first adding the number of correct responses on the Vocabulary subtest for Anderson Elementary School and all other schools testing 4th graders in Jefferson County. Then the number of correct responses for Jefferson County arrived at in Step 1 above was divided by the number of 4th graders in the system. The average number of correct responses for the system arrived at in Step 2 above was finally divided by the number of test questions, for the system's average of 37 percent shown. (See PC on page 14.)


A
B
C
D
E
F
G
H
I
J
K
L
M
GEORGIA STATEWIDE TESTING PROGRAM
CLASS
RESPONSE SUMMARY
CLASS
JOHN KENDALL
SCHOOL
ANDERSON ELEM
SYSTEM
JEFFERSON COUNTY
CODE
320-4171
NUMBER TESTED
28
GRADE 4
1
ITEM
SKILL
% CORRECT
CL SC SY
ITEM = ITEM NUMBER IN TEST
SKILL = SEE REVERSE SIDE FOR CLASSIFICATION
% CORRECT = PERCENT OF STUDENTS IN UNIT (CLASSROOM, SCHOOL, SYSTEM) RESPONDING CORRECTLY
CL = CLASS
SC = SCHOOL
SY = SYSTEM

Grade 4

Class Response Summary

A Class Response Summary is provided for each class in which students were tested. It is 3 pages long. The above sample of page 1 is reduced from its actual size of 9 1/2" × 14". Pages 2 and 3 are the same size and format except that page 2 contains information for the Capitalization, Punctuation, Usage and Map Reading subtests; Page 3 information for Graphs and Tables, Reference Materials, Mathematics Concepts and Mathematics Problem Solving subtests. For each test question, the report shows the number of the question (item), the skill measured and the average percent of correct responses of the class as well as the school and the system in which the class is located. Test questions are not in numerical order; rather, they are grouped by skill and should be read down the page, not across. On the reverse side of the report the skills are listed along with their codes. (The above sample does not have the skills printed on the reverse side.)

Key

A The teacher's name as it appears on the classroom cover sheet accompanying student answer sheets, e.g., John Kendall.

B Name of school, e.g., Anderson Elementary.

C Name of system, e.g., Jefferson County.

D Code for Anderson Elementary School in Jefferson County, e.g., 320-4171.

E Number of students tested in Mr. Kendall's class, e.g., 28 students.

F The grade level for the report, e.g., Grade 4.

G Page number of the report, e.g., page 1.

H Name of subtest, e.g., Vocabulary.

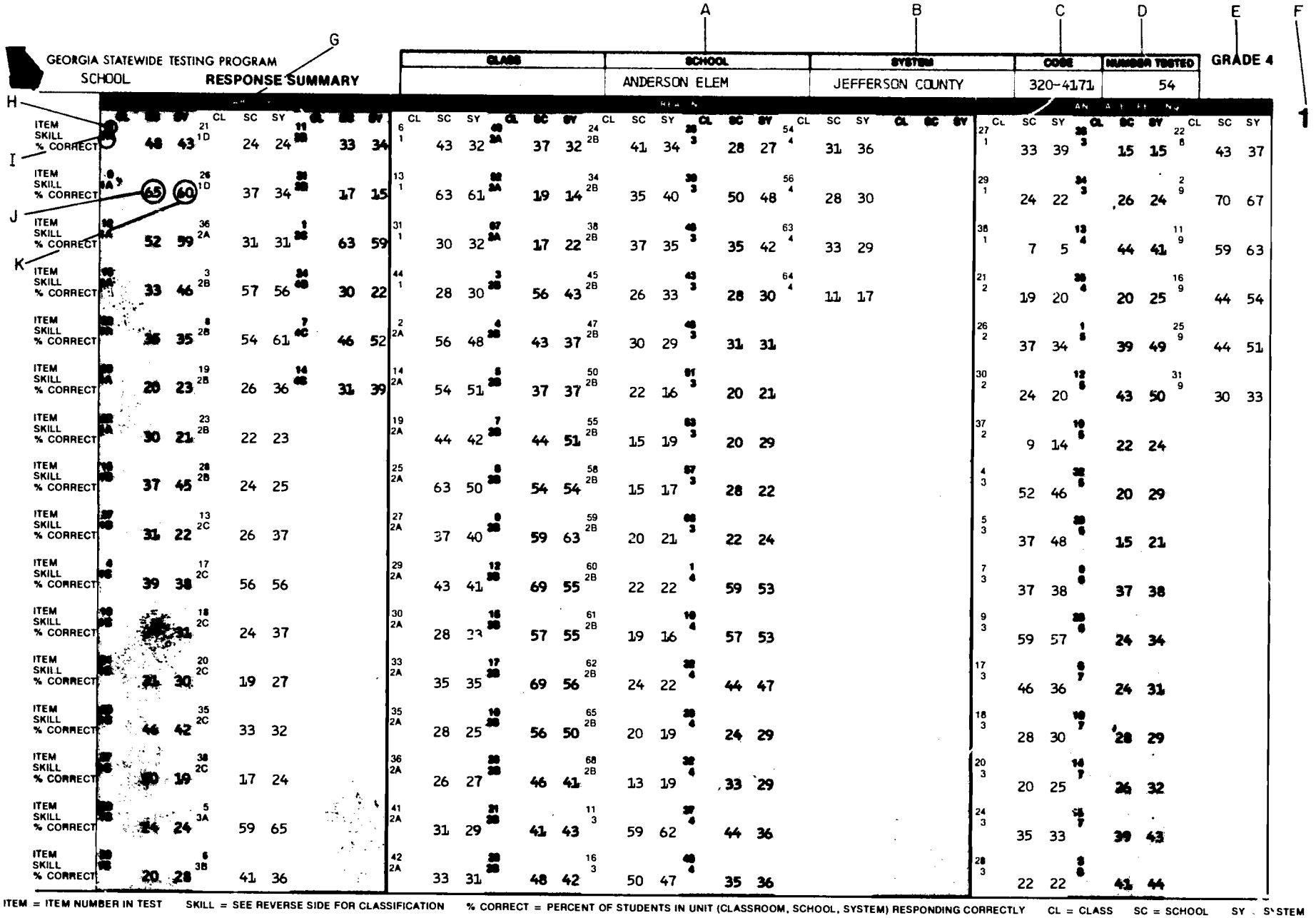
I The test question number, e.g., item number 2 in the Vocabulary subtest.

J The skill measured by the test question, e.g., item 2, skill 1A is Human Relationships-Verbs. (The skill classification codes and titles are listed on the reverse side of reports, not on reverse side of this sample.)

K This number (PC) is the percent of students in the class (CL) answering the test question correctly. The class PC was arrived at by first counting the students in the class answering a question correctly. This number is then divided by the total number of students in the class taking the test. For example, in Mr. Kendall's class, 18 of the 28 students answered question number 9 on the Vocabulary subtest correctly, for a class PC of 64. (See PC on page 14.)

L This number (PC) is the percent of students in the school (SC) answering the test question correctly. The school PC was arrived at by first counting the students in the school answering a question correctly. This number is then divided by the total number of students in the school taking the test. For example, in Anderson Elementary School, 35 out of 54 students answered question 9 in Vocabulary correctly, for a school PC of 65. (See PC on page 14.)

M This number (PC) is the percent of students in the system (SY) answering the test question correctly. The system PC was arrived at by first counting the students in the system answering a question correctly. This number is then divided by the total number of students in the system taking the test. For example, in Jefferson County, 121 of the 201 students taking the test answered question number 9 in Vocabulary correctly, for a system PC of 60. (See PC on page 14.)


A
B
C
D
E
F
G
H
I
J
K
GEORGIA STATEWIDE TESTING PROGRAM
SCHOOL RESPONSE SUMMARY
CLASS
SCHOOL
SYSTEM
CODE
NUMBER TESTED
GRADE 4
ANDERSON ELEM
JEFFERSON COUNTY
320-4171
54
1
ITEM
SKILL
% CORRECT
CL SC SY
ITEM = ITEM NUMBER IN TEST SKILL = SEE REVERSE SIDE FOR CLASSIFICATION % CORRECT = PERCENT OF STUDENTS IN UNIT (CLASSROOM, SCHOOL, SYSTEM) RESPONDING CORRECTLY CL = CLASS SC = SCHOOL SY = SYSTEM

Grade 4

School Response Summary

A School Response Summary is provided for each school in which students were tested. It is 3 pages long. The above sample of page 1 is reduced from its actual size of 9 1/2" × 14". Page 2 and 3 are the same size and format except that page 2 contains information for the Capitalization, Punctuation, Usage and Map Reading subtests; Page 3 information for Graphs and Tables, Reference Materials, Mathematics Concepts and Mathematics Problem Solving subtests. For each test question, the report shows the number of the question (item), the skill measured and the average percent of correct responses for the school as well as the system in which the school is located. Test questions are not in numerical order; rather, they are grouped by skill and should be read down the page, not across. On the reverse side of the report the skills are listed along with their codes. (The above sample does not have the skills printed on the reverse side.)

Key

A Name of school, e.g., Anderson Elementary.

B Name of system, e.g., Jefferson County.

C Code for Anderson Elementary School in Jefferson County, e.g., 320-4171.

D Number of students tested in Anderson Elementary School, e.g., 54 students.

E Grade level for the report, e.g., Grade 4.

F Page number of report, e.g., page 1.

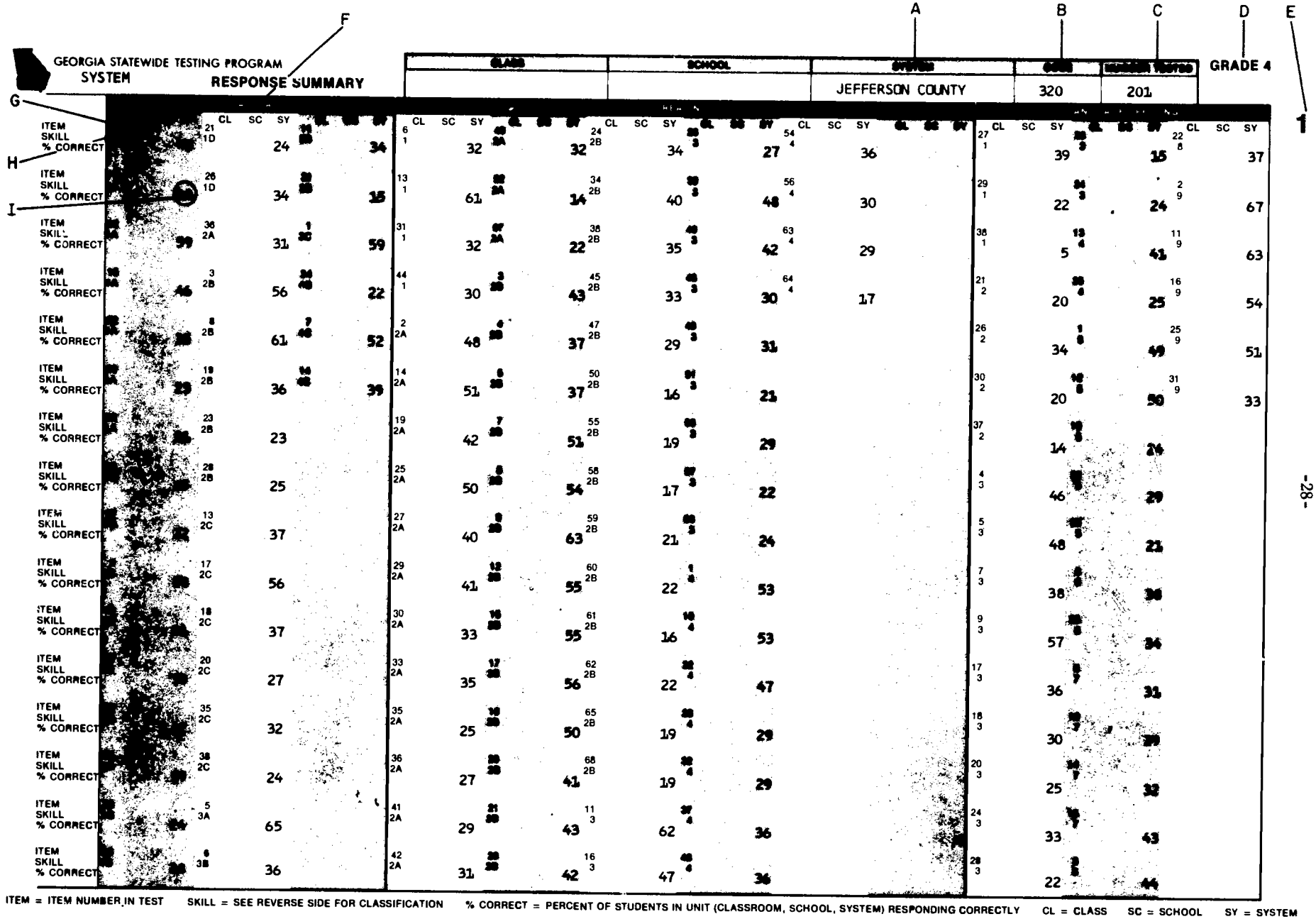
G Name of subtest, e.g., Vocabulary.

H The test question number, e.g., item number 2 in Vocabulary subtest.

I The skill measured by the test question, e.g., item 2, skill 1A is Human Relationships-Verbs. (The skill classification codes and titles are listed on the reverse side of reports, not on reverse side of this sample.)

J This number (PC) is percent of students in the school answering the test question correctly. The school PC was arrived at by first counting the students in the school answering a question correctly. This number is then divided by the total number of students in the school taking the test. For example, in Anderson Elementary School 35 out of 54 students answered question 9 in Vocabulary correctly, for a school PC of 65 (See PC on page 14.)

K This number (PC) is the percent of students in the system answering the test question correctly. The system PC was arrived at by first counting the students in the system answering a question correctly. This number is then divided by the total number of students in the system taking the test. For example, in Jefferson County, 121 of the 201 students taking the test answered question number 9 in Vocabulary correctly, for a system PC of 60. (See PC on page 14.)


A
B
C
D
E
F
G
H
I
GEORGIA STATEWIDE TESTING PROGRAM
SYSTEM
RESPONSE SUMMARY
CLASS
SCHOOL
SYSTEM
JEFFERSON COUNTY
GRADE 4
320
201
ITEM
SKILL
% CORRECT
CL SC SY
ITEM = ITEM NUMBER IN TEST
SKILL = SEE REVERSE SIDE FOR CLASSIFICATION
% CORRECT = PERCENT OF STUDENTS IN UNIT (CLASSROOM, SCHOOL, SYSTEM) RESPONDING CORRECTLY
CL = CLASS
SC = SCHOOL
SY = SYSTEM

Grade 4

System Response Summary

A System Response Summary is provided for each system. It is 3 pages long. The above sample of page 1 is reduced from actual size of 8 1/2" × 14". Page 2 and 3 are the same size and format except that page 2 contains information for the Capitalization, Punctuation, Usage and Map Reading subtests; Page 3 information for Graphs and Tables, Reference Materials, Mathematics Concepts and Mathematics Problem Solving subtests. For each test question, the report shows the number of the question (item), the skill measured and the average percent of correct response for the system. Test questions are not in numerical order; rather, they are grouped by skill and should be read down the page, not across. On the reverse side of the report the skills are listed along with their codes. (The above sample does not have the skills printed on the reverse side.)

Key

A Name of system, e.g., Jefferson County.

B Code for Jefferson County, e.g., 320.

C Number of students tested in Jefferson County, e.g., 201 students.

D Grade level for the report, e.g., Grade 4.

E Page number of report, e.g., page 1.

F Name of subtest, e.g., Vocabulary.

G The test question number, e.g., item number 2 in Vocabulary subtest.

H The skill measured by the test question, e.g., item 2, skill 1A is Human Relationships-Verbs. (The skill classification codes and titles are listed on the reverse side of reports, not on reverse side of this sample.)

I This number (PC) is the percent of students in the system answering the test question correctly. The system PC was arrived at by first counting the students in the system answering a question correctly. This number is then divided by the total number of students in the system taking the test. For example, in Jefferson County, 121 of the 201 students taking the test answered question number 9 in Vocabulary correctly, for a system PC of 60. (See PC on page 14.)

GEORGIA STATEWIDE TESTING PROGRAM

SCHOOL GRADE EQUIVALENT FREQUENCY DISTRIBUTIONS

A — SEPTEMBER 1975

B — SCHOOL ANDERSON ELEM.
C — SYSTEM JEFFERSON COUNTY
D — SCHOOL CODE 320-4171
E — GRADE 4

F

VOCABULARY

SCORE	F	PCT	CF	C-PCT
G 66	H 1	I 1.9	J 54	K 100.0
64	1	1.9	53	98.1
55	1	1.9	52	96.3
52	2	3.7	51	94.4
51	1	1.9	49	90.7
50	1	1.9	48	88.9
48	1	1.9	47	87.0
46	3	5.6	46	85.2
44	2	3.7	43	79.6
42	3	5.6	41	75.9
41	2	3.7	38	70.4
38	3	5.6	36	66.7
36	2	3.7	33	61.1
34	5	9.3	31	57.4
31	3	5.6	26	48.1
29	1	1.9	23	42.6
27	4	7.4	22	40.7
25	5	9.3	18	33.3
22	6	11.1	13	24.1
20	3	5.6	7	13.0
18	3	5.6	4	7.4
15	1	1.9	1	1.9

CASES PROCESSED	=	54 — L
MINIMUM VALUE	=	15 — M
MAXIMIM VALUE	=	66 — N
SUM OF SCORES	=	1844 — O
SUM SQD. SCORES	=	70934 — P
MEAN	=	34.1481 — Q
STND. DEV. (N)	=	12.1448 — R

PERCENTILE 90	=	51 — S
PERCENTILE 75	=	42 — T
PERCENTILE 50	=	31 — U
PERCENTILE 25	=	22 — V
PERCENTILE 10	=	18 — W

READING

SCORE	F	PCT	CF	C-PCT
70	1	1.9	54	100.0
63	1	1.9	53	98.1
60	2	3.7	52	96.3
56	1	1.9	50	92.6
53	1	1.9	49	90.7
52	1	1.9	48	88.9
51	1	1.9	47	87.0
50	2	3.7	46	85.2
48	2	3.7	44	81.5
47	3	5.6	42	77.8
46	4	7.4	39	72.2
45	1	1.9	35	64.8
43	1	1.9	34	63.0
42	2	3.7	33	61.1
41	1	1.9	31	57.4
40	1	1.9	30	55.6
39	1	1.9	29	53.7
37	2	3.7	28	51.9
36	4	7.4	26	48.1
35	2	3.7	22	40.7
33	1	1.9	20	37.0
31	3	5.6	19	35.2
29	3	5.6	16	29.6
27	2	3.7	13	24.1
26	2	3.7	11	20.4
24	3	5.6	9	16.7
23	1	1.9	6	11.1
20	1	1.9	5	9.3
17	1	1.9	4	7.4
16	2	3.7	3	5.6
15	1	1.9	1	1.9

CASES PROCESSED	=	54
MINIMUM VALUE	=	15
MAXIMIM VALUE	=	70
SUM OF SCORES	=	2064
SUM SQD. SCORES	=	87582
MEAN	=	38.2222
STND. DEV. (N)	=	12.6866

PERCENTILE 90	=	53
PERCENTILE 75	=	47
PERCENTILE 50	=	37
PERCENTILE 25	=	28
PERCENTILE 10	=	21

LANGUAGE TOTAL

SCORE	F	PCT	CF	C-PCT
51	1	1.9	54	100.0
48	3	5.6	53	98.1
47	1	1.9	50	92.6
46	1	1.9	49	90.7
44	2	3.7	48	88.9
42	1	1.9	46	85.2
41	3	5.6	45	83.3
40	5	9.3	42	77.8
38	1	1.9	37	68.5
37	1	1.9	36	66.7
36	4	7.4	35	64.8
35	3	5.6	31	57.4
34	2	3.7	28	51.9
33	2	3.7	26	48.1
32	3	5.6	24	44.4
31	6	11.1	21	38.9
30	3	5.6	15	27.8
29	2	3.7	12	22.2
28	6	11.1	10	18.5
27	1	1.9	4	7.4
25	1	1.9	3	5.6
23	1	1.9	2	3.7
15	1	1.9	1	1.9

CASES PROCESSED	=	54
MINIMUM VALUE	=	15
MAXIMIM VALUE	=	51
SUM OF SCORES	=	1887
SUM SQD. SCORES	=	68711
MEAN	=	34.9444
STND. DEV. (N)	=	7.1632

PERCENTILE 90	=	45
PERCENTILE 75	=	39
PERCENTILE 50	=	34
PERCENTILE 25	=	30
PERCENTILE 10	=	27

Grade 4

School Grade Equivalent Frequency Distributions

School Grade Equivalent Frequency Distributions are furnished for each school in which students were tested. A frequency table is provided for: Vocabulary; Reading; Language total (average for Spelling, Capitalization, Punctuation, Usage); total Work Study (average for Map Reading, Graphs and Tables, References); Mathematics (average for Concepts, Problem Solving); and ITBS Battery (average for Vocabulary, Reading, Language, Work Study, Mathematics). Averages for the areas (Language, Work Study, Mathematics) and the Battery were arrived at by adding a student's grade equivalents together and dividing by the number of subtests within the area. [e.g. (L-1) + (L-2) + (L-3) + (L-4) ÷ 4].

The table for each area such as Vocabulary has 3 sections. The top portion of the table contains the distribution of scores. The middle section, summary data for the score distributions. The bottom section the percentiles; that is the score below which the scores of the approximate percent (10, 25, 50, 75, 90) of the students fell.

The tables are printed on 11" × 14" pages with three tables abreast on the page. The report is no less than 2 pages long and may be on 4 pages if tables are too long to fit on two pages. The sample above is reduced.

Key

A Date when the test was administered, e.g., September, 1975.

B Name of school, e.g., Anderson Elementary.

C Name of system, e.g., Jefferson County.

D Code for Anderson Elementary School in Jefferson County, e.g., 320-4171.

E Grade level for the report, e.g., Grade 4.

F Subtest or area, e.g., Vocabulary, Reading.

G This number is the Grade Equivalent (GE) achieved by one or more students, e.g., sixth year, sixth month in Vocabulary.

H This number is the frequency (F) or the number of students achieving the GE, e.g., one student in Anderson Elementary achieved a GE of 6.6 in Vocabulary.

I This number is the percent (PCT) of students in the school achieving the given GE, e.g., 1.9 percent of students in Anderson Elementary School achieved a GE of sixth year, sixth month in Vocabulary.

J This number is the cumulative frequency (CF), or the number of students in the school achieving a GE up to and including the given score, e.g., 54 students in Anderson Elementary School achieved a GE of up to and including sixth year, sixth month in Vocabulary.

K This number is the Cumulative percent (C-PCT) or the percent of students in the school achieving a score up to and including the given GE, e.g., 100% of the students in Anderson Elementary School achieved a GE of up to and including sixth year, sixth month in Vocabulary.

L This number is the number of students tested in the school, e.g., 54 in Anderson Elementary School.

M This number is the lowest GE achieved in the school, e.g., first year, fifth month in Vocabulary in Anderson Elementary School.

N This number is the highest GE achieved in the school, e.g., sixth year, sixth month in Vocabulary in Anderson Elementary School.

O This number is the sum of all students' GE's in the school. In Anderson Elementary School the sum of all students' GE's is 1844 in Vocabulary.

P This number is the sum of squared GE's for all students in the school. This was arrived at by first squaring the GE for each student. Then the squared GE's for all students were summed. In Anderson Elementary the sum of squared GE's in Vocabulary is 70934.

Q This number is the mean GE for the school. It was arrived at by summing all the students' GE's and then dividing by the number of students. The mean of GE for Anderson Elementary in Vocabulary when rounded is 3.4 or third year, fourth month.

R This number is the standard deviation of GE's for the school. It is arrived at by first dividing the sum of squares by the number of students tested. Then the squared mean is subtracted from the number arrived at in Step 1 above. Finally, the square root of the number arrived at in Step 2 is calculated giving the standard deviation. For example, in the Vocabulary subtest of Anderson Elementary School, the sum of squared GE's (70934) is divided by the number of students tested (54). Subtracted from this number (1313.59) is the mean (34.1481) of the Vocabulary subtest squared (1166.09) giving 147.5. The standard deviation for the Vocabulary subtest is the square root of 147.5 or 12.1448. This would be read when rounded as a standard deviation of the GE of one year, two months.

S The approximate GE below which the GE's of 90 percent of students in the school fell, e.g., in Anderson Elementary School 90% of students' GE's fell below an approximate GE of fifth year, first month in Vocabulary.

T The approximate GE below which GE's of 75 percent of students in the school fell, e.g., in Anderson Elementary School 75% of students' GE's fell below an approximate GE of fourth year, second month in Vocabulary.

U The approximate GE below which the GE's of 50 percent of students in the school fell, e.g., in Anderson Elementary School 50% of students' GE's fell below an approximate GE of third year, first month in Vocabulary.

V The approximate GE below which the GE's of 25 percent of students in the school fell. In Anderson Elementary School 25% of students' GE's fell below an approximate GE of second year, second month in Vocabulary.

W The approximate GE below which the GE's of 10 percent of students in the school fell. In Anderson Elementary School 10% of students' GE's fell below an approximate GE of first year, eighth month in Vocabulary.

GEORGIA STATEWIDE TESTING PROGRAM

SCHOOL STANDARD SCORE FREQUENCY DISTRIBUTIONS

A — SEPTEMBER 1975

B — SCHOOL ANDERSON ELEM.
C — SYSTEM JEFFERSON COUNTY
D — SCHOOL CODE 320-4171
E — GRADE 4

F

VOCABULARY

SCORE (G)	F (H)	PCT (I)	CF (J)	C-PCT (K)
89	1	1.9	54	100.0
88	1	1.9	53	98.1
81	1	1.9	52	96.3
79	2	3.7	51	94.4
78	1	1.9	49	90.7
77	1	1.9	48	88.9
76	1	1.9	47	87.0
74	3	5.6	46	85.2
72	2	3.7	43	79.6
70	3	5.6	41	75.9
69	2	3.7	38	70.4
67	3	5.6	36	66.7
64	2	3.7	33	61.1
62	5	9.3	31	57.4
59	3	5.6	26	48.1
57	1	1.9	23	42.6
55	4	7.4	22	40.7
52	5	9.3	18	33.3
48	6	11.1	13	24.1
45	3	5.6	7	13.0
41	3	5.6	4	7.4
35	1	1.9	1	1.9

READING

SCORE	F	PCT	CF	C-PCT
92	1	1.9	54	100.0
87	1	1.9	53	98.1
85	2	3.7	52	96.3
82	1	1.9	50	92.6
79	1	1.9	49	90.7
78	1	1.9	48	88.9
77	3	5.6	47	87.0
75	2	3.7	44	81.5
74	3	5.6	42	77.8
73	4	7.4	39	72.2
72	1	1.9	35	64.8
70	1	1.9	34	63.0
69	2	3.7	33	61.1
68	1	1.9	31	57.4
67	1	1.9	30	55.6
66	1	1.9	29	53.7
64	2	3.7	28	51.9
63	4	7.4	26	48.1
62	2	3.7	22	40.7
60	1	1.9	20	37.0
58	3	5.6	19	35.2
55	3	5.6	16	29.6
53	2	3.7	13	24.1
52	2	3.7	11	20.4
49	3	5.6	9	16.7
47	1	1.9	6	11.1
42	1	1.9	5	9.3
36	1	1.9	4	7.4
34	2	3.7	3	5.6
32	1	1.9	1	1.9

LANGUAGE TOTAL

SCORE	F	PCT	CF	C-PCT
78	1	1.9	54	100.0
75	3	5.6	53	98.1
74	1	1.9	50	92.6
73	1	1.9	49	90.7
71	2	3.7	48	88.9
69	1	1.9	46	85.2
68	3	5.6	45	83.3
67	5	9.3	42	77.8
65	1	1.9	37	68.5
64	1	1.9	36	66.7
63	4	7.4	35	64.8
62	3	5.6	31	57.4
61	2	3.7	28	51.9
60	2	3.7	26	48.1
59	3	5.6	24	44.4
57	6	11.1	21	38.9
56	3	5.6	15	27.8
54	2	3.7	12	22.2
52	6	11.1	10	18.5
51	1	1.9	4	7.4
47	1	1.9	3	5.6
44	1	1.9	2	3.7
23	1	1.9	1	1.9

CASES PROCESSED =	54 — L	
MINIMUM VALUE =	35 — M	
MAXIMIM VALUE =	89 — N	
SUM OF SCORES =	3295 — O	
SUM SQD. SCORES =	209873 — P	
MEAN =	61.0185 — Q	
STND. DEV. (N) =	12.7780 — R	
PERCENTILE 90 =	78 — S	
PERCENTILE 75 =	70 — T	
PERCENTILE 50 =	59 — U	
PERCENTILE 25 =	48 — V	
PERCENTILE 10 =	41 — W	

CASES PROCESSED =	54
MINIMUM VALUE =	32
MAXIMIM VALUE =	92
SUM OF SCORES =	3449
SUM SQD. SCORES =	230745
MEAN =	63.8704
STND. DEV. (N) =	13.9152
PERCENTILE 90 =	79
PERCENTILE 75 =	74
PERCENTILE 50 =	64
PERCENTILE 25 =	53
PERCENTILE 10 =	42

CASES PROCESSED =	54
MINIMUM VALUE =	23
MAXIMIM VALUE =	78
SUM OF SCORES =	3281
SUM SQD. SCORES =	203971
MEAN =	60.7593
STND. DEV. (N) =	9.2495
PERCENTILE 90 =	72
PERCENTILE 75 =	66
PERCENTILE 50 =	61
PERCENTILE 25 =	55
PERCENTILE 10 =	51

Grade 4
School Standard Score Frequency Distributions

School Standard Score Frequency Distributions are furnished for each school in which students were tested. A frequency table is provided for: Vocabulary; Reading; Language total (average for Spelling, Capitalization, Punctuation, Usage): total Work Study (average for Map Reading, Graphs and Tables, References); Mathematics (average for Concepts, Problem Solving); and ITBS Battery (average for Vocabulary, Reading, Language, Work Study, Mathematics). Averages for the areas (Language, Work Study, Mathematics) and the Battery were arrived at by first adding a student's grade equivalents together and dividing the number of subtests within the area [e.g., (L-1) + (L-2) + (L-3) + (L-4) ÷ 4].

The table for each area such as Vocabulary has 3 sections. The top portion of the table contains the distribution of scores. The middle section, summary data for the score distributions. The bottom section the percentiles; that is the score below which the scores of the approximate percent (10, 25, 50, 75, 90) of the students fell.

The tables are printed on 11" × 14" pages with three tables abreast on the page. The report is no less than 2 pages long and may be on 4 pages if tables are too long to fit on two pages. The sample above is reduced.

Key

A Date when the test was administered, e.g., September, 1975.
B Name of school, e.g., Anderson Elementary.
C Name of system, e.g., Jefferson County.
D Code for Anderson Elementary School in Jefferson County, e.g., 320-4171.
E Grade level for the report, e.g., Grade 4.
F Subtest or area, e.g., Vocabulary, Reading.
G This number is the Standard Score (SS) achieved by one or more students, e.g., 89 in Vocabulary.
H This number is the frequency (F) or the number of students achieving the SS, e.g., one student in Anderson Elementary achieved a SS of 89 in Vocabulary.
I This number is the percent (PCT) of students in the school achieving the given SS, e.g., 1.9 percent of students in Anderson Elementary School achieved a SS of 89 in Vocabulary.
J This number is the cumulative frequency (CF), or the number of students in the school achieving a SS up to and including the given score, e.g., 54 students in Anderson Elementary School achieved a SS of up to and including 89 in Vocabulary.
K This number is the Cumulative percent (C-PCT) or the percent of students in the school achieving a score up to and including the given SS, e.g., 100% of the students in Anderson Elementary School achieved a SS of up to and including 89 in Vocabulary.
L This number is the number of students tested in the school, e.g., 54 in Anderson Elementary School.
M This number is the lowest SS achieved in the school, e.g., 35 in Vocabulary in Anderson Elementary School.
N This number is the highest SS achieved in the school, e.g., 89 in Vocabulary in Anderson Elementary School.
O This number is the sum of all students' SS's in the school. In Anderson Elementary School the sum of all students' SS's is 3295 in Vocabulary.
P This number is the sum of squared SS's for all students in the school. This was arrived at by first squaring the SS for each student. Then the squared SS's for all students were summed. In Anderson Elementary the sum of squared SS's in Vocabulary is 209873.
Q This number is the mean SS for the school. It was arrived at by summing all the students' SS's and then dividing by the number of students. The mean of SS for Anderson Elementary in Vocabulary when rounded is 61.
R This number is the standard deviation of SS's for the school. It is arrived at by first dividing the sum of squares by the number of students tested. Then the squared mean is subtracted from the number arrived at in Step 1 above. Finally the square root of the number arrived at in Step 2 is calculated giving the standard deviation. For example, in the Vocabulary subtest of Anderson Elementary School, the sum of squared SS's (209873) is divided by the number of students tested (54). Subtracted from this number (3886.54) is the mean (61.0185) of the Vocabulary subtest squared (3723.26) giving 163.28. The standard deviation for the Vocabulary subtest is the square root of 163.28 or 12.7780.
S The approximate SS below which the SS's of 90 percent of students in the school fell, e.g., in Anderson Elementary School 90% of students' SS's fell below an approximate SS of 78 in Vocabulary.
T The approximate SS below which SS's of 75 percent of students in the school fell, e.g., in Anderson Elementary School 75% of students' SS's fell below an approximate SS of 70 in Vocabulary.
U The approximate SS below which the SS's of 50 percent of students in the school fell, e.g., in Anderson Elementary School 50% of students' SS's fell below an approximate SS of 59 in Vocabulary.
V The approximate SS below which the SS's of 25 percent of students in the school fell. In Anderson Elementary School 25% of students' SS's fell below an approximate SS of 48 in Vocabulary.
W The approximate SS's below which the SS's of 10 percent of students in the school fell. In Anderson Elementary School 10% of students' SS's fell below an approximate SS of 41 in Vocabulary.

GEORGIA STATEWIDE TESTING PROGRAM

SYSTEM GRADE EQUIVALENT FREQUENCY DISTRIBUTIONS

A——SEPTEMBER 1975
B——SYSTEM JEFFERSON COUNTY
C——SYSTEM CODE 320
D——GRADE 4

E

VOCABULARY

SCORE (F)	F (G)	PCT (H)	CF (I)	C-PCT (J)
68	1	0.5	201	100.0
66	2	1.0	200	99.5
64	3	1.5	198	98.5
60	1	0.5	195	97.0
59	1	0.5	194	96.5
57	1	0.5	193	96.0
56	1	0.5	192	95.5
55	4	2.0	191	95.0
54	3	1.5	187	93.0
52	5	2.5	184	91.5
51	4	2.0	179	89.1
50	5	2.5	175	87.1
49	1	0.5	170	84.6
48	3	1.5	169	84.1
46	6	3.0	166	82.6
45	2	1.0	160	79.6
44	6	3.0	158	78.6
42	8	4.0	152	75.6
41	9	4.5	144	71.6
40	10	5.0	135	67.2
38	8	4.0	125	62.2
36	10	5.0	117	58.2
34	14	7.0	107	53.2
31	20	10.0	93	46.3
29	12	6.0	73	36.3
27	12	6.0	61	30.3
25	17	8.5	49	24.4
22	10	5.0	32	15.9
20	8	4.0	22	10.9
18	8	4.0	14	7.0
15	4	2.0	6	3.0
13	1	0.5	2	1.0
11	1	0.5	1	0.5

CASES PROCESSED	=	201——K
MINIMUM VALUE	=	11——L
MAXIMUM VALUE	=	68——M
SUM OF SCORES	=	7113——N
SUM SQD. SCORES	=	280481——O
MEAN	=	35.3881——P
STND. DEV. (N)	=	11.9630——Q
PERCENTILE 90	=	51——R
PERCENTILE 75	=	42——S
PERCENTILE 50	=	32——T
PERCENTILE 25	=	25——U
PERCENTILE 10	=	19——V

READING

SCORE	F	PCT	CF	C-PCT
71	1	0.5	201	100.0
70	1	0.5	200	99.5
69	1	0.5	199	99.0
66	2	1.0	198	98.5
63	3	1.5	196	97.5
62	1	0.5	193	96.0
61	2	1.0	192	95.5
60	2	1.0	190	94.5
57	1	0.5	188	93.5
56	4	2.0	187	93.0
55	1	0.5	183	91.0
54	1	0.5	182	90.5
53	3	1.5	181	90.0
52	3	1.5	178	88.6
51	2	1.0	175	87.1
50	6	3.0	173	86.1
49	2	1.0	167	83.1
48	5	2.5	165	82.1
47	4	2.0	160	79.6
46	7	3.5	156	77.6
45	4	2.0	149	74.1
44	5	2.5	145	72.1
43	6	3.0	140	69.7
42	6	3.0	134	66.7
41	4	2.0	128	63.7
40	8	4.0	124	61.7
39	8	4.0	116	57.7
37	9	4.5	108	53.7
36	8	4.0	99	49.3
35	11	5.5	91	45.3
33	7	3.5	80	39.8
31	11	5.5	73	36.3
29	7	3.5	62	30.8
27	5	2.5	55	27.4
26	12	6.0	50	24.9
24	8	4.0	38	18.9
23	7	3.5	30	14.9
21	9	4.5	23	11.4
20	5	2.5	14	7.0
19	2	1.0	9	4.5
18	2	1.0	7	3.5
17	2	1.0	5	2.5
16	2	1.0	3	1.5
15	1	0.5	1	0.5

ABOVE TABLE NOT COMPLETE

LANGUAGE TOTAL

SCORE	F	PCT	CF	C-PCT
66	1	0.5	201	100.0
64	1	0.5	200	99.5
62	1	0.5	199	99.0
61	1	0.5	198	98.5
60	1	0.5	197	98.0
59	1	0.5	196	97.5
57	4	2.0	195	97.0
56	1	0.5	191	95.0
55	2	1.0	190	94.5
53	1	0.5	188	93.5
52	1	0.5	187	93.0
51	6	3.0	186	92.5
50	1	0.5	180	89.6
49	2	1.0	179	89.1
48	5	2.5	177	88.1
47	1	0.5	172	85.6
46	2	1.0	171	85.1
45	1	0.5	169	84.1
44	6	3.0	168	83.6
43	6	3.0	162	80.6
42	3	1.5	156	77.6
41	3	1.5	153	76.1
40	10	5.0	150	74.6
39	5	2.5	140	69.7
38	4	2.0	135	67.2
37	8	4.0	131	65.2
36	6	3.0	123	61.2
35	9	4.5	117	58.2
34	9	4.5	108	53.7
33	8	4.0	99	49.3
32	12	6.0	91	45.3
31	15	7.5	79	39.3
30	9	4.5	64	31.8
29	9	4.5	55	27.4
28	12	6.0	46	22.9
27	6	3.0	34	16.9
26	4	2.0	28	13.9
25	5	2.5	24	11.9
24	3	1.5	19	9.5
23	5	2.5	16	8.0
22	3	1.5	11	5.5
21	4	2.0	8	4.0
20	1	0.5	4	2.0
19	1	0.5	3	1.5
15	1	0.5	2	1.0
14	1	0.5	1	0.5

ABOVE TABLE NOT COMPLETE

Grade 4
System Grade Equivalent Frequency Distributions

School Grade Equivalent Frequency Distributions are furnished for each system. A frequency table is provided for: Vocabulary; Reading; Language total (average for Spelling, Capitalization, Punctuation, Usage); total Work Study (average for Map Reading, Graphs and Tables, References); Mathematics (average for Concepts, Problem Solving); and ITBS Battery (average for Vocabulary, Reading, Language, Work Study, Mathematics). Averages for the areas (Language, Work Study, Mathematics) and the Battery were arrived at by adding a student's grade equivalents together and dividing by the number of subtests within the area. [e.g., (L-1) + (L-2) + (L-3) + (L-4) ÷ 4].

The tables for each area such as Vocabulary has 3 sections. The top portion of the table contains the distribution of scores. The middle section, summary data for the score distributions. The bottom section the percentiles; that is the score below which the scores of the approximate percent (10, 25, 50, 75, 90) of the students fell.

The tables are printed on 11" × 14" pages with three tables abreast on the page. The report is no less than 2 pages long and may be on 4 pages if tables are too long to fit on two pages. The sample above is reduced.

Key

A Date when the test was administered, e.g., September, 1975.
B Name of system, e.g., Jefferson County.
C Code for Jefferson County, e.g., 320.
D Grade level for the report, e.g., Grade 4.
E Subtest or area, e.g., Vocabulary, Reading.
F This number is the Grade Equivalent (GE) achieved by one or more students, e.g., sixth year, eighth month in Vocabulary.
G This number is the frequency (F) or the number of students achieving the GE, e.g., one student in Jefferson County.
H This number is the percent (PCT) of students in the system achieving the given GE, e.g., 0.5 percent of students in Jefferson County achieved a GE of sixth year, eighth month in Vocabulary.
I This number is the cumulative frequency (CF), or the number of students in the system achieving a GE up to and including the given score, e.g., 201 students in Jefferson County achieved a GE of up to and including sixth year, eighth month in Vocabulary.
J This number is the cumulative percent (C-PCT) or the percent of students in the system achieving a score up to and including the given GE, e.g., 100% of the students in Jefferson County achieved a GE of up to and including sixth year, eighth month in Vocabulary.
K This number is the number of students tested in the system, e.g., 201 in Jefferson County.
L This number is the lowest GE achieved in the system, e.g., first year, first month in Vocabulary in Jefferson County.
M This number is the highest GE achieved in the system, e.g., sixth year, eighth month in Vocabulary in Jefferson County.
N This number is the sum of all students' GE's in the system. In Jefferson County, the sum of all students' GE's is 7113 in Vocabulary.
O This number is the sum of squared GE's for all students in the system. This was arrived at by first squaring the GE for each student. Then the squared GE's for all students were summed. In Jefferson County the sum of squared GE's in Vocabulary is 280481.
P This number is the mean GE for the system. It was arrived at by summing all the students' GE's and then dividing by the number of students. The mean of GE for Jefferson County in Vocabulary when rounded is 3.5 or third year, fifth month.
Q This number is the standard deviation of GE's for the system. It is arrived at by first dividing the sum of squares by the number of students tested. Then the squared mean is subtracted from the number arrived at in Step 1 above. Finally, the square root of the number arrived at in Step 2 is calculated giving the standard deviation. For example, in the Vocabulary subtest of Jefferson County, the sum of squared GE's (280481) is divided by the number of students tested (201). Subtracted from this number (1395.43) is the mean (35.3881) of the Vocabulary subtest squared. (1252.32) giving 143.11. The standard deviation for the Vocabulary subtest is the square root of 143.11 or 11.9630. This would be read when rounded as a standard deviation of the GE of one year, two months.
R The approximate GE below which the GE's of 90 percent of students in the system fell, e.g., in Jefferson County 90% of students' GE's fell below an approximate GE of fifth year, first month in Vocabulary.
S The approximate GE below which the GE's of 75 percent of students in the system fell, e.g., in Jefferson County 75% of students' GE's fell below an approximate GE of fourth year, second month in Vocabulary.
T The approximate GE below which the GE's of 50 percent of students in the system fell, e.g., in Jefferson County 50% of students' GE's fell below an approximate GE of third year, second month in Vocabulary.
U The approximate GE below which the GE's of 25 percent of students in the system fell. In Jefferson County 25% of students' GE's fell below an approximate GE of second year, fifth month in Vocabulary.
V The approximate GE below which the GE's of 10 percent of students in the system fell. In Jefferson County 10% of students' GE's fell below an approximate GE of first year, ninth month in Vocabulary.

GEORGIA STATEWIDE TESTING PROGRAM

SYSTEM STANDARD SCORE FREQUENCY DISTRIBUTIONS

A——SEPTEMBER 1975
B——SYSTEM JEFFERSON COUNTY
C——SYSTEM CODE 320
D——GRADE 4

E

VOCABULARY

SCORE (F)	F (G)	PCT (H)	CF (I)	C-PCT (J)
91	1	0.5	201	100.0
89	2	1.0	200	99.5
88	3	1.5	198	98.5
85	1	0.5	195	97.0
84	1	0.5	194	96.5
83	1	0.5	193	96.0
82	1	0.5	192	95.5
81	7	3.5	191	95.0
79	5	2.5	184	91.5
78	4	2.0	179	89.1
77	6	3.0	175	87.1
76	3	1.5	169	84.1
74	6	3.0	166	82.6
73	2	1.0	160	79.6
72	6	3.0	158	78.6
70	8	4.0	152	75.6
69	19	9.5	144	71.6
67	8	4.0	125	62.2
64	10	5.0	117	58.2
62	14	7.0	107	53.2
59	20	10.0	93	46.3
57	12	6.0	73	36.3
55	12	6.0	61	30.3
52	17	8.5	49	24.4
48	10	5.0	32	15.9
45	8	4.0	22	10.9
41	8	4.0	14	7.0
35	4	2.0	6	3.0
30	1	0.5	2	1.0
26	1	0.5	1	0.5

CASES PROCESSED	=	201——K
MINIMUM VALUE	=	26——L
MAXIMUM VALUE	=	91——M
SUM OF SCORES	=	12540——N
SUM SQD. SCORES	=	814624——O
MEAN	=	62.3881——P
STND. DEV. (N)	=	12.6722——Q

PERCENTILE 90	=	78——R
PERCENTILE 75	=	70——S
PERCENTILE 50	=	60——T
PERCENTILE 25	=	52——U
PERCENTILE 10	=	42——V

READING

SCORE	F	PCT	CF	C-PCT
93	1	0.5	201	100.0
92	2	1.0	200	99.5
89	2	1.0	198	98.5
87	3	1.5	196	97.5
86	1	0.5	193	96.0
85	4	2.0	192	95.5
82	5	2.5	188	93.5
81	1	0.5	183	91.0
80	1	0.5	182	90.5
79	3	1.5	181	90.0
78	3	1.5	178	88.6
77	8	4.0	175	87.1
76	2	1.0	167	83.1
75	5	2.5	165	82.1
74	4	2.0	160	79.6
73	7	3.5	156	77.6
72	4	2.0	149	74.1
71	5	2.5	145	72.1
70	6	3.0	140	69.7
69	6	3.0	134	66.7
68	4	2.0	128	63.7
67	8	4.0	124	61.7
66	8	4.0	116	57.7
64	9	4.5	108	53.7
63	8	4.0	99	49.3
62	11	5.5	91	45.3
60	7	3.5	80	39.8
58	11	5.5	73	36.3
55	7	3.5	62	30.8
53	5	2.5	55	27.4
52	12	6.0	50	24.9
49	8	4.0	38	18.9
47	7	3.5	30	14.9
44	9	4.5	23	11.4
42	5	2.5	14	7.0
40	2	1.0	9	4.5
38	2	1.0	7	3.5
36	2	1.0	5	2.5
34	2	1.0	3	1.5
32	1	0.5	1	0.5

ABOVE TABLE NOT COMPLETE

LANGUAGE TOTAL

SCORE	F	PCT	CF	C-PCT
90	1	0.5	201	100.0
89	1	0.5	200	99.5
87	1	0.5	199	99.0
86	1	0.5	198	98.5
85	2	1.0	197	98.0
83	4	2.0	195	97.0
82	1	0.5	191	95.0
81	2	1.0	190	94.5
79	1	0.5	188	93.5
78	7	3.5	187	93.0
77	1	0.5	180	89.6
76	2	1.0	179	89.1
75	5	2.5	177	88.1
74	1	0.5	172	85.6
73	2	1.0	171	85.1
72	1	0.5	169	84.1
71	6	3.0	168	83.6
70	6	3.0	162	80.6
69	3	1.5	156	77.6
68	3	1.5	153	76.1
67	10	5.0	150	74.6
66	5	2.5	140	69.7
65	4	2.0	135	67.2
64	8	4.0	131	65.2
63	6	3.0	123	61.2
62	9	4.5	117	58.2
61	9	4.5	108	53.7
60	8	4.0	99	49.3
59	12	6.0	91	45.3
57	15	7.5	79	39.3
56	9	4.5	64	31.8
54	9	4.5	55	27.4
52	12	6.0	46	22.9
51	6	3.0	34	16.9
49	4	2.0	28	13.9
47	5	2.5	24	11.9
46	3	1.5	19	9.5
44	5	2.5	16	8.0
41	3	1.5	11	5.5
39	4	2.0	8	4.0
36	1	0.5	4	2.0
31	1	0.5	3	1.5
23	1	0.5	2	1.0
20	1	0.5	1	0.5

ABOVE TABLE NOT COMPLETE

Grade 4
System Standard Score Frequency Distributions

System Standard Score Frequency Distributions are furnished for each system. A frequency table is provided for: Vocabulary; Reading; Language total (average for Spelling, Capitalization, Punctuation, Usage): total Work Study (average for Map Reading, Graphs and Tables, References); Mathematics (average for Concepts, Problem Solving); and ITBS Battery (average for Vocabulary, Reading, Language, Work Study, Mathematics). Averages for the areas (Language, Work Study, Mathematics) and the Battery were arrived at by first adding a student's grade equivalents together and dividing the number of subtests within the area [e.g., (L-1) + (L-2) + (L-3) + (L-4) ÷ 4]. Then the average GE was converted statistically to the standard score scale.

The table for each area such as Vocabulary has 3 sections. The top portion of the table contains the distribution of scores. The middle section, summary data for the score distributions. The bottom section the percentiles; that is the score below which the scores of the approximate percent (10, 25, 50, 75, 90) of the students fell.

The tables are printed on 11" × 14" pages with three tables abreast on the page. The report is no less than 2 pages long and may be on 4 pages if tables are too long to fit on two pages. The sample above is reduced.

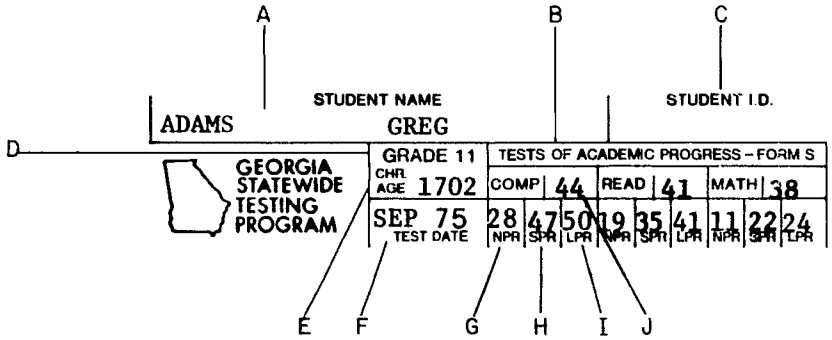
Key

A Date when the test was administered, e.g., September, 1975.
B Name of system, e.g., Jefferson County.
C Code for Jefferson County, e.g., 320.
D Grade level for the report, e.g., Grade 4.
E Subtest or area, e.g., Vocabulary, Reading.
F This number is the Standard Score (SS) achieved by one or more students, e.g., 91 in Vocabulary.
G This number is the frequency (F) or the number of students achieving the SS, e.g., one student in Jefferson County achieved a SS of 91 in Vocabulary.
H This number is the percent (PCT) of students in the system achieving the given SS, e.g., 0.5 percent of students in Jefferson County achieved a SS of 91 in Vocabulary.
I This number is the cumulative frequency (CF), or the number of students in the system achieving a SS up to and including the given score, e.g., 201 students in Jefferson County achieved a SS of up to and including 91 in Vocabulary.
K This number is the number of students tested in the system, e.g., 201 in Jefferson County.
L This number is the lowest SS achieved in the system, e.g., 26 in Vocabulary in Jefferson County.
M This number is the highest SS achieved in the system, e.g., 91 in Vocabulary in Jefferson County.
N This number is the sum of all students' SS's in the system. In Jefferson County the sum of all students' SS's is 12540 in Vocabulary.
O This number is the sum of squared SS's for all students in the system. This was arrived at by first squaring the SS for each student. Then the squares SS's for all students were summed. In Jefferson County the sum of squared SS's in Vocabulary is 814624.
P This number is the mean SS for the system. It was arrived at by summing all the students' SS's and then dividing by the number of students. The mean of SS for Jefferson County in Vocabulary when rounded is 62.
Q This number is the standard deviation of SS's for the system. It is arrived at by first dividing the sum of squares by the number of students tested. Then the squared mean is subtracted from the number arrived at in Step 1 above. Finally the square root of the number arrived at in Step 2 is calculated giving the standard deviation. For example, in the Vocabulary subtest of Jefferson County, the sum of squared SS's (814624) is divided by the number of students tested (201). Subtracted from this number (4052.86) is the mean (62.3881) of the Vocabulary subtest squared (3892.28) giving 160.58. The standard deviation for the Vocabulary subtest is the square root of 160.58 or 12.6722.
R The approximate SS below which the SS's of 90 percent of students in the system fell, e.g., in Jefferson County 90% of students' SS's fell below an approximate SS of 78 in Vocabulary.
S The approximate SS below which SS's of 75 percent of students in the system fell, e.g., in Jefferson County 75% of students' SS's fell below an approximate SS of 70 in Vocabulary.
T The approximate SS below which the SS's of 50 percent of students in the system fell, e.g., in Jefferson County 50% of students' SS's fell below an approximate SS of 60 in Vocabulary.
U The approximate SS below which the SS's of 25 percent of students in the system fell. In Jefferson County 25% of students' SS's fell below an approximate SS of 52 in Vocabulary.
V The approximate SS's below which the SS's of 10 percent of students in the system fell. In Jefferson County 10% of students' SS's fell below an approximate SS of 42 in Vocabulary.

Grade 11

Student Cumulative Record Label

This is a pressure sensitive label that can be placed in the Student's Cumulative Record folder. One copy for each student is furnished. Labels are grouped by classroom.



Key

A Name of student, e.g., Greg Adams.

B Name and form of the test, e.g., Tests of Academic Progress - Form S

C This is an optional number, filled in only if it was coded on Greg's answer sheet.

D Grade level of student, e.g., Grade 11.

E Age of student at time of testing, e.g., Greg was 17 years 2 months old.

F Date on which test was administered, e.g., September, 1975.

G The National Percentile Rank (NPR) represents Greg's standing in relation to the students in the national sample on which the test was normed. In Composition, Greg scored as well as or better than 28 percent of the students in the national sample. (See NPR page 13.)

H The State Percentile Rank (SPR) represents Greg's standing in relation to Georgia 11th Graders who took the test in 1974. In Composition, Greg scored as well as or better than 47 percent of Georgia 11th Graders tested in 1974. (See SPR page 13.)

I The Local Percentile Rank (LPR) represents Greg's standing in relation to other students in his system this year, 1975. In Composition, Greg scored as well as or better than 50 percent of the eleventh graders in Jefferson County. (See LPR page 13.)

J The Standard Score (SS) which represents a statistical conversion of the raw score (number of correct answers) to a scale common to all subtests. This permits comparisons among subtests. An examination of Greg's scores shows that he did better in Composition than in Reading and Math. (See SS page 12.)

GEORGIA STATEWIDE TESTING PROGRAM

A — PUPIL SCORE REPORT — B — SEPTEMBER 1975

GRADE 11
CLASS MARY BOWMAN

C — SCHOOL BARBER HIGH
D — SYSTEM JEFFERSON COUNTY
E — SCHOOL CODE 320-2171

		COMP	READ	MATH
ADAMS	GREG			
H — S.S.		44	41	38
I — L PR		50	41	24
J — S PR		47	35	22
K — N PR		28	19	11
DANIELS	MARY			
S.S.		43	39	35
L PR		43	32	18
S PR		41	27	16
N PR		25	14	7

		COMP	READ	MATH
BYERS	SUSAN			
S.S.		51	50	45
L PR		72	72	51
S PR		70	65	48
N PR		54	50	30
ENGLE	RALPH			
S.S.		54	58	60
L PR		80	91	95
S PR		80	87	92
N PR		65	79	84

		COMP	READ	MATH
COHEN	ANNA			
S.S.		44	36	33
L PR		46	20	11
S PR		44	18	10
N PR		28	9	4
FULLER	JOHN			
S.S.		41	39	46
L PR		36	32	58
S PR		33	27	53
N PR		20	14	35

	COMP	READ	MATH
NUMBER TESTED	31	31	31
MEAN S.S.	48.5	46.6	44.9

Grade 11

Pupil Score Report

The Pupil Score Report is a roster of all students in the classroom showing the same information appearing on each student's Cumulative Record Label. In addition, the final entry for a class, on this report shows summaries for all students in the class taking the test in September, 1975. The number of pages for a classroom depends upon the number of students. Each page shows scores for no more than 27 students. Only part of one page is shown above and is reduced. Actual size of each page is 11" × 14".

Key

A The teacher's name as it appeared on the classroom cover sheet accompanying student answer sheets, e.g., Mary Bowman.

B Date test was administered, e.g., September, 1975.

C Name of the school, e.g., Barber High.

D Name of the system, e.g., Jefferson County.

E Code for Barber High School in Jefferson County, e.g., 320-2171.

F Subtests in the TAP, e.g., Composition, Reading, Mathematics.

G Name of student, e.g., Greg Adams, Mary Daniels, etc.

H Standard Score (SS) represents a statistical conversion of the raw score to a scale common to all subtests. This permits comparison among subtests. Greg's SS of 44 in Composition when compared with his SS of 41 in Reading indicates he did better in Composition than in Reading. (See SS on page 12.)

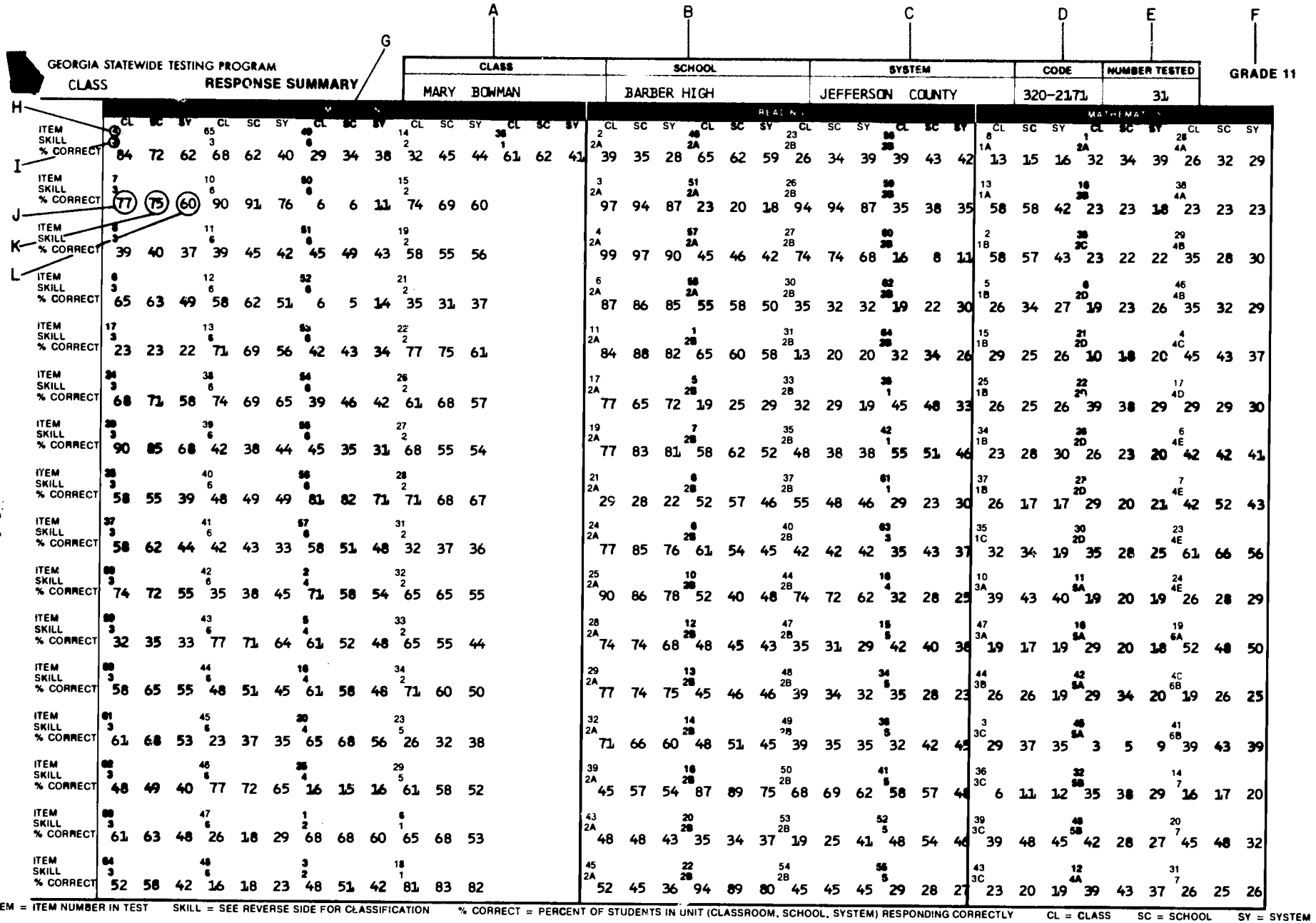
I Local Percentile Rank (LPR) represents Greg's standing in relation to other 11th grade students in the system (in this instance, Jefferson County), who took the test in September, 1975. In Composition, Greg scored as well as or better than 50 percent of 11th graders in Jefferson County. (See LPR on page 13.)

J State Percentile Rank (SPR) which represents Greg's standing in relation to Georgia 11th graders who took the test in 1974. In Composition, Greg scored as well or better than 47 percent of the students in the state. (See SPR on page 13.)

K National Percentile Rank (NPR) which represents Greg's standing in relation to the national sample on which the test was normed. In Composition, Greg scored as well or better than 28 percent of the students in the national sample. (See NPR on page 13.)

L The number of students tested in the class represented on the roster, e.g., 31 students in Mary Bowman's class.

M The mean Standard Score (SS) for Mary Bowman's class. The mean was determined by adding the SS of each student in a subtest together and dividing the sum for all students by the number of students in the class. In Ms. Bowman's class the Composition SS of Greg (44) was added to that of Susan (51), Anna (44) and so on through all 31 students. The sum for all 31 students was then divided by 31 for a class mean SS in Composition of 48.5. The class mean SS may be used to compare Greg's or any other student's SS to the average of the class. For example, Greg's SS of 44 in Composition as compared to the class mean SS of 48.5 shows he was lower than the class average. The mean SS for the class in one subtest may also be used to compare this subtest with others. For example, the class mean SS in Composition of 48.5 indicates that the average class performance was higher than in Reading (46.6) and Mathematics (44.9).


A
B
C
D
E
F
G
H
I
J
K
L
GEORGIA STATEWIDE TESTING PROGRAM
CLASS RESPONSE SUMMARY
CLASS
MARY BOWMAN
SCHOOL
BARBER HIGH
SYSTEM
JEFFERSON COUNTY
CODE
320-2171
NUMBER TESTED
31
GRADE 11
READING
MATHEMATICS
ITEM
SKILL
% CORRECT
CL SC SY
ITEM = ITEM NUMBER IN TEST
SKILL = SEE REVERSE SIDE FOR CLASSIFICATION
% CORRECT = PERCENT OF STUDENTS IN UNIT (CLASSROOM, SCHOOL, SYSTEM) RESPONDING CORRECTLY
CL = CLASS
SC = SCHOOL
SY = SYSTEM

Grade 11

Class Response Summary

A Class Response Summary is provided for each class in which students were tested. It is 1 page long. The above sample is reduced from its actual size of 9 1/2" × 14". For each test question, the report shows the number of the question (item), the skill measured and the average percent of correct responses of the class as well as the school and the system in which the class is located. Test questions are not in numerical order; rather, they are grouped by skill and should be read down the pages, not across. On the reverse side of the report the skills are listed along with their codes. (The above sample does not have the skills printed on the reverse side.)

Key

A The teacher's name as it appears on the classroom cover sheet accompanying student answer sheets, e.g., Mary Bowman.

B Name of school, e.g., Barber High.

C Name of system, e.g., Jefferson County.

D Code for Barber High School in Jefferson County, e.g., 320-2171.

E Number of students tested in Ms. Bowman's class, e.g., 31 students.

F The grade level for the report, e.g., Grade 11.

G Name of subtest, e.g., Composition.

H The test question number, e.g., item number 4 in the Composition subtest.

I The skill measured by the test question, e.g., item 4 skill 3 is Usage. (The skill classification codes and titles are listed on the reverse side of reports, not on reverse side of this sample.)

J This number (PC) is the percent of students in the class (CL) answering the test question correctly. The class PC was arrived at by first counting the students in the class answering a question correctly. This number is then divided by the total number of students in the class taking the test. For example, in Ms. Bowman's class, 24 of 31 students answered question number 7 on the Composition subtest correctly, for a class PC of 77. (See PC on page 14.)

K This number (PC) is the percent of students in the school (SC) answering the test question correctly. The school PC was arrived at by first counting the students in the school answering a question correctly. This number is then divided by the total number of students in the school taking the test. For example, in Barber High School, 49 out of 65 students answered question 7 in Composition correctly, for a school PC of 75. (See PC on page 14.)

L This number (PC) is the percent of students in the system (SY) answering the test question correctly. The system PC was arrived at by first counting the students in the system answering a question correctly. This number is then divided by the total number of students in the system taking the test. For example, in Jefferson County, 176 of the 293 students taking the test answered question number 7 in Composition correctly, for a system PC of 60. (See PC on page 14.)

GEORGIA STATEWIDE TESTING PROGRAM

SCHOOL **RESPONSE SUMMARY**

F

CLASS	A SCHOOL	B SYSTEM	C CODE	D NUMBER TESTED	E GRADE 11
	BARBER HIGH	JEFFERSON COUNTY	320-2171	65	

G H I J

	MATHEMATICS															READING												MATHEMATICS											
	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY	CL	SC	SY
ITEM	4			65			40			14			38			2			46			23			58			8			1			28					
SKILL	3			3			6			2			1			2A			2A			2B			2B			1A			2A			4A					
% CORRECT		72	62		62	40		34	38		45	44		62	41		35	28		62	59		34	39		43	42		15	16		34	39		32	29			
ITEM	7			10			50			15						3			51			26			58			13			16			38					
SKILL	3			6			6			2						2A			2A			2B			2B			1A			2B			4A					
% CORRECT		75	60		91	76		6	11		69	60					94	87		20	18		94	87		38	35		58	42		23	18		23	23			
ITEM	8			11			51			19						4			57			27			60			2			33			29					
SKILL	3			6			6			2						2A			2A			2B			2B			1B			2C			4B					
% CORRECT		40	37		45	42		49	43		55	56					97	90		46	42		74	68		8	11		57	43		22	22		28	30			
ITEM	9			12			52			21						6			58			30			62			5						46					
SKILL	3			6			6			2						2A			2A			2B			2B			1B			2D			4B					
% CORRECT		63	49		62	51		5	14		31	37					86	85		58	50		32	32		22	30		34	27		23	26		32	29			
ITEM	17			13			53			22						11			1			31			64			15			21			4					
SKILL	3			6			6			2						2A			2B			2B			2B			1B			2D			4C					
% CORRECT		23	22		69	56		43	34		75	61					88	82		60	58		20	20		34	26		25	26		18	20		43	37			
ITEM	24			38			54			26						17			5			33			38			25			22			17					
SKILL	3			6			6			2						2A			2B			2B			1			1B			2D			4D					
% CORRECT		71	58		69	65		46	42		68	57					65	72		25	29		29	19		38	33		25	26		38	29		29	30			
ITEM	30			39			56			27						19			7			35			42			34			26			6					
SKILL	3			6			6			2						2A			2B			2B			1			1B			2D			4E					
% CORRECT		85	68		38	44		35	31		55	54					83	81		62	52		38	38		51	46		28	30		23	20		42	41			
ITEM	35			40			58			28						21			6			37			61			37			27			7					
SKILL	3			6			6			2						2A			2B			2B			1			1B			2D			4E					
% CORRECT		55	39		49	49		82	71		68	67					28	22		57	46		48	46		23	30		17	17		20	21		52	43			
ITEM	37			41			57			31						24			9			40			63			35			30			23					
SKILL	3			6			6			2						2A			2B			2B			3			1C			2D			4E					
% CORRECT		62	44		43	33		51	48		37	36					85	76		54	45		42	42		43	37		34	19		28	25		66	56			
ITEM	58			42			2			32						25			10			44			16			10			11			24					
SKILL	3			6			4			2						2A			2B			2B			4			3A			5A			4E					
% CORRECT		72	55		38	45		58	54		65	55					86	78		40	48		72	62		28	25		43	40		20	19		28	29			
ITEM	56			43			5			33						28			12			47			15			47			18			19					
SKILL	3			6			4			2						2A			2B			2B			5			3A			5A			6A					
% CORRECT		35	33		71	64		52	48		55	44					74	68		45	43		31	29		40	38		17	19		20	18		48	50			
ITEM	60			44			16			34						29			13			48			34			44			42			40					
SKILL	3			6			4			2						2A			2B			2B			5			3B			5A			6B					
% CORRECT		65	55		51	45		58	48		60	50					74	75		46	46		34	32		28	23		26	19		34	20		26	25			
ITEM	61			45			20			23						32			14			49			35			3			45			41					
SKILL	3			6			4			5						2A			2B			2B			5			3C			5A			6B					
% CORRECT		68	53		37	35		68	56		32	38					66	60		51	45		35	35		42	45		37	35		5	9		43	39			
ITEM	62			46			25			29						39			18			50			41			36			32			14					
SKILL	3			6			4			5						2A			2B			2B			5			3C			5B			7					
% CORRECT		49	40		72	65		15	16		58	52					57	54		89	75		69	62		57	48		11	12		38	29		17	20			
ITEM	63			47			1			6						43			20			53			52			39			48			20					
SKILL	3			6			2			1						2A			2B			2B			5			3C			5B			7					
% CORRECT		63	48		18	29		68	60		68	53					48	53		34	37		25	31		54	46		48	45		28	27		48	32			
ITEM	64			48			3			18						45			22			54			55			43			12			31					
SKILL	3			6			2			1						2A			2B			2B			5			3C			4A			7					
% CORRECT		58	42		18	13		51	42		83	82					45	36		89	80		45	45		28	27		20	19		43	37		25	26			

ITEM = ITEM NUMBER IN TEST SKILL = SEE REVERSE SIDE FOR CLASSIFICATION % CORRECT = PERCENT OF STUDENTS IN UNIT (CLASSROOM, SCHOOL, SYSTEM) RESPONDING CORRECTLY CL = CLASS SC = SCHOOL SY = SYSTEM

Grade 11

School Response Summary

A School Response Summary is provided for each school in which students were tested. It is 1 page long. The above sample is reduced from its actual size of 9 1/2" × 14". For each test question, the report shows the number of the question (item), the skill measured and the average percent of correct responses for the school as well as the system in which the school is located. Test questions are not in numerical order; rather, they are grouped by skill and should be read down the page, not across. On the reverse side of the report the skills are listed along with their codes. (The above sample does not have the skills printed on the reverse side.)

Key

A Name of school, e.g., Barber High.

B Name of system, e.g., Jefferson County.

C Code for Barber High School in Jefferson County, e.g., 320-2171.

D Number of students tested in Barber High School, e.g., 65 students.

E Grade level for the report, e.g., Grade 11.

F Name of subtest, e.g., Composition.

G The test question number, e.g., item number 4 in Composition subtest.

H The skill measured by the test question, e.g., item 4, skill 3 is Usage. (The skill classification codes and titles are listed on the reverse side of reports, not on reverse side of this sample.)

I This number (PC) is percent of students in the school answering the test question correctly. The school PC was arrived at by first counting the students in the school answering a question correctly. This number is then divided by the total number of students in the school taking the test. For example, in Barber High, 49 out of 65 students answered question 7 in Composition correctly, for a school PC of 75. (See PC on page 14.)

J This number (PC) is the percent of students in the system answering the test question correctly. The system PC was arrived at by first counting the students in the system answering a question correctly. This number is then divided by the total number of students in the system taking the test. For example, in Jefferson County, 176 of the 293 students taking the test answered question number 7 in Composition correctly, for a system PC of 60. (See PC on page 14.)

GEORGIA STATEWIDE TESTING PROGRAM

SYSTEM RESPONSE SUMMARY

CLASS	SCHOOL	A SYSTEM	B CODE	C NUMBER TESTED	D GRADE 11
		JEFFERSON COUNTY	320	293	

E

F

G

H

ITEM / SKILL / % CORRECT	CL	SC	SY
1 3	65 3	49 6	14 2	39 1	62	40	38	44	41
2 2A	46 2A	23 2B	56 2B	6 1A	1 3A	28 4A	28
3 3	10 6	88 6	15 2	60	76	11	60
3 2A	51 2A	26 2B	50 2B	13 1A	18 3B	38 4A	23
4 3	11 6	81 6	19 2	37	42	43	56
4 2A	57 2A	27 2B	60 2B	2 1B	38 3C	29 4B	30
5 3	12 6	88 6	21 2	49	51	14	37
6 2A	58 2A	30 2B	62 2B	5 1B	9 2D	45 4B	29
6 3	13 6	83 6	22 2	22	56	34	61
11 2A	1 2B	31 2B	64 2B	15 1B	21 2D	4 4C	37
7 3	38 6	64 6	26 2	58	65	42	57
17 2A	5 2B	33 2B	38 1	25 1B	22 2D	17 4D	30
8 3	39 6	88 6	27 2	68	44	31	54
19 2A	7 2B	35 2B	42 1	34 1B	26 2D	6 4E	41
9 3	40 6	86 6	28 2	39	49	71	67
21 2A	9 2B	37 2B	61 1	37 1B	27 2D	7 4E	43
10 3	41 6	87 6	31 2	44	33	48	36
24 2A	9 2B	40 2B	63 3	35 1C	30 2D	23 4E	56
88 3	42 6	2 4	32 2	55	45	54	55
25 2A	10 2B	44 2B	16 4	10 3A	11 3A	24 4E	29
99 3	43 6	5 4	33 2	33	64	48	44
28 2A	12 2B	47 2B	18 5	47 3A	18 3A	19 6A	50
88 3	44 6	16 4	34 2	55	45	48	50
29 2A	13 2B	48 2B	34 5	44 3B	42 3A	40 6B	25
61 3	45 6	39 4	23 5	53	35	56	38
32 2A	14 2B	49 2B	38 5	3 3C	46 3A	41 6B	39
62 3	46 6	26 4	29 5	40	65	16	52
39 2A	18 2B	50 2B	41 5	36 3C	32 3B	14 7	20
63 3	47 6	1 2	6 1	48	29	60	53
43 2A	20 2B	53 2B	52 5	39 3C	48 3B	20 7	32
64 3	48 6	3 2	18 1	42	23	42	82
45 2A	22 2B	54 2B	56 5	43 3C	12 4A	31 7	26

ITEM = ITEM NUMBER IN TEST SKILL = SEE REVERSE SIDE FOR CLASSIFICATION % CORRECT = PERCENT OF STUDENTS IN UNIT (CLASSROOM, SCHOOL, SYSTEM) RESPONDING CORRECTLY CL = CLASS SC = SCHOOL SY = SYSTEM

33975-NCG75P4.5-366112

Grade 11

System Response Summary

A System Response Summary is provided for each system. It is 1 page long. The above sample is reduced from its actual size of 9 1/2" × 14". For each test question, the report shows the number of the question (item), the skill measured and the average percent of correct responses for the system. Test questions are not in numerical order; rather, they are grouped by skill and should be read down the page, not across. On the reverse side of the report the skills are listed along with their codes. (The above sample does not have the skills printed on the reverse side.)

Key

A Name of system, e.g., Jefferson County.

B Code for Jefferson County, e.g., 320.

C Number of students tested in Jefferson County, e.g., 293 students.

D Grade level for the report, e.g., Grade 11.

E Name of subtest, e.g., Composition.

F The test question number, e.g., item number 4 in Composition subtest.

G The skill measured by the test question, e.g., item 4, skill 3 is Usage. (The skill classification codes and titles are listed on the reverse side of reports, not on reverse side of this sample.)

H This number (PC) is the percent of students in the system answering the test question correctly. The system PC was arrived at by first counting the students in the system answering a question correctly. This number is then divided by the total number of students in the system taking the test. For example, in Jefferson County, 176 of the 293 students taking the test answered question number 7 in Vocabulary correctly, for a system PC of 60. (See PC on page 14.)

GEORGIA STATEWIDE TESTING PROGRAM

SCHOOL STANDARD SCORE FREQUENCY DISTRIBUTIONS

A—— SEPTEMBER 1975
B—— SCHOOL BARBER HIGH
C—— SYSTEM JEFFERSON COUNTY
D—— SCHOOL CODE 320-2171
E—— GRADE 11

F

COMPOSITION

SCORE G	F H	PCT I	CF J	C-PCT K
79	1	1.5	65	100.0
61	1	1.5	64	98.5
60	2	3.1	63	96.9
59	2	3.1	61	93.8
58	3	4.6	59	90.8
57	3	4.6	56	86.2
56	3	4.6	53	81.5
55	1	1.5	50	76.9
54	2	3.1	49	75.4
53	4	6.2	47	72.3
52	1	1.5	43	66.2
51	3	4.6	42	64.6
50	2	3.1	39	60.0
49	2	3.1	37	56.9
48	4	6.2	35	53.8
46	5	7.7	31	47.7
45	1	1.5	26	40.0
44	10	15.4	25	38.5
43	1	1.5	15	23.1
42	2	3.1	14	21.5
41	2	3.1	12	18.5
40	2	3.1	10	15.4
39	1	1.5	8	12.3
37	1	1.5	7	10.8
36	2	3.1	6	9.2
34	1	1.5	4	6.2
32	2	3.1	3	4.6
24	1	1.5	1	1.5

CASES PROCESSED = 65—L
MINIMUM VALUE = 24—M
MAXIMIM VALUE = 79—N
SUM OF SCORES = 3135—O
SUM SQD. SCORES = 156155—P
MEAN = 48.2308—Q
STND. DEV. (N) = 8.7280—R

PERCENTILE 90 = 58—S
PERCENTILE 75 = 54—T
PERCENTILE 50 = 46—U
PERCENTILE 25 = 43—V
PERCENTILE 10 = 37—W

READING

SCORE	F	PCT	CF	C-PCT
66	1	1.5	65	100.0
65	1	1.5	64	98.5
64	1	1.5	63	96.9
60	2	3.1	62	95.4
59	1	1.5	60	92.3
58	2	3.1	59	90.8
56	2	3.1	57	87.7
55	3	4.6	55	84.6
54	1	1.5	52	80.0
53	2	3.1	51	78.5
51	3	4.6	49	75.4
50	2	3.1	46	70.8
49	2	3.1	44	67.7
48	4	6.2	42	64.6
47	1	1.5	38	58.5
46	2	3.1	37	56.9
45	1	1.5	35	53.8
44	7	10.8	34	52.3
43	2	3.1	27	41.5
42	2	3.1	25	38.5
41	5	7.7	23	35.4
39	6	9.2	18	27.7
38	3	4.6	12	18.5
37	2	3.1	9	13.8
36	4	6.2	7	10.8
34	1	1.5	3	4.6
32	1	1.5	2	3.1
29	1	1.5	1	1.5

CASES PROCESSED = 65
MINIMUM VALUE = 29
MAXIMIM VALUE = 66
SUM OF SCORES = 2998
SUM SQD. SCORES = 142838
MEAN = 46.1231
STND. DEV. (N) = 8.3767

PERCENTILE 90 = 57
PERCENTILE 75 = 51
PERCENTILE 50 = 44
PERCENTILE 25 = 39
PERCENTILE 10 = 35

MATHEMATICS

SCORE	F	PCT	CF	C-PCT
69	1	1.5	65	100.0
67	1	1.5	64	98.5
60	3	4.6	63	96.9
58	2	3.1	60	92.3
57	3	4.6	58	89.2
56	1	1.5	55	84.6
55	2	3.1	54	83.1
54	1	1.5	52	80.0
53	1	1.5	51	78.5
52	1	1.5	50	76.9
51	4	6.2	49	75.4
50	1	1.5	45	69.2
49	4	6.2	44	67.7
48	2	3.1	40	61.5
47	2	3.1	38	58.5
46	4	6.2	36	55.4
45	6	9.2	32	49.2
43	4	6.2	26	40.0
42	3	4.6	22	33.8
40	3	4.6	19	29.2
38	5	7.7	16	24.6
35	5	7.7	11	16.9
33	1	1.5	6	9.2
30	4	6.2	5	7.7
28	1	1.5	1	1.5

CASES PROCESSED = 65
MINIMUM VALUE = 28
MAXIMIM VALUE = 69
SUM OF SCORES = 2986
SUM SQD. SCORES = 142594
MEAN = 45.9385
STND. DEV. (N) = 9.1330

PERCENTILE 90 = 57
PERCENTILE 75 = 51
PERCENTILE 50 = 45
PERCENTILE 25 = 38
PERCENTILE 10 = 33

School Standard Score Frequency Distributions are furnished for each school in which students were tested. A frequency table is provided for Composition, Reading and Mathematics.

The table for each area such as Composition has 3 sections. The top portion of the table contains the distribution of scores. The middle section, summary data for the score distributions. The bottom section the percentiles; that is the score below which the scores of the approximate percent (10, 25, 50, 75, 90) of the students fell.

The tables are printed on 11" × 14" pages with three tables abreast on the page. The report is no less than 1 page long and may be more if tables are too long to fit on one page. The sample above is reduced.

Key

A Date when the test was administered, e.g., September, 1975.
B Name of school, e.g., Barber High.
C Name of system, e.g., Jefferson County.
D Code for Barber High School in Jefferson County, e.g., 320-2171.
E Grade level for the report, e.g., Grade 11.
F Subtest or area, e.g., Composition, Reading.
G This number is the Standard Score (SS) achieved by one or more students, e.g., 79 in Composition.
H This number is the frequency (F) or the number of students achieving the SS, e.g., one student in Barber High achieved a SS of 79 in Composition.
I This number is the percent (PCT) of students in the school achieving the given SS, E.g., 1.5 percent of students in Barber High achieved a SS of 79 in Composition.
J This number is the cumulative frequency (CF), or the number of students in the school achieving a SS up to and including the given score, e.g., 65 students in Barber High achieved a SS of 79, or below in Composition.
K This number is the cumulative percent (C-PCT) or the percent of students in the school achieving a score up to and including the given SS, e.g., 100% of the students in Barber High achieved a SS of up to and including 79 in Composition.
L This number is the number of students tested in the school, e.g., 65 in Barber High.
M This number is the lowest SS achieved in the school, e.g., 24 in Composition in Barber High.
N This number is the highest SS achieved in the school, e.g., 79 in Composition in Barber High.
O This number is the sum of all students' SS's in the school. It is arrived at by summing the SS of all students in the school. In Barber High the sum of all students' SS's is 3135 in Composition.
P This number is the sum of squared SS's for all students in the school. This was arrived at by first squaring the SS for each student. Then the squared SS's for all students were summed. In Barber High the sum of squared SS's in Composition is 156155.
Q This number is the mean SS for the school. It was arrived at by summing all the students' SS's and then dividing by the number of students. The mean SS for Barber High in Composition when rounded is 48.
R This number is the standard deviation of SS for the school. It is arrived at by first dividing the sum of squares by the number of students tested. Then the squared mean is subtracted from the number arrived at in Step 1 above. Finally the square root of the number arrived at in Step 2 is calculated giving the standard deviation. For example, in the Composition subtest of Barber High, the sum of squared SS's (156155) is divided by the number of students tested (65). Subtracted from this number (2402.38) is the mean of (48.2308) of the Composition subtest squared (2326.21) giving 76.17. The standard deviation for the Composition subtest is the square root of 76.17 or 8.7280.
S The approximate SS below which the SS's of 90 percent of students in the school fell, e.g., in Barber High 90% of students' SS's fell below an approximate SS of 58 in Composition.
T The approximate SS below which SS of 75 percent of students in the school fell, e.g., Barber High 75% of students' SS's fell below an approximate SS of 54 in Composition.
U The approximate SS below which the SS's of 50 percent of students in the school fell, e.g., in Barber High 50% of students' SS's fell below an approximate SS of 46 in Composition.
V The approximate SS below which the SS of 25 percent of students in the school fell. In Barber High 25% of students' SS's fell below an approximate SS of 43 in Composition.
W The approximate SS below which the SS of 10 percent of students in the school fell. In Barber High 10% of students' SS's fell below an approximate SS of 37 in Composition.

GEORGIA STATEWIDE TESTING PROGRAM

SYSTEM STANDARD SCORE FREQUENCY DISTRIBUTIONS

A——SEPTEMBER 1975
B——SYSTEM JEFFERSON COUNTY
C——SYSTEM CODE 320
D——GRADE 11

E

COMPOSITION

SCORE	F	PCT	CF	C-PCT
79 (F)	1 (G)	0.3 (H)	292 (I)	100.0 (J)
75	1	0.3	291	99.7
74	1	0.3	290	99.3
70	1	0.3	289	99.0
69	1	0.3	288	98.6
67	1	0.3	287	98.3
66	1	0.3	286	97.9
64	2	0.7	285	97.6
63	2	0.7	283	96.9
61	4	1.4	281	96.2
60	4	1.4	277	94.9
59	6	2.1	273	93.5
58	6	2.1	267	91.4
57	7	2.4	261	89.4
56	6	2.1	254	87.0
55	11	3.8	248	84.9
54	7	2.4	237	81.2
53	7	2.4	230	78.8
52	5	1.7	223	76.4
51	11	3.8	218	74.7
50	4	1.4	207	70.9
49	6	2.1	203	69.5
48	15	5.1	197	67.5
47	3	1.0	182	62.3
46	17	5.8	179	61.3
45	10	3.4	162	55.5
44	24	8.2	152	52.1
43	6	2.1	128	43.8
42	7	2.4	122	41.8
41	14	4.8	115	39.4
40	11	3.8	101	34.6
39	14	4.8	90	30.8
38	11	3.8	76	26.0
37	9	3.1	65	22.3
36	8	2.7	56	19.2
35	7	2.4	48	16.4
34	9	3.1	41	14.0
32	4	1.4	32	11.0
31	5	1.7	28	9.6
30	4	1.4	23	7.9
29	6	2.1	19	6.5
28	3	1.0	13	4.5
27	2	0.7	10	3.4
26	3	1.0	8	2.7
24	2	0.7	5	1.7
23	1	0.3	3	1.0
21	2	0.7	2	0.7

CASES PROCESSED = 292——K
MINIMUM VALUE = 21——L
MAXIMIM VALUE = 79——M
SUM OF SCORES = 13101——N
SUM SQD. SCORES = 617021——O
MEAN = 44.8664——P
STND. DEV. (N) = 10.0044——Q

PERCENTILE 90 = 57——R
PERCENTILE 75 = 51——S
PERCENTILE 50 = 44——T
PERCENTILE 25 = 38——U
PERCENTILE 10 = 31——V

READING

SCORE	F	PCT	CF	C-PCT
69	3	1.0	293	100.0
67	3	1.0	290	99.0
66	1	0.3	287	98.0
65	3	1.0	286	97.6
64	1	0.3	283	96.6
62	1	0.3	282	96.2
61	5	1.7	281	95.9
60	3	1.0	276	94.2
59	3	1.0	273	93.2
58	6	2.0	270	92.2
57	3	1.0	264	90.1
56	8	2.7	261	89.1
55	4	1.4	253	86.3
54	5	1.7	249	85.0
53	12	4.1	244	83.3
52	6	2.0	232	79.2
51	13	4.4	226	77.1
50	6	2.0	213	72.7
49	8	2.7	207	70.6
48	18	6.1	199	67.9
47	7	2.4	181	61.8
46	12	4.1	174	59.4
45	9	3.1	162	55.3
44	16	5.5	153	52.2
43	6	2.0	137	46.8
42	5	1.7	131	44.7
41	19	6.5	126	43.0
40	9	3.1	107	36.5
39	16	5.5	98	33.4
38	8	2.7	82	28.0
37	8	2.7	74	25.3
36	14	4.8	66	22.5
35	5	1.7	52	17.7
34	9	3.1	47	16.0
33	7	2.4	38	13.0
32	4	1.4	31	10.6
31	5	1.7	27	9.2
30	7	2.4	22	7.5
29	7	2.4	15	5.1
28	3	1.0	8	2.7
26	1	0.3	5	1.7
25	2	0.7	4	1.4
23	1	0.3	2	0.7
21	1	0.3	1	0.3

CASES PROCESSED = 293
MINIMUM VALUE = 21
MAXIMIM VALUE = 69
SUM OF SCORES = 13018
SUM SQD. SCORES = 605474
MEAN = 44.4300
STND. DEV. (N) = 9.6144

PERCENTILE 90 = 57
PERCENTILE 75 = 51
PERCENTILE 50 = 44
PERCENTILE 25 = 37
PERCENTILE 10 = 32

MATHEMATICS

SCORE	F	PCT	CF	C-PCT
71	1	0.3	289	100.0
69	2	0.7	288	99.7
67	1	0.3	286	99.0
65	1	0.3	285	98.6
64	1	0.3	284	98.3
63	1	0.3	283	97.9
61	1	0.3	282	97.6
60	9	3.1	281	97.2
59	3	1.0	272	94.1
58	3	1.0	269	93.1
57	8	2.8	266	92.0
56	4	1.4	258	89.3
55	5	1.7	254	87.9
54	9	3.1	249	86.2
53	3	1.0	240	83.0
52	6	2.1	237	82.0
51	11	3.8	231	79.9
50	9	3.1	220	76.1
49	9	3.1	211	73.0
48	11	3.8	202	69.9
47	15	5.2	191	66.1
46	16	5.5	176	60.9
45	26	9.0	160	55.4
43	19	6.6	134	46.4
42	20	6.9	115	39.8
40	17	5.9	95	32.9
38	16	5.5	78	27.0
35	21	7.3	62	21.5
33	16	5.5	41	14.2
30	12	4.2	25	8.7
28	9	3.1	13	4.5
26	3	1.0	4	1.4
21	1	0.3	1	0.3

CASES PROCESSED = 289
MINIMUM VALUE = 21
MAXIMIM VALUE = 71
SUM OF SCORES = 12842
SUM SQD. SCORES = 594448
MEAN = 44.4360
STND. DEV. (N) = 9.0751

PERCENTILE 90 = 56
PERCENTILE 75 = 50
PERCENTILE 50 = 43
PERCENTILE 25 = 36
PERCENTILE 10 = 30

Grade 11
System Standard Score Frequency Distributions

System Standard Score Frequency Distributions are furnished for systems. A frequency table is provided for Composition, Reading and Mathematics.

The table for each area such as Composition has 3 sections. The top portion of the table contains the distribution of scores. The middle section, summary data for the score distributions. The bottom section the percentiles: that is the score below which the scores of the approximate percent (10, 25, 50, 75, 90) of the students fell.

The tables are printed on 11" × 14" pages with three tables abreast on the page. The report is no less than 1 page long and may be more if tables are too long to fit on one page. The sample above is reduced.

Key

A Date when the test was administered, e.g., September, 1975.
B Name of system, e.g., Jefferson County.
C Code for Jefferson County, e.g., 320.
D Grade level for the report, e.g., Grade 11.
E Subtest or area, e.g., Composition, Reading.
F This number is the Standard Score (SS) achieved by one or more students, e.g., 79 in Composition.
G This number is the frequency (F) or the number of students achieving the SS, e.g., one student in Jefferson County achieved a SS of 79 in Composition.
H This number is the percent (PCT) of students in the system achieving the given SS, e.g., 0.3 percent of students in Jefferson County achieved a SS of 79 in Composition.
I This number is the cumulative frequency (CF), or the number of students in the system achieving a SS up to and including the given score, e.g., 292 students in Jefferson County achieved a SS of 79 in Composition.
J This number is the cumulative percent (C-PCT) or the percent of students in the system achieving a score up to and including the given SS, e.g., 100% of the students in Jefferson County achieved a SS of up to and including 79 in Composition.
K This number is the number of students tested in the system, e.g., 292 in Jefferson County.
L This number is the lowest SS achieved in the system, e.g., 21 in Composition in Jefferson County.
M This number is the highest SS achieved in the system, e.g., 79 in Composition in Jefferson County.
N This number is the sum of all students' SS's in the system. It is arrived at by summing the SS of all students in the system. In Jefferson County the sum of all students' SS's is 13101 in Composition.
O This number is the sum of squared SS's for all students in the system. This was arrived at by first squaring the SS for each student. Then the squared SS's for all students were summed. In Jefferson County the sum of squared SS's in Composition is 617021.
P This number is the mean SS for the system. It was arrived at by summing all the students' SS and then dividing by the number of students. The mean SS for Jefferson County in Composition when rounded is 45.
Q This number is the standard deviation of SS's for the system. It is arrived at by first dividing the sum of squares by the number of students tested. Then the squared mean is subtracted from the number arrived at in Step 1 above. Finally the square root of the number arrived at in Step 2 is calculated giving the standard deviation. For example, in the Composition subtest of Jefferson County, the sum of squared SS's (617021) is divided by the number of students tested (292). Subtracted from this number (2113.09) is the mean of (44.8664) of the Composition subtest squared (2012.99) giving 100.1. The standard deviation for the Composition subtest is the square root of 100.1 or 10.0044.
R The approximate SS below which the SS's of 90 percent of students in the system fell, e.g., in Jefferson County 90% of the students' SS's fell below an approximate SS of 57 in Composition.
S The approximate SS below which SS of 75 percent of students in the system fell, e.g., Jefferson County 75% of students' SS's fell below an approximate SS of 51 in Composition.
T The approximate SS below which the SS's of 50 percent of students in the system fell, e.g., in Jefferson County 50% of students' SS's fell below an approximate SS of 44 in Composition.
U The approximate SS below which the SS of 25 percent of students in the system fell. In Jefferson County 25% of students' SS's fell below an approximate SS of 38 in Composition.
V The approximate SS below which the SS of 10 percent of students in the system fell. In Jefferson County 10% of students SS's fell below an approximate SS of 31 in Composition.

HOW MAY THE TEST RESULTS BE INTERPRETED AND UTILIZED?

A SYSTEMATIC APPROACH TO INTERPRETATION
AND UTILIZATION OF STATEWIDE TEST RESULTS

TEACHER'S GUIDE TO EVALUATING STUDENT PERFORMANCE

Reading

One means of evaluating the progress of students within a class is to use the results of the Iowa Tests of Basic Skills. A systems approach to this is illustrated below.

STEP I

First, record the students' names according to their national percentile rank score in reading, found on the Pupil Score Report.

READING PERCENTILE CHART

Below 4	4-10	11-22	23-39	40-59	60-76	77-88	89-95	96-Up

Three major groups of student scores typically will emerge, those who score below the twenty-second percentile, those who score between the twenty-third and eighty-eighth percentiles, and those who score at the eighty-ninth percentile and above. Each of these groups should be analyzed with a somewhat different approach.

STEP II

1. If the percentile rank for Reading is extremely low (22 or below), scores for subtests and responses to items within specific categories in this area indicate no proficiency of skill development. If the student, at the level of the test taken, was unable to function well enough to establish an area of proficiency, basic activities should be planned for reteaching and reinforcing all basic reading skills.

   Remember that reading is a growth process requiring a long period of skill development. Students who scored at a low level on this test will generally require basic skill development.

2. Generally, students who score within percentile range 22 and below need further assessment to determine the skills and level where instruction should begin. Investigation may show that these students lack the basic decoding skills to respond successfully to the test. For these students, determine if more appropriate and specific information is already available. If not, the specific information should be gathered. Referral to the psychometrist or reading consultant may be in order. The teacher can also conduct an informal evaluation of students. Following is an approach which the teacher might use in such an evaluation.

WORK HABITS

Example:	Satisfactory	Improvement Needed
Listens attentively Follows directions Uses time wisely Works independently Plans and organizes work Completes work		

LETTER GRADE ACHIEVEMENT

Reading	English	Spelling	Writing	Social Studies	Math	Science

OVER-ALL ACHIEVEMENT AS COMPARED TO TEACHER EXPECTATIONS

Excellent Progress	Satisfactory Progress	Unsatisfactory Progress

CONDUCT

Good	Satisfactory	Needs Improvement

Gathering this data together may help the teacher spot difficulties more readily.

STEP III

1. Students scoring between the twenty-third and eighty-eighth percentiles will exhibit definite strengths and weaknesses through their response to items within the specific skill categories.

   Remember also that two students scoring at the same percentile rank may be quite different in their reading proficiency, so it is necessary to generate information on student performance in specific reading skills to properly plan for student learning.

   For these reasons the teacher needs to examine the student item response reports to identify the specific skill categories in which a student needs instruction. A list of these skills with space for the names of students deficient in these skills will be helpful. (A sample form follows this page.)

   (Students whose scores are between the twenty-third and thirty-ninth percentiles may be in need of special assessment if several skill areas appear deficient. It is possible that no area of proficiency can be established for these students on the ITBS reading.)

2. On the form, list the names of those students whose scores fall in percentile range 40 to 89 on the reading percentile chart made previously.

   (a) From the Pupil Score Report, determine if the student's vocabulary score is lower than his reading score. If so, place a check by the student's name under "vocabulary." Typically, if vocabulary is lower than reading, a particular weakness in this area is indicated, and the student should be provided additional help in vocabulary building.

Grade 4

IOWA TESTS OF BASIC SKILLS

STUDENT	VOCABULARY	READING				
		Main Idea	Supporting Detail-Explicit	Supporting Detail-Inferred	Application	Evaluation

CHECK ( ) if student missed:

Main Idea – 2 or more
Explicit – 4 or more
Inferred – 5 or more
Application – 3 or more
Evaluation – 3 or more

(b) Utilizing the Student Item Response Report, examine the skill categories within the reading subtest. Check as deficient according to these criteria

Main Idea	2 or more missed
Supporting Detail (Explicit)	4 or more missed
Supporting Detail (Inferred)	5 or more missed
Application	3 or more missed
Evaluation	3 or more missed

Remember that the more items which measures a particular skill category, the more information there is about performance. When there are only a few items measuring a skill, there are fewer opportunities to assess the range of knowledge of either an individual or a group. Teacher-made evaluations are a necessary supplement to any standardized test evaluation.

(c) Students within these percentile ranges will function on a variety of reading levels, with varying skill proficiencies. Any grouping procedures or instructional approaches accordingly must be flexible and varied.

Language

STEP I

Using the Pupil Score Report, record the students' names on a chart according to their national percentile rank on language composite.

PERCENTILE RANK CHART

Below 4	4-10	11-22	23-39	40-59	60-76	77-88	89-95	96-Up

Remember that two students scoring at the same percentile rank may be quite different in their language proficiency, so it is necessary to generate information on student performance in specific language skills to properly plan for student learning.

TOTAL LANGUAGE

The total scores of students falling within percentile rank 22 or below tend to indicate no proficiency of skill development. If the student was unable to function well enough to establish an area of proficiency, it is suggested that basic activities should be planned for reteaching and reinforcing all basic language skills.

The scores of students falling within percentile ranks 23-39 would indicate a weakness in many basic language skills. Informal teacher-made tests, along with other data concerning the student should be reviewed to help establish the weak areas and instructional activities could be planned for reteaching and reinforcing some or all of these skills.

For students falling in percentile ranks 40-88, the strengths and weaknesses begin to form a pattern that can be used by the teacher in grouping for specific instruction. Instruction could be centered around reinforcing and extending the specified language skills of these students.

Students who fall within percentile ranks 89-99 show a mastery of the basic language skills at their current level (based upon performance on this test); therefore, instructional activities could be planned for enrichment and application of language.

Since all students in percentile ranks 40-88 will need assistance in some area, the following suggestions are given:

PUNCTUATION

Poor response to the test items on the punctuation sub-test would indicate a deficiency in rules for punctuation and the application of these rules in writing sentences, paragraphs, and letters. The teacher could examine the Item Response Report and test items to determine the extent of review and/or instruction needed and plan activities for reteaching and applying the rules for punctuation.

CAPITALIZATION

Poor performance on the capitalization sub-test would indicate a weakness in the rules for capitalization. The teacher needs to assess the extent of deficiency in capitalization (names, titles, cities, countries, quotations, initials, days, and months) and plan activities accordingly. Students could be grouped for instruction according to weaknesses indicated.

USAGE

Poor performance in the correct usage area would indicate a weakness in recognition and application of words used in conversation and paragraphs. Since correct usage is related to the individual being tested, e.g., environment, culture, etc., extensive instruction is needed in oral and written communication to develop appropriate dialogue. The teacher should assess the need and plan activities relating to verb tenses, contractions, pronouns, articles, subject and verb agreement and words used for comparison.

SPELLING

Poor performance in the spelling sub-test would indicate lack of skills in applying rules in spelling words (vowels, silent letters, plural form of words, etc.) and in following the sequential letter pattern rather than the phonetic form. The teacher should examine the Item Response Report to determine specific area(s) of weakness. Activities could be planned for review and/or instruction of the various rules and application of sounds and letters in writing words correctly.

STEP II

Using the percentile chart for total language, identify those students whose names appear on the chart in percentile ranks 40 to 88.

1. The higher the percentile ranks for the total area, the more meaningful scores for subtests and responses within specific categories become. It is important to utilize the Item Response Report for these students in order to identify specific categories in which particular students need instruction. A list of these skills, with space for the names of students who are deficient in these skills, will assist the teacher in planning instruction. A suggested form follows this section.

2. List the names of those students whose scores fall in the percentile range 40 to 88 on the language percentile chart made previously.
   Using the Student Item Response Report:

   (a) Examine the student's responses for the Language subtest Spelling. Check the skill areas as deficient according to the following:
   Errors in endings - 2 or more missed
   Reversing letters - 2 or more missed
   Omission of letters - 3 or more missed
   Unnecessary letters - 2 missed
   Incorrect vowel - 2 or more missed
   Incorrect consonant - 2 missed
   Spelling by sound alone - 2 or more missed
   Common mispronunciation - 2 missed
   No error - 2 or more missed

   (b) Examine the student's responses for the Language subtest Capitalization. Check the areas as deficient according to the following:
   Beginning of sentence - 2 or more missed
   Pronoun "I" - *
   Opening and Closing of Letter - 2 missed
   Proper nouns - 5 or more missed
   Unnecessary Capitalization of common noun - 2 missed
   No error - 2 or more missed

(c) Examine the student's response for the Punctuation subtest. Check the areas as deficient according to the following:
Quotation mark - *
Question mark - 2 or more missed
Colon - *
Apostrophe - 2 or more missed
Comma date - *
Comma series - 2 or more missed
Comma City and State - 2 missed
Comma closing of letter - *
Comma unnecessary - 2 or more missed
Period end of sentence - 2 or more missed
Period abbreviation or initial - 2 or more missed
Unnecessary (period) - *
No error - 2 or more missed

(d) Examine the student's response for the language usage subtest. Check the areas as deficient according to the following:
Subject-verb agreement - 2 or more missed
Substandard verb form - 3 or more missed
Noun and pronoun form - 2 or more missed
Pronoun case - 2 or more missed
Comparison - *
Use of negative forms - 2 or more missed
Diction - 2 missed
Redundancy - *
No error - 2 or more missed

* only one item assessed this area

3. Students falling within percentile ranks 23 to 88 will function on a variety of levels, with varying skill proficiencies. Any grouping procedures or instructional approaches accordingly must be flexible and varied.

Student's Name		
Errors in Ending	SPELLING	
Reversing Letters		
Omission of Letters		
Unnecessary Letters		
Incorrect Vowel		
Incorrect Consonant		
Spelling By Sound Alone		
Common Mispronunciation		
No Error		
Beginning of Sentence	CAPITALIZATION	
Pronoun "I"		
Opening and Closing of Letter		
Proper Nouns		
Unnecessary Capitalization of Common Noun		
No Error		
Quotation Mark	PUNCTUATION	
Question Mark		
Colon		
Apostrophe		
Comma Date		
Comma City & State		
Comma Closing of Letter		
Comma Unnecessary		
Period End of Sentence		
Period Abbreviation or Initial		
Period Unnecessary		
No Error		
Subject-Verb Agreement	USAGE	
Substandard Verb Form		
Noun and Pronoun Form		
Pronoun Case		
Comparisons		
Use of Negative Forms		
Diction		
Redundancy		
No Error		

Work Study Skills

STEP I

Work study skills involve the application of basic reading skills and often are assessed as one facet of the broad area of reading. A Total Reading score significantly higher than the total Work Study Skills score would indicate that the student is not able to apply his reading skills at the level of his capability in work study tasks. This typically reflects lack of practice and lack of familiarity with the various tools (maps, graphs, tables) and references which aid in problem solving. A student who has acquired some basic reading proficiency will benefit from instruction and practice in the use of reference, map and graph skills appropriate for his reading level.

Using the Pupil Score Report, record the students' names according to their total Work Study Skills percentile rank.

PERCENTILE CHART

Below 4	4-10	11-22	23-39	40-59	60-76	77-88	89-95	96-Up

Remember that two students scoring at the same percentile rank may be quite different in their work study skills proficiency, so it is necessary to generate information on student performance in specific work study skills to properly plan student learning.

STEP II

1. If the percentile rank for total work study skills is extremely low (22 or below), scores for the subtests and responses to items within specific categories indicate no proficiency of skill development. Activities should be planned for reteaching and reinforcing all basic work study skills.

2. Students whose scores fall within percentile ranks 89-99 probably have mastered the basic work study skills at their current developmental level, and instruction could be planned for enrichment and further application of work study skills.

3. Students in percentile rank 23-88 most likely will need assistance in some area. The higher the percentile rank for the total area, the more meaningful scores for subtests and responses within specific categories become. It is important to utilize the Item Response Report for these students in order to identify specific categories in which particular students need instruction. A list of these skills, with space for the names, will assist the teacher in planning instruction. A suggested form for such use follows this section. List the names of those students whose scores fall in the range 23 to 88 on the work study skills percentile chart made previously. Using the Student Item Response Report:

   (a) Examine the students' responses for the maps (W-1) subtest. Check the skill areas as deficient according to the following:
   Notes directions and uses scale to compute distances - 2 or more missed
   Use grid system to locate - 2 or more missed
   Recognize relative locations - 2 or more missed
   Read symbols - 2 or more missed
   Makes inferences from given information - 3 or more missed

   (b) Examine the students' responses for the graphs (W-2) subtest. Check the skill areas as deficient according to the following:
   Reads data - 3 or more missed
   Organize information from given data - 2 or more missed
   Interpret information from given data - 2 or more missed

(c) Examine the students' responses for the reference (W-3) subtest. Check the skill areas as deficient according to the following:
Alphabetize - 3 or more missed
Use of index - 3 or more missed
Use of table of contents - 2 or more missed
Use of dictionary: pronunciation - 2 or more missed
Use of dictionary: syllabication - 2 or more missed
Use of dictionary: spelling - only 1 item assessed
Use of dictionary: definitions - 2 or more missed
Use of dictionary: usage - only 1 item assessed
Use of encyclopedia - 2 or more missed
Use of reference materials - 2 or more missed

4. Students falling within percentile ranks 23-88 will function on a variety of levels, with varying skill proficiencies. Any grouping procedures or instructional approaches accordingly must be flexible and varied.

Remember that the more items which measure a particular skill category, the more information there is about performance. When there are only a few items measuring a skill, there are fewer opportunities to assess the range of knowledge of either an individual or a group. Teacher-made evaluations are a necessary supplement to any standardized test evaluation.

Names		
Note directions and uses Scale to compute distances	MAPS	
Uses grid systems to locate places		
Recognizes relative locations		
Reads Symbols		
Makes references from given information		
Reads data	GRAPHS	
Organizes information from given data		
Interpret information from given data		
ALPHABETIZE	REFERENCES	
USE OF INDEX		
USE OF TABLE OF CONTENTS		
Use of dictionary - A. Pronunciation		
B. Syllabication		
C. Spelling		
D. Definitions		
E. Usage		
Use of Encyclopedia		
Use of Reference Materials		

MATHEMATICS

On the Iowa Tests of Basic Skills two subtests assess mathematics skills, concepts and problem-solving. The concepts subtest assesses understanding of meaning, process and relationships in mathematics, whereas the problem-solving subtest assesses competence in problem-solving and application of number skills. The concepts subtest, to some extent, reflects an approach to teaching mathematics which stresses understanding, rather than a "tell-and-drill" approach. The problem-solving subtest attempts to provide realistic problems which are original and contemporary and which require more than recall skills to solve.

For purposes of evaluating student test performance the total mathematics scores for the students in a class can be utilized in order to more quickly note those students with deficiencies. The teacher will also want to check for discrepencies in performance on the two math subtests.

STEP I

Using the Pupil Score Report, record the students' names according to their total mathematics percentile rank.

MATH PERCENTILE CHART

Below 4	4-10	11-22	23-39	40-59	60-76	77-88	89-95	96-Up

Remember that two students scoring at the same percentile rank may be quite different in their mathematics proficiency, so it is necessary to obtain information about specific mathematics skills to properly plan student learning.

STEP II

1. If the percentile rank for total mathematics is extremely low (22 or below), scores for the subtests and responses to items within specific categories indicate no proficiency of skill development. Activities should be planned for reteaching and reinforcing all basic mathematics skills for these students.

2. Students whose scores fall above the eighty-eighth percentile probably have mastered basic skills at their current developmental level as assessed by this test. Enrichment activities should be planned for these students.

3. Students whose scores range between percentile ranks 23-88 will vary in levels of ability and skill proficiency. The Student Item Response Record can be utilized to assess their performance on the items in specific skill categories. As can be seen by examination of the response record, many of the skill categories are assessed by only one or two items. No assumptions about skill proficiency can be made based on so few items. The teacher will need to evaluate these skill areas further by means of classroom tests or other appropriate measures. The following criteria provide a rather gross evaluation which can be utilized to chart possible student deficiencies. A sample chart follows this section. Using the Student Item Response Report:

   (a) Examine the students' responses for Math Concepts (M-1). Check the skill areas as deficient according to the following:
   Sets, numbers, numeration - 4 or more missed
   Operations, their properties and number theory - 3 or more missed
   Relations and functions - 2 or more missed
   Geometry - only 3 items assessed
   Measurement - 2 or more missed
   Application - only 2 items assessed

   (b) Examine the students' responses for Math Problem-Solving (M-2). Check the skill areas as deficient according to the following:
   Operations, their properties and number theory - 6 or more missed
   Measurement - 3 or more missed
   Application - only 2 items assessed

   Within the main skill areas noted above are further breakdowns of functions. This classification is listed on the skill classification sheet in a previous section of this Guide. Noting student performance on these specific items may aid the teacher in planning instructional activities.

The sheet on page 68 breaks down the mathematics tests into the various skills. In analyzing the various responses for the skills assessed, it should be remembered that the larger the number of items, the more meaningful the information within specific categories become.

NAMES	MATH CONCEPTS						MATH PROBLEM-SOLVING		
	Sets, numbers, numeration	Operations, their properties and number theory	Relations and functions	Geometry	Measurement	Application	Operations, their properties and number theory	Measurement	Application

1. Sets, numbers, numeration
   - 1A. Sets and Set Operation

     25
   - 1B. Numbers

     6 14 18 22 27 30
   - 1C. Numeration (Place value)

     1 7 13 28

2. Operations, their properties and number theory
   - 2A. Addition and Subtraction

     8
   - 2B. Multiplication and Division

     11 16 21 26 31
   - 2C. Number Properties

     5 9
   - 2D. Combination of Operations

     34

3. Relations and Functions
   - 3C. Equality and Inequality

     12 20 23 24 25

4. Geometry
   - 4A. Polygons

     15 33
   - 4E. Points, Lines, Planes, Solids

     19

5. Measurement
   - 5A. Units

     2 3 4 29 39
   - 5C. Conversions

     17

7. Application

   10 32

2. Operations, their properties and number theory
   - 2A. Addition and Subtraction

     1 2 3 4 7 9 10 11 16 23
   - 2B. Multiplication and Division

     5 8 13 24
   - 2D. Combination of Operations

     6 12 17 19

5. Measurement
   - 5A. Units

     14 15 18 20 26 27
   - 5E. Computation involving measures

     25

7. Application

   21 22

WHAT MAY BE DONE TO IMPROVE STUDE 'TS' LEARNING?

The goal of the Georgia Statewide Testing Program is to improve instruction. The previous sections of the GUIDE have focused on using the reports and on assessing and interpreting the data contained in the reports. Hopefully, a diagnosis of every child's strengths and weaknesses has been made as a result of following the suggestions in these sections. It follows, then, that diagnosis leads to the formulation of prescriptions for learning.

The following section contains examples of activities designed to do something about improving a child's learning of basic skills. Admittedly, the activities are limited in number and scope. They also do not assume that every child will master a particular skill by successfully participating in the activities. They must be augmented by the judgment of the teacher and the variety of individual and group learning activities previously used by the teacher and found to help boys and girls acquire skills. Perhaps the creative approach would be to examine these activities, locate or develop others and then use all of them to either improve children's mastery of skills or to provide for their enrichment.

While this section is geared to the 4th grade ITBS, a similar grouping of skills and activities could be accomplished by teachers, and curriculum specialists for the 8th grade.

Each of the ITBS subtests is treated separately. Within the subtest the skills measured are labeled and referenced to the test questions in the 4th grade test. Examples of activities follow the skill labels. In some instances activities may be used to improve more than one skill with only minor modifications. Therefore, the user is referred to an activity presented previously.

In mathematics the concepts (M-1) and problem solving (M-2) subtests are treated together. This approach is used because understanding concepts and acquiring problem solving skills are closely tied.

V-VOCABULARY

Introduction

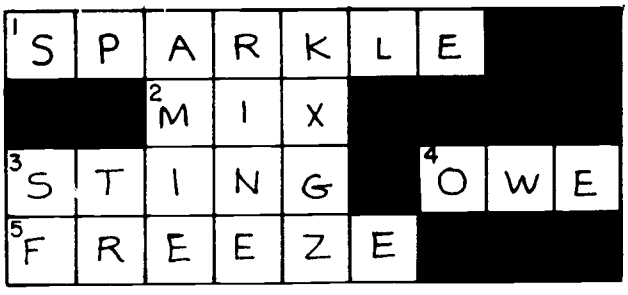
In the study of language the students need to know the terms of grammar. Students have probably been learning various terms in studying school subjects. However, how well do they remember them? Stress to students their future study of English will be much easier and more efficient if they bring to it a clear understanding of grammar terms.

Students should find that an understanding of the various parts of speech will be helpful to them in their effort to remove errors from their speech and writing.

1A—Verbs (Items: 2, 9, 12, 16, 22, 29, 32)

To teach students the concept of verbs duplicate crossword puzzle sheets for each class member. Vary the difficulty of the puzzle to suit the group. For example, easier puzzles would consist of answers to be written either across or down only, while more difficult puzzles would include both. Construct phrases for each clue and place below the puzzle.

Example:



1. Bright light
2. To stir around
3. Pain sharply
4. Due to be paid
5. Turn into ice

Instruct the students to find the numbered square and the clues which match. Draw an example puzzle on the board and work through the puzzle completely if necessary. Upon completion of the puzzle, ask the students to find the verbs in the puzzle and construct sentences using each verb.

This procedure can also be used for nouns (Items: 15, 37) and adjectives (Items: 4, 10, 24, 25, 27, 30, 33).

1B—Noun (Items: 15, 37) (See 1A—Verb)

1C—Adjective (Items: 4, 10, 24, 25, 27, 30, 33) (See 1A—Verb)

R-READING

Introduction

One of the main phases of the basic reading program is that of functional reading in which all students learn to put reading to work. A basic reading program can lay the foundation for useful reading skills. However, in the development of study skills the purpose of the pupil, rather than the nature of the material, should have first emphasis. Not until this purpose is clear is the student able to turn to suitable materials or apply proper reading techniques.

The suggested activities which follow can be utilized for meeting the needs of the least proficient reader, provide practice for the average reader and give additional experiences to the gifted student or superior reader. The teacher ultimately has a two-fold function of helping students understand the purposes of reading and at the same time selecting and adjusting the materials and methods to make it possible for them to fulfill the purpose.

The suggested activities can be closely related to other projects such as, writing a play or a puppet show, painting murals, compiling a book of readings, etc.

1—Main Idea (Items: 6, 13, 31, 44)

This activity is designed to promote the ability to read for the main idea by (1) selecting a title for the story, (2) identifying the sentences that express the main idea in parts of a story, or in a paragraph, (3) locating the main parts of a story, and (4) stating the main idea of a story simply and clearly.

Duplicate copies of a paragraph for each student. Cut each sentence into long strips and enclose in an envelope (student copy). Maintain a copy which illustrates the original paragraph and the required answers (desk copy).

Instruct the students that the contents of the envelope should be reconstructed into a story. Request the sentence(s) that identify the main idea be underlined or marked. The students should also restate the main idea on the back of the envelope. In addition, ask the student to indicate the best name for this story and write it on the face of the envelope. Students can check their work with the desk copy. As a follow-up activity, students can be asked to write a short paragraph and use the same procedure to work with another student or a small group of students.

Variation:

Use paragraphs written by students in the previous activity and construct pairs of sentences relating to the paragraph. One sentence should be the main idea and one states a detail of the story. Distribute copies of the paragraph or read the paragraph to the students. Write the pairs of sentences on the board and ask the students to decide which of the sentences gives a main idea of the story and which one gives only a detail.

After the students have chosen the sentences which they think give the main idea of the story, have them rearrange these sentences to show which comes first, second, third, etc. in the story. Verify their arrangement by reading the sentences to see if they do tell the story.

2—Supporting Detail

2A—Explicit (Items: 2, 14, 19, 25, 27, 29, 30, 33, 35, 36, 41, 42)

To practice relating story details to main ideas, distribute copies of a short story to the students. Divide the class into groups and assign the following tasks:

Task #1:

Read the story and prepare a list of questions about details which are answered in the story. Leave sufficient space for students to provide the answers. On a separate sheet write the first and last word of each sentence which answers the questions and keep as an answer key. Prepare instructions for other students to complete this task.

Task #2:

Read the story and write subtitles and number the subtitles for each paragraph in the story. Write a list of story details and prepare a quiz which requires the student to match the subtitles to the story details. Instruct the groups to exchange tasks and complete as instructed by the task.

After the tasks are completed have a member of each group give the reasons why their group related the facts as they did.

Variation:

Have a group of students paint a mural of a topic of interest. Have other groups or individuals model objects from clay or papier mâché, write poems, write a song which related to the topic study.

After the enrichment activity has been completed have each student write descriptive phrases relating to one or more of the projects. For example, one descriptive phrase might be "warm, bright skies." After the students have completed lists of descriptive phrases prepare a story and questions using the phrases and distribute as a follow-up activity.

The questions can be constructed to elicit explicit and inferred details of the story.

This procedure can also be utilized to provide practice in identifying Inferred Details (Items: 24, 34, 38, 45, 47, 50, 55, 58, 59, 60, 61, 62, 65, 68).

2—Supporting Detail

2B—Inferred (Items: 24, 34, 38, 45, 47, 50, 55, 58, 59, 60, 61, 62, 65, 68) (See 2A—Explicit)

3—Application (Items: 11, 16, 26, 39, 40, 43, 48, 51, 53, 57, 66)

The following activity is designed to assist the student and teacher determine whether full value is derived from information presented in terms of the degree of comprehension, interpretation, application and evaluation.

Prepare a tape recording of a discussion on a topic of interest or one that is related to previous class work. Prepare questions that require the students to:

1) Select suitable sources of information
2) Distinguish between relevant and irrelevant information
3) Recognize the difference between fact and opinion
4) Judge the validity and adequacy of information

Arrange the questions in a sequential order in relation to the order of presentation on tape. Initially, present only portions of the recording and stop at predetermined points. Introduce the questions related to that portion of the recording. The questions should be constructed to help the students to recognize that they must have additional information in order to provide the correct answers. Play the recording through each sequence followed by the sets of questions. Encourage class discussion. Replay the entire recording without pauses. Distribute an exercise which tests the student's ability in the four areas previously mentioned. The teacher may choose to distribute a copy of the taped discussion for reference material.

4—Evaluation (Items: 1, 10, 22, 28, 32, 37, 46, 54, 56, 63, 64) (See 3—Application)

LANGUAGE

L-1 SPELLING

Introduction

Two common causes of spelling mistakes are the omission of a syllable and the addition of an extra syllable. The student who spells "probably" as "probaby" has made the first kind of error. If a student spells "lightning" as "lightening", he has made the second kind. Errors such as these are errors in pronunciation which, in turn, are results of not knowing the exact syllables in the word. Emphasis upon dividing a word into its pronounceable parts will help the student to pronounce and to spell the word correctly.

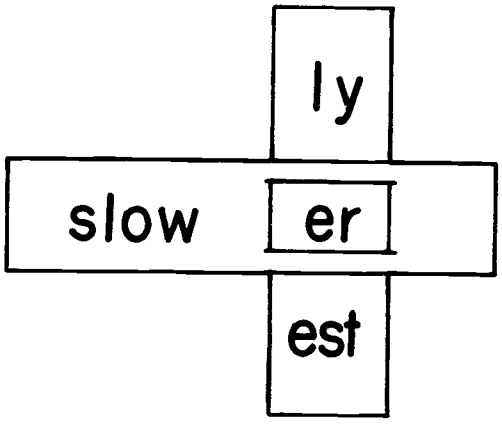
1—Errors in Endings (Items: 27, 29, 38)

Teaching the root part of a word provides a means to illustrate the usage of correct endings of a word.

Cut pairs of cards into strips. Write one root word on one strip and cut two horizontal slits following the word. On the second strip, write endings which could be added to the root word.

Instruct the student to insert the second strip through the slits in the first strip.

Example:



This procedure may be varied by using a variety of root words on one strip and one ending on the second strip. This variation provides practice with most common error in endings.

Variation:

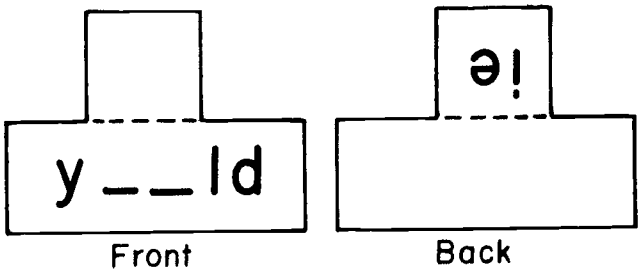
To apply the ability to add the endings ly, er, est, draw a baseball diamond on the board. Write one ending at each base. Divide the class into two teams. A student who can write words with the corresponding endings at each base gets a home run. A student may choose to only go to one base in which case another team member can make an attempt to help that student move to another base.

2—Reversing Letters (Items: 21, 26, 30, 37)

This activity provides the student practice with words which contain letters that are commonly reversed.

Prepare flash cards with words that include letters commonly reversed and substitute blanks for the letters. On the back of the flash card attach a strip with the missing letters which is to be used as a flipcard. When the card is folded as shown the missing letters will be properly positioned.

Example:



Variation:

Clip and mount pictures for a game. Write a Key word on the back side of the picture. Choose a student to present the picture game called "quick peek". Allow the class to work in pairs. The picture is to be shown first and then the word is to be shown quickly. The word should relate to the picture. For example, show a picture of a yield road sign and write the flash word "yield". The students are required to write the word they saw correctly.

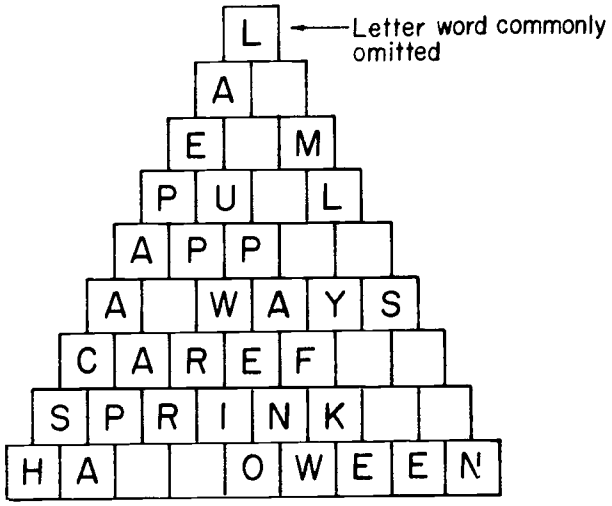
3—Omission of Letters (Items: 4, 5, 7, 9, 17, 18, 20, 24, 28, 33, 34)

This puzzle is designed to help students from omitting letters and to avoid using unnecessary letters.

Construct a pyramid puzzle and duplicate for each student using a letter word commonly omitted in the top square. Provide the student with some additional letters as clues.

The student must use the letter word in the top square and complete the missing letters. In some instances, it may require the letter word in the top square, plus one additional letter.

Example:



Variations of this pyramid can be applied to the same concept. For example, the puzzle may only include the one letter word in the top square and the student would be required to construct words utilizing the letter word without letter words as clues.

As previously mentioned, this pyramid puzzle can also be used to teach unnecessary usage of letters (Items: 13, 35).

4—Unnecessary Letters (Items: 13, 35) (See 2—Reversing Letters)

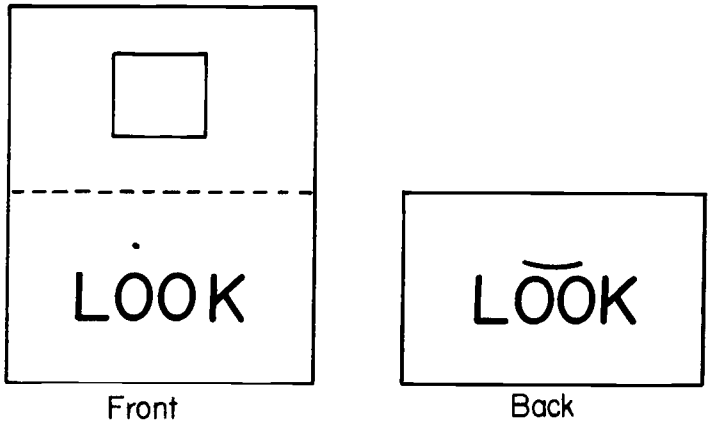
5—Incorrect Vowel (Items: 1, 12, 19, 32, 36)

Vowels have many different sounds. For instance, long a has the sound of a in the word ale. Long e is pronounced as in the word eve, etc.

Students can learn the correct pronunciation of the vowel sounds by the use of flash cards with a flip over window. Divide students in triads or small groups and encourage students to participate.

Student leader begins by holding flash card with flip top window covering all the letters except the vowel. Students are to pronounce the sound and write as many words that contain the same sound. Student leader is to reveal the word and tally points for each correct word. The back side of the card may demonstrate the proper pronunciation of the vowel.

Example:



Variation:

Prepare a deck of cards in various colors. Split the deck in half and write words on one side. Write corresponding sounds of each word on the remaining deck. Instruct the students to break up in groups and play cards. The object of game is to attempt to draw cards until each player has a card with one word and two cards with the matching sound. A player can discard all remaining cards to win.

This activity can also be utilized to learn the pronunciation of consonants (Items: 8, 23). Consonants do not have so many different sounds as vowels do, their sounds are sufficiently indicated simply by the consonant itself; thus k is always pronounced the same, n is always pronounced the same, etc. However, there are consonant sounds which must be shown by a system of respelling. For instance, mother as mŭ th ′er.

6—Incorrect Consonants (Items: 8, 23) (See 5—Incorrect Vowel)

7—Spelling by Sound Alone (Items: 6, 10, 14, 15)

To adapt this activity for use as a group game divide the class into two or more teams. Designate work areas for each team. Tape record a list of sounds that have been studied by the class. The task for each team is to list columns of 4, 5 and 6—letter words on an easel pad which include the recorded sounds.

Example:

List of sounds

an	ap	at
en	ep	et
in	ip	it
on	op	ot
un	up	ut

The team which first completes each column is the winner.

This activity can also be adapted to sounds that have not been studied.

8—Common Mispronunciation (Items: 3, 22)

Error in pronunciation may be of three kinds:

1) Accenting the wrong syllable—prefer'able for pref'erable
2) Mispronouncing a letter—gesture for jesture
3) Enunciating incorrectly. Common errors in enunciation are the result of either carelessness or a wrong idea of the spelling of a word. They may result from the omission of letters or syllables—probaly for probably. They may result from the addition of sounds not in the word—athalete for athlete.

Prepare an overhead transparency which pre ents a list of syllables in a scrambled order and instruct the students to construct words using the various syllables. Have them write the words on a sheet of paper leaving space between each syllable.

Prepare an additional transparency which illustrates various combinations of the syllables with which the student can check his work.

Example:

Transparency of Syllables:

1. dis	14. less
2. ti	15. er
3. care	16. con
4. ties	17. di
5. turb	18. ter
6. feath	19. tion
7. car	20. ag
8. de	21. er
9. er	22. con
10. sid	23. par
11. it	24. beau
12. ful	25. man
13. pos	26. pen

Transparency of Words:

1. car pen ter
2. care less
3. dis turb
4. par ties
5. feath er
6. man ag er
7. con sid er
8. de pos it
9. beau ti ful
10. con di tion

L-2 CAPITALIZATION

Introduction

The uses of capital letters serve many purposes. Many uses of capital letters are observed for no other reason than that are established by custom.

In the use of capital letters variations and inconsistencies are common.

A student should follow the conventional usage expected of him just as he follows the conventions of correct spelling, grammatical usage, and punctuation.

The following activities can be adapted to all the subheadings in this skill area. These activities can be utilized to instruct the use of capital letters according to standard usage.

Activity #1:

Select a newspaper article or a letter to the editor and white out a varying amount of capital letters. The same material or alternative material should be duplicated for each student. Alternative material can be distributed, whereby, groups of five have the same material. Instruct the students to initially work independently. Upon completion of their work they can compare their corrections with their group. Encourage a discussion in the group work.

Furnish each group with an original copy of the article.

Activity #2:

Read a poem slowly and have the students write the passages. Draw their attention to titles, names, places etc. by pronouncing with emphasis. Divide the class into groups and instruct the groups to compare their work. The groups are to present their usage of capital letters to the class.

Activity #3:

Have a group of students write a letter to a local businessman requesting that a poster advertising a school event be displayed in his window. Have some students draw a poster for purposes of advertisement.

1—Beginning of Sentence (Items: 1, 15, 21)

If a student fails to use a capital letter at the beginning of a sentence, the error is almost invariably due to failure to recognize the end of one sentence and the beginning of the next. (See Introduction, Activities #1-3)

2—Pronoun "I" (Item: 5)

The personal pronoun "I" is always capitalized. (See Introduction, Activities #1-3)

3—Opening and Closing of Letter (Items: 20, 22)

Although the salutation, or greeting varies with the nature of the inside address, the first word, title and name are always capitalized.

However, only the first word of the complimentary close, or leave-taking is capitalized. (See Introduction, Activities #1-3)

4—Proper Nouns (Items: 2, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16, 18, 19, 24, 25, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38)

Since proper nouns name people, places, and things they can be distinguished readily within a sentence and are capitalized. (See Introduction, Activities #1-3)

5—Unnecessary Capitalization of Common Noun (Items: 27, 39)

Since common nouns do not name people, places and things they are never capitalized. (See Introduction, Activities #1-3)

L-3 PUNCTUATION

Introduction

Punctuation marks are used to make the meaning of a sentence clear to the reader. They indicate not only when a pause should come but also the extent of the pause. For instance, the comma denotes a slight hesitation while the period stands for a longer hesitation. Voice inflections are conveyed by the use of the question mark and the exclamation point. Quotation marks and apostrophes serve to clarify writing and are used by writers according to rules based upon custom.

The student should be instructed to use punctuation marks when: (1) meaning demands it, or (2) conventional usage requires it. Since punctuation exercises are at best an artificial activity, the following procedures are designed to give students practice, as well as illustrate how it carrys over into their own writing.

The activities can be adapted to include one or all subheadings in this skill area.

Activity #1:

Create or cut out newspaper articles of interest to the students which contain 50 words and remove all punctuation marks. Instruct the students that they are to pretend they are newspaper editors and must publish this article in 25 words or less.

They must give all the basic information and points of interest in their rewrite.

This activity can be followed up by having all the final rewrites assimilated into a newspaper format.

Activity #2:

Prepare a series of codes or messages. Distribute different codes to each group. Instruct the students to translate the message and punctuate when necessary.

Example:

Code #1:

Marine Operator this is Yacht Blue Water WZ 1234 143 degrees true 18 miles from Jekyll Island Struck submerged object taking on water fast engine disabled This is Yacht Blue Water WZ 1234 Over

Code #2:

A ·−	J ·−−−	S ···
B −···	K −·−	T −
C −·−·	L ·−··	U ··−
D −··	M −−	V ···−
E ·	N −·	W ·−−
F ··−·	O −−−	X −··−
G −−·	P ·−−·	Y −·−−
H ····	Q −−·−	Z −−··
I ··	R ·−·	

···· · ·−·· ·−−· ·−− · ·− ·−· · ··− −· −·· ·
·−· ·− − − ·− −·−· −·− −−− ·−−· · ·−· ·−
− −−− ·−· −·· −−− −·−− −−− ··− ·−· · −
−·· −− ·

Code #3:

sith si ryvo irpncpila I dwulo lelk ot cnortaguaetl lal utsdtnes rfo hte useccssufl nacrivla No nomyad jnaaury 1 9177 ew liwl vahe hte iref hcief refi paeanit nda rifenem sivitgin ruo chsloo htey wlil rriave ta 009 m a

Messages:

Code #1:

"Marine Operator this is Yacht Blue Water, WZ 1234, 143 degrees true, 18 miles from Jekyll Island. Struck submerged object, taking on water fast, engine disabled. This is Yacht Blue Water, WZ 1234. Over."

Code #2:

"Help! We are under attack. Operator, do you read me?"

Code #3:

This is your principal. I would like to congratulate all students for the successful carnival. On Monday, January 1, 1977 we will have the Fire Chief, Fire Captain and firemen visiting our school. They will arrive at 9:00 a. m.

1—Quotation Mark (Item: 38) (See Introduction, Activities #1 and #2)

2—Question Mark (Items: 10, 26, 33) (See Introduction, Activities #1 and #2)

3—Colon (Item: 5) (See Introduction, Activities #1 and #2)

4—Apostrophe (Items: 4, 13, 24, 29, 35) (See Introduction, Activities #1 and #2)

5—Comma (Items: 7, 14, 21, 30, 28, 36, 22, 15, 31, 37, 39)

5A—Date (Item: 7)

5B—Series (Items: 14, 21, 30)

5C—City and State (Items: 28, 36)

5D—Closing of Letter (Item: 22)

5E—Unnecessary (Items: 15, 31, 37, 39)

(See Introduction, Activities #1 and #2)

6—Period (Items: 2, 9, 12, 23, 8, 16, 17, 19, 27, 34, 20)

6A—End of Sentence (Items: 2, 9, 12, 23)

6B—Abbreviation or Initial (Items: 1, 6, 8, 16, 17, 19, 27, 34)

6C—Unnecessary (Item: 20)

(See Introduction, Activities #1 and #2)

L-4 USAGE

Introduction

Each of us speaks several kinds of English; the kind we speak depends upon the situation. The choice of language is based on what is appropriate to an occasion.

The rules of grammar and usage are intended as a description of how language is actually used. The usage comes first; the description of it follows. The rules are not to be considered more important than the language. Therefore, rules are used as guides for people whc are learning to speak and write the English language acceptable to any group in which they find themselves.

1—Subject-Verb Agreement (Items: 6, 15, 26)

Although students may understand clearly what is meant by agreement, it is important to emphasize they must be careful not to be misled by certain constructions which tend to cause disagreement of subject and verb. For example, some words, such as each, either, neither, one, etc. when used as subjects are frequently followed by a phrase. The student should be aware that a phrase coming between the subject and verb does not affect the agreement of the verb with the subject.

Other rules point out that some words may be singular or plural depending upon whether they refer to a quantity of something (singular) or to a number of things (plural).

An additional emphasis should be upon the development of agreement form in the student's speech. Oral drills stressing the correct form may prove useful to the student since ear training is important in correcting usage.

Activity #1

Introduce the class to the Change and Agree Puzzle. Write an example on the board if necessary.

Stress there are no real clues or methods used to trick the student and there may be more than one answer. Students must understand how to use the clues provided. The object of this word game is to cross out the word given (underlined) and substitute a new word which agrees in number with its subject or verb. The puzzle can call for a word(s) to be furnished by the student which agree in number.

Example:

1. Some of the fruit _____ stolen. (Change the quantity of fruit, add a verb)

   Solution:
   All
   ~~Some~~ of the fruit were stolen.

   Rule: The words some, all, and most may be singular or plural, depending upon whether they refer to a quantity of something (singular) or to a number of things (plural).

2. A truck and a _____ _____ in the accident. (Add a subject, add a verb)

   Solution:
   A truck and a car were in the accident.

   Rule: Most compound subjects joined by and are plural and take a plural verb.

This puzzle can be used to cover each rule, as well as the exceptions to the rules.

2—Substandard Verb Form (Items: 1, 5, 10, 11, 12, 18, 20, 23, 29, 32)

Certain expressions are considered illiterate by all educated persons. These expressions are never appropriate and seem to be avoided. To be specific, he don't, she come, he done it, she seen it, she brung it, etc. are such expressions. To help students learn to use verbs according to standard usage design new exercises using the Change and Agree Puzzle (see 1—Subject-Verb Agreement). The puzzle can be used with regular and irregular verb forms. Since irregular verbs form their past and past participle forms in various ways: by changing the vowel in the verb; by changing consonants; or by making no change at all, the student must know the principal parts of each irregular verb.

Example:

1. He _____ more than I did.
   a. Add one: drink
      drove
      swim
   b. Change to present tense and add one: swims
      drank
      swam

   Solution:

   1a. He drove more than I did.
   1b. He swims more than I do.

3—Noun and Pronoun Form (Items: 17, 25, 30)

Tell the students they will play the State Again Game. Group students in teams and have them number their paper from 1 to 25. Instruct the students to write pronouns in their proper case to fill in the blank in the sentences read by a student or teacher. Emphasize they should use as many different pronouns as they can. However, they cannot use the pronoun you.

Make an oral game of this exercise by having individual teams repeat aloud a new sentence using the same verb forms.

Encourage the teams to indicate when they are prepared to state their sentence using the pronoun and to read aloud to the class. Write the team scores on the board as reinforcement. This game can also be used to teach Pronoun Case (Items: 3, 8, 28).

4—Pronoun Case (Items: 3, 8, 28) (See 3—Noun and Pronoun Form)

5—Comparisons (Item: 14)

The following Parallel Square is designed to assist students to change the form of adjectives and adverbs when they are used to compare the qualities of the words they modify. The three degrees of comparison are: positive, comparative and superlative.

Duplicate copies of the puzzle for each student. Students should be instructed to write their answer in the numbered box that matches the sentence and word following the sentence read aloud.

Example:

	1 T	A	L	L	E	S	T
2 P	R	E	T	T	I	E	R
	3 L	O	N	G	E	R	
4 M	O	S	T	5 L	E	S	S
6 H	A	P	P	I	E	S	T
		7 B	E	T	T	E	R

Read Aloud:

1. This is the Blank tree. (Tall)
2. She is a Blank girl than I. (Pretty)
3. Although both Mary and Susan have long hair, Mary's hair is Blank. (Long)
4. Of the two teams, the Eagles were Blank eager this year. (Most)
5. Jim was Blank excited than I. (Less)
6. He is the Blank baby I know. (Happy)
7. Our class did Blank last week. (Good)

Variations of this square can be applied to the regular methods of comparisons, as well as, to the irregular comparison.

6—Use of Negative Forms (Items: 7, 21, 27)

A double negative is a construction in which two negative words are used where one is sufficient. Stress that most double negatives are poor English, in both colloquial and standard usage.

Have the students read the paragraph silently and ask for a description of what took place. Following the class discussion ask pairs of students to recreate the situation using different sentences.

Example:

This morning my father could scarcely avoid hitting a truck. He hadn't but a few feet to stop. The policeman asked, "Haven't you no brakes?" My father answered, "I didn't have no time to use my brakes." I couldn't help but agree with him. The policeman said, "You can hardly tell your car was in an accident." He didn't give us no ticket. He left us go.

This exercise can also be applied to Diction (Items: 4, 22)

7—Diction (Items: 4, 22) (See 6—Use of Negative Forms)

8—Redundacy (Item: 16)

This exercise is a method of demonstrating redundacy or "repetition". Explain to the students that their thoughts lose impact if they repeat the same thought or description. Distribute lists of scrambled sentences to each student. Instruct the students to unscramble the words until the sentence makes sense. Point out that one word or more than one word may not be necessary.

Example:

1. to party was Bill going the he.

   Bill was going to the party.
   OR
   He was going to the party.

2. themselves the caught without thief anyone from help police the by

   The police caught the thief by themselves.
   OR
   The police caught the thief without help from anyone.

WORK-STUDY SKILLS

W-1 MAPS

Introduction

Prepare students by emphasizing why maps are important. For instances, maps help us to feel and understand what the world is like. Maps give us the distances between places and some tell us the climate, population and products of a country. Maps classify information and give us impressions of size, shape and location.

In summary, maps tell us a story through color, words and symbols.

1—Note Directions and Use Scale to Compute Distances (Items: 1, 5, 12, 16, 22, 29)

Draw a picture map of the classroom and duplicate for each student. Use colors, words and symbols for the various objects in the room. Label the seating arrangements, desks, tables, bookcases, windows, doors, blackboards, bulletin boards, etc.

Construct a game, such as, "Which Direction?" Pass out cards to the students with direction questions. For example, "What direction is the teacher's desk from the bulletin board?" "Which direction will you go to get to the door?"

Variation:

The same game can be used with a school-map, town or street-map, etc.

To introduce the Use of Grid System to locate places (Items: 11, 15) have the students indicate where streets interchange or two-way lanes become one-way on the map. If a rural area is the situation, request the students to indicate a road divides or becomes a new road.

As an additional activity, have students draw a picture map of place near their home and label buildings, roads, streets, stoplights, road crossings, etc. and any unusual site or location they have observed such as a construction site. Instruct the students to use the "Which Direction" procedure and make up direction questions for the class.

2—Use Grid System to Locate Places (Items: 11, 15) (See 1—Note Directions and Use)

3—Recognize Relative Locations (Items: 7, 8, 14, 19, 23, 28)

Instruct students to draw a picture road or street-map (See 1—Note Directions and Use). Ask the students to use their imaginations and write a short paragraph with relevant questions about the map.

For example:

Student draws a map of his neighborhood (with labels, symbols) and may write the following paragraph and questions:

I live at Cross Creek Village. Most of my friends walk from Cross Creek to school. On the way home we sometimes stop at the drug store for some snacks.

Questions:

1. I live on Wall Avenue. Which one of my friends lives the closest?
2. The new bank will be two blocks north of the grocery store. What street will the bank be located?
3. Where would you see a railroad sign?
4. How far is the drug store from my house?
5. What direction do we walk to school?

Variation:

Have students draw a map which depicts or illustrates more specific detail, such as, a road map. The types of road maps may include super highways, state roads, unimproved roads, trails, railroads, waterways.

In addition, have the student write lists of words and symbols that might be part of his road map. For example, if the student draws a waterway, he should include symbols for bridges, inlets, lighthouses, etc.

This activity may be extended to use the mileage scale to find distances.

Select maps prepared by students and design questions that provide students the opportunity to utilize the symbols and words and make inferences in relation to given information. This activity lends itself to developing the following skills:

1) Note Directions (Items: 1, 5, 12, 16, 22, 24)
2) Use of Grid System To Locate Places (Items: 11, 15)
3) Recognize Relative Locations (Items: 7, 8, 14, 19, 23, 28)
4) Read Symbols (Items: 2, 3, 4, 25, 26, 32)
5) Make Inferences from Given Information (Items: 17, 18, 20, 21, 24, 27, 30, 31)

4—Read Symbols (Items: 2, 3, 4, 25, 26, 32) (See 3—Recognize Relative Locations)

5—Make Inferences from Given Information (Items: 6, 9, 10, 13, 17, 18, 20, 21, 24, 27, 30, 31) (See 3—Recognize Relative Locations)

W-2 GRAPHS

Introduction

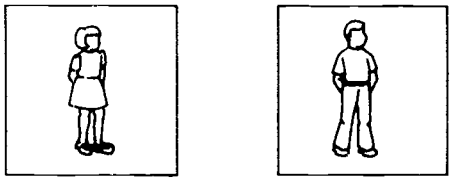
Graphs communicate masses of figures and data in a simplified manner. Graphs assist students to see patterns and relationships which may have passed unnoticed. When students collect and sort data comparisons arise and relationships are formed. Collection of data can increase the student's desire to look at situations in greater depth.

As the students see these relationships, concepts and fundamental principles will become clearer.

1—Read Data (Items: 1, 5, 6, 7, 8, 9, 13, 15, 17, 19, 21)

As an introduction to this skill area, direct the student's interest to a specific task that can be developed into a pictorial representation. A pictorial may take the form of a graph, chart, table, circle, etc. Inform the students that they will do a survey. Request the students to write their name on a piece of paper and write the number of persons in their family. Collect the slips of paper and list the information on the board. Explain to the students that they are to come to the desk and pick up pieces of cardboard squares for each person in the family. Each square will have a picture of a male or female.

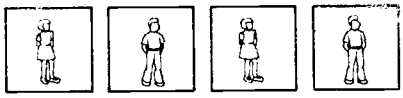
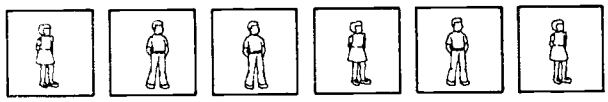
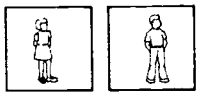
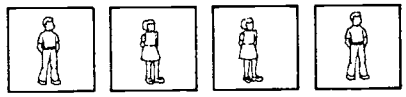
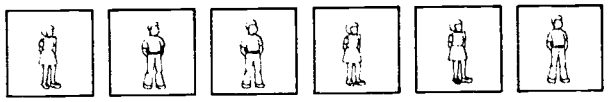
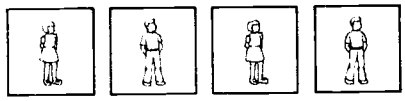
Example:



Introduce the idea that the class now has information which can be arranged to make a picture (pictorial representation). Discuss and request suggestions of how the squares can be arranged in a picture.

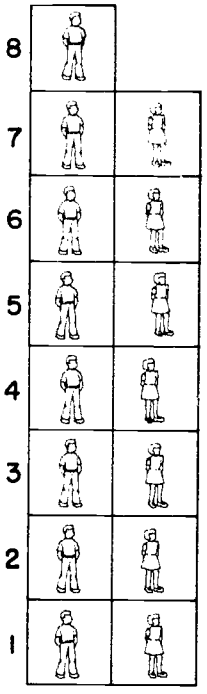
Ask each child how many of their family are male or female. Draw a series of squares on the board to correspond to the list of family members provided by students.

Example:

Information From Slips of Paper		Arrangement of Picture Squares
Janet	4	
Mary	6	
Susan	2	
Bill	3	
John	5	
Dot	4	
Thomas	6	
Lynn	4	

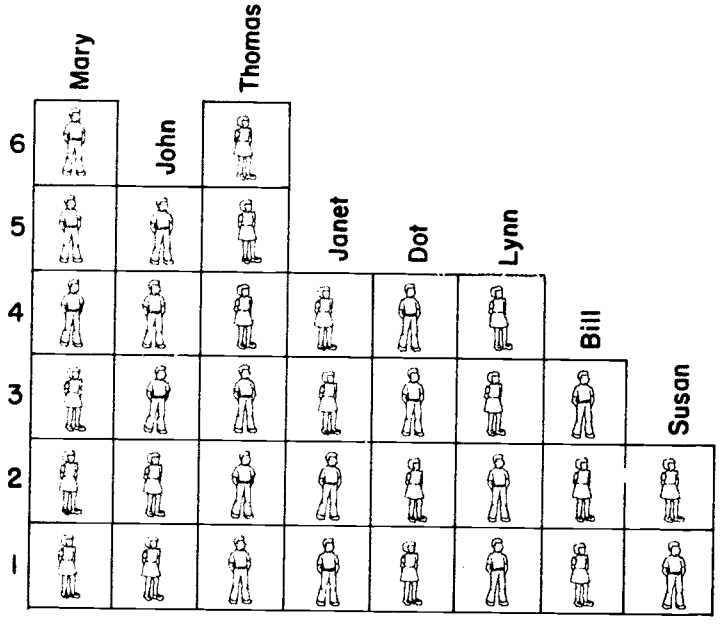
Indicate that this is one kind of a picture. Explore through class discussion or in small groups how this information can be reclassified. For example, a picture showing the total number of males and females for the class can be constructed.

Example:



Small groups of students can be encouraged to select other methods of arranging the squares.

Example:



Graphs communicate and the communication must be interpreted. Therefore, the student should provide a short comment sheet to accompany the graph. This provides the class an opportunity to view the comments in conjunction with the chart or graph. When comments are being made it is good to allow the use of "is greater than," "is less than," "is the same as," etc. The pictorial representation gives information and may be used to encourage further discovery of additional information.

2—Organize Information From Given Data (Items: 2, 3, 4, 14, 16, 18, 20, 22, 23)

Computational practice can be drawn out from discussions of pictorial representations. The teacher, and more important the students, can set "problems" based on the pictorial representation (see 1—Read Data). For example, a group of students may set problems for the class as follows:

1. How many more persons were male than female?
2. If every family was invited to visit our class, how many people including the students would be present?
3. How many more family members do boys in our class have than do girls?
4. How many students have more than twice as many people in the family as Susan?
5. How many family members do John and Thomas have altogether?

In this activity students should be encouraged to:

1) Define their own categories of classifying the data
2) Select their own way of recording the findings

3—Interpret Information from Given Data (Items: 10, 11, 12, 24) (See 1—Read Data)

Prepare questions based on the family survey that provide students the opportunity to interpret information from the data gathered. Examples of questions are as follows: (See 1—Read Data)

1. Which of these families is most likely to take two cars to go out?
2. In what families are there most likely to be less than two children?

Variation of the questions will depend upon the categories of classification selected.

W-3 REFERENCES

Introduction

Familiarity with the kinds of reference books will increase the student's efficiency in looking up information. The activities which follow will not be an adequate substitute for actualy having the books available to students and working with them.

It is suggested that one member of the class might be assigned to each of the standard reference books. Have the student find out whether the assigned book is in the school or public library. Request the student to skim the preface and other useful sections and report to the class any additional information that is pertinent. Whenever it is possible, have one volume of a many-volumed work available for the class to examine.

Descriptions of the books should be provided even though the particular reference may not be accessible. Some of the reference books might include:

1) Special Dictionaries (Roget's Thesaurus, Webster's Dictionary of Synonyms)
2) Encyclopedias (Compton's Pictured Encyclopedia, World Book Encyclopedia)
3) Biographical Reference Books—(Biography Index, Webster's Biography Dictionary, Who's Who and Who's Who in America, Books about Authors)
4) Yearbooks—(World Almanac and Book of Facts, Information Please Almanac)
5) Atlases—(Encyclopedia Britannica Atlas)
6) Literature Reference Books—(Bartlett's Familiar Quotations, Granger's Index to Poetry and Recitations)
7) Other Reference Books—(Book Review Digest, Encyclopedia of the Social Sciences)

Some of the reference books may only be located in high school libraries. Since these books vary in their function, the teacher may still wish the students to be acquainted with the particular purpose served by each.

1—Alphabetize (Items: 1-12)

The activities in this section are designed to develop skills to use reference materials with ease. Reference materials may include the use of dictionary, telephone directory, newspaper, catalogs, magazines and materials prepared in the classroom.

A committee or pairs of students can be assigned the responsibility for preparing a telephone directory for the classroom. The local telephone directory can be used as a reference source. It is important that the students be made aware of the accuracy needed to alphabetize, spell correctly, and copy phone numbers of their classmates.

A reference book is another exercise that can be prepared by students for the classroom. This book can include names of books, maps, audio-visual materials, and other resources that are available in the classroom.

A variation of this exercise can be a reference box which includes the same resources except that the information is in card catalog form.

2—Use of Index (Items: 13-22)

Students can collect short stories, poems, letters, school news articles, reports, magazine articles, etc. and mount the materials for a loose-leaf notebook. Duplicate the collected materials for each group. Each group can prepare a list of sets of words that pertain to the duplicated materials. In addition, each set of words should be grouped into categories. This activity provides students an opportunity to determine what categories must be included in the notebook index (Headings and Sub-headings). The use of small groups provides students with a concrete experience in expressing their skills and provide practice.

One group should then be responsible to finalize the index and compile a table of contents. Continuous updating of the notebook gives students opportunities to use the index and table of contents in a meaningful situation.

Variation:

Collect magazines of interest and cut out index or table of contents. Have students make up a new table of contents or an index. Cut out the index of the local newspaper and ask a group of students to make a new index.

3—Use of Table of Contents (Items: 23-28) (See 2—Use of Index)

4—Uses of Dictionary (Items: 38-46)

The use of a dictionary requires the student to recognize key words for pronunciation and to locate specific information.

Cut round arm holes on each side of a cardboard box. Instruct students to write new and unusual words on 3 × 5 cards and drop into box. Ask them to include a key to its pronunciation, its part of speech, a definition, and a sentence containing that word. Each day have several students pull a card and present it to the class as follows:

Student Asks:

1. Pronounce the word.
2. Request the number of syllables.
3. Write the word in syllable form on the board.
4. Read the sentence.
5. Request the definition.
6. Read the definition.
7. Request the part of speech.

A variation of this exercise is to have each student present it to the class as follows:

1. Read the sentence without the word (student says the word "Blank").
2. Request the word.
3. Read the definition.
4. Request the word.
5. Pronounce the word.
6. Request the number of syllables.
7. Write the word in syllable form on the board.
8. Write the sentence on the board.
9. Request the part of speech.
10. Request another sentence.

5—Use of Encyclopedia (Items: 47-52)

Use pictures cut from magazines, headlines from newspapers, poems, famous speeches, maps, posters of foreign countries, songs, T.V. schedule, music, etc.

Insert the stimulus material in plastic covers for repeated use. Use magic markers to write key words on cover.

Ask students to make a list of sources which would provide additional information to the topic of the stimulus material.

Example:

Stimulus material is the map of Georgia. The key word on the cover is "Agriculture in Georgia". The student's task is to list reference sources where additional information can be obtained, such as, encyclopedia, Georgia History Book, etc.

This procedure can be used to develop more specific details such as, locations of dates, authors, events, etc.

6—Use of Reference Materials (Items: 29-36) (See 5—Use of Encyclopedia)

MATHEMATICS

M-1 CONCEPTS

1—Sets, Numbers, Numeration

1A—Sets and Set Operation (Item: 25)

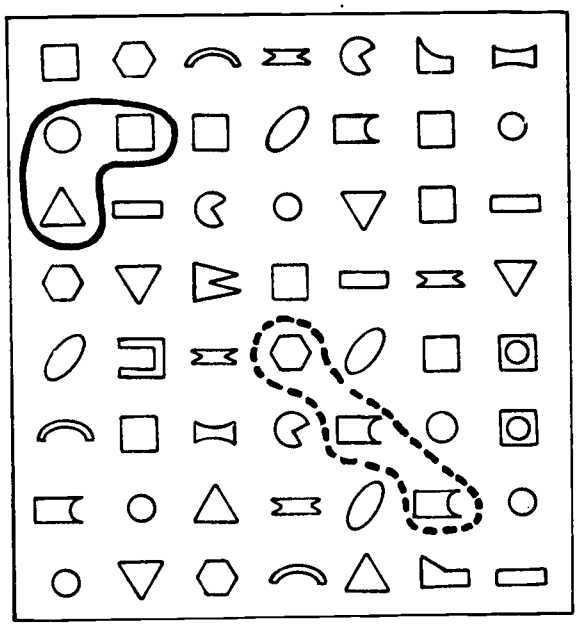
The criterion for a set is rather simple. A collection is called a set if it is clear that any one of the objects really belongs in the collection. A set is completely determined by its elements; that is, the objects in the set. It is necessary, therefore, to determine whether or not any object is a member of the set.

Many opportunities arise in the classroom for classifying, reclassifying and general sorting out. The process of "partitioning" consists of splitting a set into "sub-sets" such that each sub-set contains at least one element and each element belongs to just one sub-set. Sets may be partitioned into more than two sub-sets.

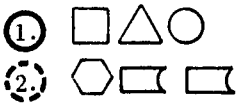
Design a diagram with columns and rows of figures in sequence (side by side or up and down). Design questions that request the student to circle the same number of elements as illustrated in the sets below the diagram. Point out that the sets may appear side by side, up and down or in multiple order.

Example:

Instruct the students to circle the sets in different colors and mark the set in the question section with the same color.



Which set above has the same number of elements as the sets:



M-1 CONCEPTS

1B—Numbers (Items: 6, 14, 18, 22, 27, 30)

All numbers including our natural numbers are an abstract concept. While many agree that the natural numbers are easier for students to understand than the other numbers, we must, nevertheless, keep in mind that they involve this abstract notion.

Certain logical ideas have to be acquired by the student before a real grasp of numbers is possible. Through early experience students learn to recognize, or become aware of "twoness," "threeness," "fourness," etc. which may occur through a variety of real situations.

Important properties of numbers are:

1) A number stands for a class of things.
2) Numbers can be compared with one another by being put in an order of magnitude.

Prepare a number diagram with several rows of figures. In each row, place in sequence (side by side) one or more pairs of numbers which can be added. Number the rows. Below the number diagram pose problems that are appropriate to each row.

Instruct the student to study each row and answer the problem for the designated row.

1	9	6	3	4	7	7	9	3	8	4
2	5	2	1	1	7	1	8	1	8	5
3	4	1	7	8	4	1	5	6	2	7
4	8	6	3	5	2	6	3	4	6	2
5	7	9	5	9	4	8	2	8	1	8
6	9	6	5	4	9	2	6	9	5	6
7	8	4	6	1	5	7	1	3	6	1
8	5	8	9	9	3	9	4	6	4	7
9	1	7	4	2	6	2	7	5	8	7
10	3	2	3	7	8	5	1	8	3	9

Problems:

1. $80 + \square = 96$
2. $\square \times 65 = 195$
3. $\frac{4}{4} + \square = 12$
4. $\square + \square = 14$
5. $\square \times \frac{12}{6} = 96$
6. $\square = 9 + 6$
7. $\frac{2}{3} \times \square = 6$
8. $\square - 7 = 11$
9. $5 = \square \times \frac{1}{3}$
10. $6 + \square = 21$

Variation:

Instruct students to circle three numbers in succession which add up to the total in the box.

M-1 CONCEPTS

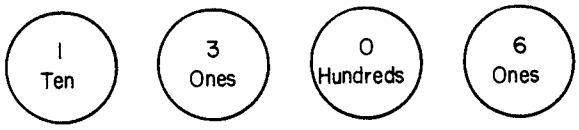
1C—Numeration (Place Value) (Items: 1, 7, 13, 28)

Students should have an awareness of the need for a convenient system of notation, the need for this and place value, and the idea of a number base.

It is not unusual to underestimate the difficulty of our system of place value. Students become confused over the values of each numeral contained in a given number. This may be due to the fact that many have not seen a practical representation of the position and the consequent value of a numeral in our system of notation. Thus, an activity approach to the problem is suggested. Cut rectangles of tagboard or use 3 × 5 cards. Draw vertical and horizontal lines to form a card of 21 squares. Write numbers in each square, alternating the numbers in each column, as well as each card. Gather a number of bottle caps and label (stick on the inside of the caps) with the following:

a) A number and the word "unit" or "one(s)"
b) A number and the word "ten(s)"
c) A number and the word "hundreds"

Example:



Instruct the students to play the game exactly like Bingo. Select a student to pull a bottle cap from a container and call the information. The students are to place a button or bottle cap on the square that has that place value. The first to cover three numbers across wins.

Example:

2	8	9
7	5	1
4	0	3
1	9	7
3	6	0
8	2	5
6	4	2

Variation:

The cards may include the labeled columns on the top of the rectangle.
The cards may be designed to include additional columns such as "thousandths" or "tenths".

M-1 CONCEPTS

2—Operations, Their Properties and Number Theory

2A—Addition and Subtraction (Item: 8)

Addition can be defined as an operation, one number being added to another number, resulting in a third number. The addition of numbers is an abstract operation performed upon abstract notions.

Subtraction is the inverse operation of addition. The first approach to subtraction concerns the comparison between two rows or columns, one of which is greater than the other. Premature use of the signs + and - leads to their continuous misuse.

Activity #1:

Write a simple problem consisting of two or three paragraphs describing a situation of interest to the students. Then formulate questions to be solved that correspond to the story.

Example:

A witness at the scene of a hit and run accident stated the following in court:

It seemed to me that there were at least 3, and not more than 6, people in the car that failed to stop. I did not notice whether they were men or women. The car was traveling about 10 miles over the speed limit. The car continued for 2 blocks and then turned to the right.

A second witness reported that there were at least twice as many men as women in the car. The car was traveling approximately 11 miles below the speed limit. This witness did not notice which way the car turned when it reached the third block beyond the accident.

A third witness reported that the car had 2 women and proceeded at approximately 12 miles above the speed limit.

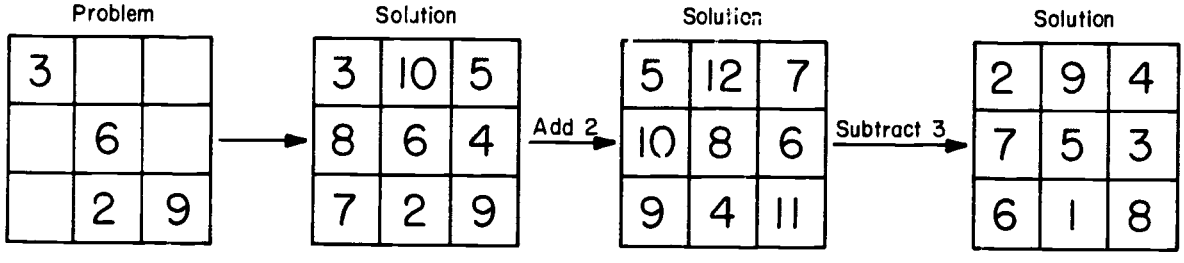
Questions:

1. If the speed limit is 35 miles per hour, how fast was the car going according to the first witness?
2. If the first and third witnesses are correct, how many men were in the car?
3. How many miles over the speed limit were reported by the first and third witnesses?
4. How many miles did these three witnesses report altogether?
5. If the third witness had reported that the car traveled at least 4 blocks beyond the accident, how many blocks further did the car travel altogether according to the three witnesses?

Activity #2:

Cut cards into "basic" squares and instruct the students to write the correct number in each blank square. Point out that all sides, across, down or diagonally, add up to the same number.

Example:



M-2 PROBLEMS

2—Operations, Their Properties and Number Theory

2A—Addition and Subtraction (Items: 1, 2, 3, 4, 7, 9, 10, 11, 16, 23) (See Concepts —2A Addition and Subtraction)

M-1 CONCEPTS

2B—Multiplication and Division (Items: 11, 16, 21, 26, 31)

Cut cardboard squares and divide into "3 × 3" or "4 × 4" squares. Divide the class into 2 or more teams. Instruct the students that each square has an assigned number which corresponds to a question.

The teacher calls a student from a team to choose a number from the square. The teacher reads the question that corresponds to the number. If the student answers correctly his team covers that square with a button.

Example:

1	4	6
7	2	5
9	8	3

Examples of Questions:

1. How many 8's in 24 ?
2. How many 5's must be subtracted from 25 to get 5 ?

Variation:

Use the same process or activities as in Addition and Subtraction (See 2A—Addition and Subtraction).

M-2 PROBLEMS

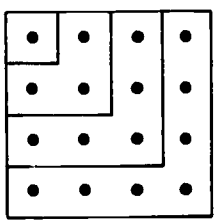
2B—Multiplication and Division (Items: 5, 8, 13, 24) (See 2A—Addition and Subtraction Activity #1)

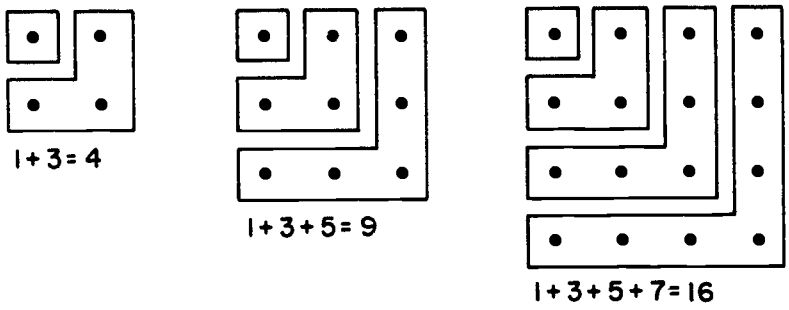
M-1 CONCEPTS

2C—Number Properties (Items: 5, 9)

Draw patterns of odd and even numbers on cards and cut out into shapes. Discuss with students these patterns when assimilated fit together. The student should see the results of adding an odd number and another odd number or an even number and another even number.

Example:

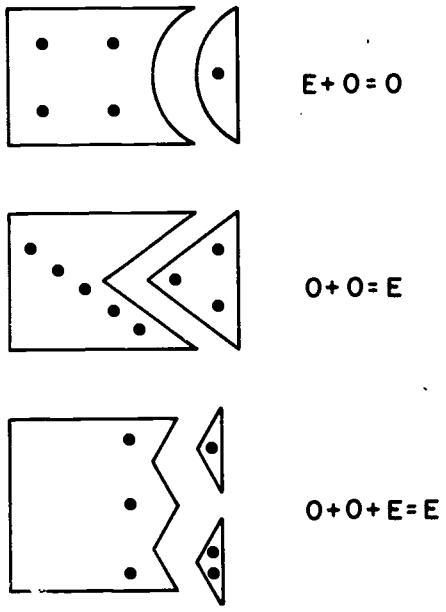




Variations:

Cut cards in different shapes than illustrated above and use with odd numbers.

Have students assimilate odd and even patterns and request whether the result is an odd or even number. Some of the following are shapes that can be applied: E = Even, O = Odd

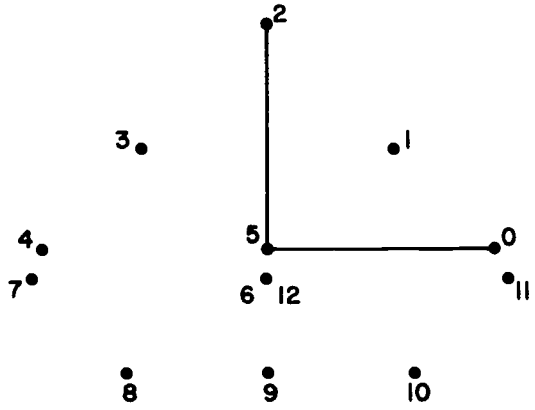


2D—Combinations of Operations (Item: 34)

Prepare pictures to be completed by connecting the dots. Design pictures by ordering even numbers and other pictures to be completed by ordering odd numbers.

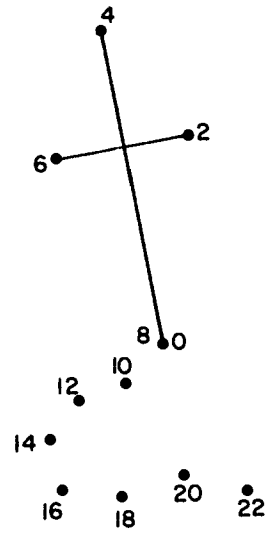
Before the students begin, point out that the picture is to be completed by adding odd or even numbers or both.

Example:



Design pictures that require the students to draw segments between the numbered points by counting, such as, by twos, threes, fours, fives, etc.

Example:



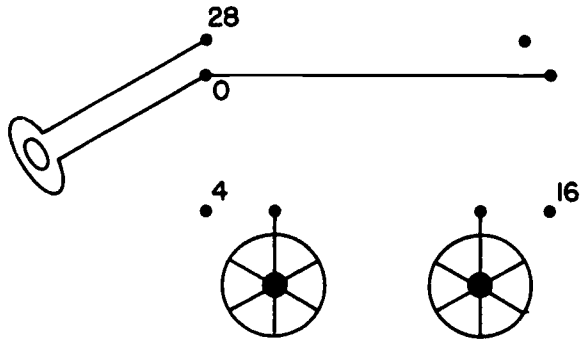
Variation:

#1—Prepare pictures that require the student to draw segments between the dots which are not all numbered. Thus, the student must identify the dot by counting. Group games can be devised to use this process.

#2—This activity can be extended by setting up and checking similar generalizations for combination of operations.

Example:

#1



Example:

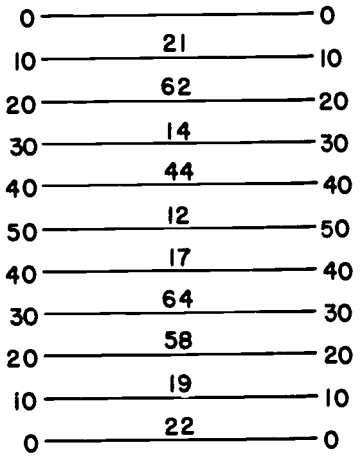
#2

M-2 PROBLEMS

2D—Combination of Operations (Items: 6, 12, 17, 19)

Play a game of arithmetic football. The students must work very quickly and accurately if each team wishes to score a touch down. Draw 11 parallel lines on the board. By each line write a number suitable for part of an addition or subtraction problem. Have a number of small toy footballs or make out of papier mâché. On each football write a number that is suitable to a problem in addition or subtraction. For example, label the balls with "add 8," "subtract 10," "add 12," etc.

Example:



Divide class into teams. Select a team member to draw a football from the box (numbers not shown). Player is to read number label on the football (add a number or subtract a number). By each ten yard line there is a number. The player must add or subtract the number of the football to the number on the ten yard line and give his answer. If the player is correct the team proceeds to the next 10 yard line. Teacher calls another team member to choose a ball and proceed in the same manner. If a team does not score correctly, the next team is called.

M-1 CONCEPTS

3—Relations and Functions

3C—Equality and Inequality (Items: 12, 20, 23, 24, 35)

Equality infers a relation indicating that two or more quantities are exactly the same.
Two members are equal if the sets they represent can be matched one to one with no elements left over or remaining.

Inequality is a number sentence in which the value on the left of the relation symbol is not equal to the value on the right of the relation symbol. Examples of appropriate vocabulary which illustrate inequalities are:

"the number is greater than"
"the number is less than"
"the number is exactly the same"
"is longer than"
"is shorter than"
"is approximately the same length"
"is heavier than"
"is lighter than"
"is approximately the same weight"

Call attention that the inequality sign between two numbers is written as: $>$ for greater than and $<$ for less than. In addition, the signs $<$ and $>$ always point toward the lesser number; for example $2 < 6$ and $8 > 3$.

$(2 \times \square) + 1 = 5$

$3 \times (\square + 2) = 9$

$\square \times (\square + 1) = 2$

$\triangle = (2 \times \square) + 5$

Draw a chart which illustrates a penny, nickel, dime, quarter and half dollar at the top. Along the side of the chart write in various amounts of money in numeral form. Instruct the student to indicate whether the numeral amount is greater than or less than the coin.

					
65¢	>				
38¢	<				
95¢	>				
80¢	>				
23¢	<				
42¢	<				
19¢	<				
75¢	>				
100¢					

Variation:

This activity can be extended to include varying possibilities by use of combinations of coins at the top. Thus, students must add several coins that are equivalent to a half-dollar and then compare this coin value to the numeral figure.

For another practice, provide word problems below the chart. For example:

2 half-dollars is greater than 80¢
2 quarters, 3 dimes is less than 90¢

M-1 CONCEPTS

4—Geometry

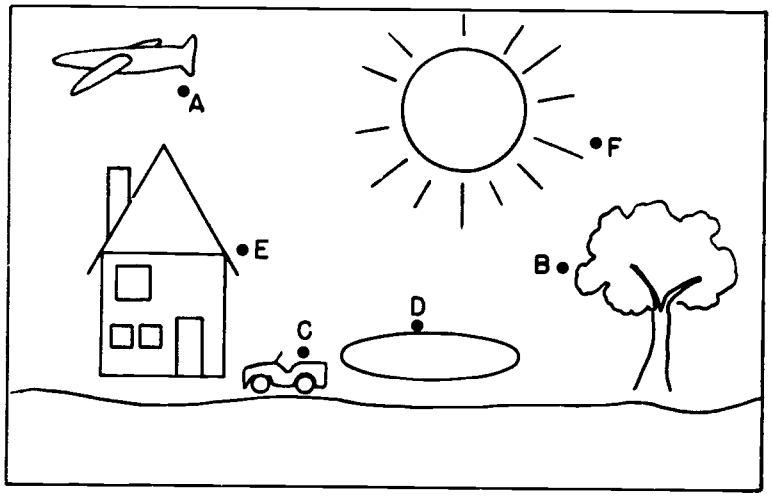
Geometry is the study of sets of points, the properties of these sets of points, and the relationships which exist between sets of points. These sets of points are classified on the basis of properties and relationships.

4A—Polygons (Items: 15, 33)

A polygon is a simple closed figure that consists only of line segments. A polygon with three segments is called a triangle; four segments, a quadrilateral; five segments, a pentagon; six segments, a hexagon; and so on.

Cut out a picture from a coloring book which illustrates many objects, such as, a dog, horse, car, plane, tree, mailbox, etc. Place a dot next to each object and label each dot with a letter. Discuss with the class the properties of sets of points, line segments between points, etc. Design exercises which review the basic polygons.

Example:



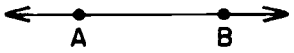
Give oral directions such as:

1. How many line segments are needed to draw a triangle?
2. Name the line segments that make the figure of a triangle?
3. Are all the segments in this figure of equal length?

Variation:

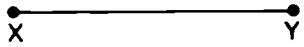
Design questions that review the properties of sets of points, line segments between points, etc.

1. This is:



(line) ray segment AB

2. This is (segment) XY.



3. Another name is (segment YX).

4E—Points, Lines, Planes, Solids (Item: 19) (See 4A—Polygons)

M-1 CONCEPTS

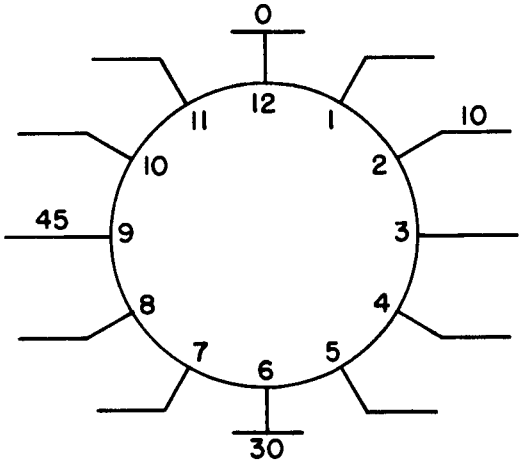
5—Measurement

Measurement is the comparison of a unit with an object to be measured and is expressed with a numerical value and a unit of measure.

5A—Unity (Items: 2, 3, 4, 29, 36)

A standard unit is a certain agreed-upon unit of measure which as in this country has been set by law. Discuss and review the concepts of each unit of measurement before attempting to introduce problems. The following activity can be used to introduce the concept of time. Discuss and review time by the hour, the half hour, and at five-minute intervals. Use activities that demonstrate that every number on the clock shows a period of 5 minutes.

Example:

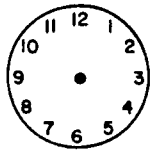
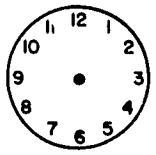
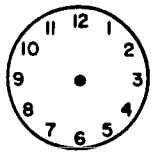


Have the student complete the stated time on each extended line. The concept of measurement activities can include:

1) Numerals for time;
2) Writing the number of days in each month;
3) Identifying equivalencies between gallons, quarts, pints and cups;
4) Recognizing the equivalencies between pounds and ounces;
5) Identifying dozen as twelve, pair as two, and package as container, and;
6) Reading a thermometer.

Devise a time table for incoming and outgoing airplanes. This activity will help the student to determine the time, a certain number of minutes after a given time, as well as, the appropriate numerals for that time interval.

Draw a clock for the student to use as a reference. Draw several clocks without hands so that students may wish to draw hands to the numbers while solving the problem below the clocks.

Present Time	Leave N.Y.	Arrive Georgia	Time Delay
8:15	9:25	11:20	12 min.
12:50	1:36	3:31	On Time
3:30	3:20	5:15	15 min.
4:45	5:16	7:11	14 min.

Your family has arrived at the N.Y. Airport to catch a flight to Georgia. You are now faced with deciding what time you can catch a flight since your family did not make reservations. A time chart is in the lobby which will help you decide which one to catch. First, check the present time it is now. See what time the first plane is scheduled to leave N.Y. Check to see if it is on time. Check the time you will arrive in Georgia.

Questions:

1. How long do you have to wait to leave N.Y.?
2. What time will your plane leave according to the Time Delay chart?
3. What time will you arrive in Georgia?
4. If you catch the next flight how long must you wait?
5. How many total hours are you in flight?
6. How many flights are scheduled to leave between 8:00 a.m. and 3:30 p.m. ?
7. How many minutes must you wait before your flight leaves?

Conversions for each unit of measurement should be included in the activities.

Develop problems related to the time activity such as:

1. The plane from N.Y. to Georgia can fly 600 miles per hour. How many miles will your plane fly in 2 hours?

Variation:

Use charts, graphs, picture stories, etc. to demonstrate each of the units.

M-2 PROBLEMS

5—Measurement

5A—Units (Items: 14, 15, 18, 20, 26, 27) (See M-1 Concepts, 5A—Units)

M-1 CONCEPTS

5C—Conversions (Item: 17) (See M1—Concepts, 5A—Units)

M-2 PROBLEMS

5E—Computation Involving Measures (Item: 25) (See M-1 Concepts, 5A—Units)

M-1 CONCEPTS

7—Application (Items: 10, 32) (See M1—Concepts, 5A—Units)

M-2 PROBLEMS

7—Application (Items: 21, 22) (See M-1 Concepts, 5A—Units)

How may Scores Be Released To the General Public?

Although a press conference is held to release the statewide analysis of results, local systems are encouraged to release their own results locally. This gives the local administrator the opportunity to communicate more directly with the concerned public in the local community and to discuss the test findings in more detail. In particular, this gives the local system spokesman the opportunity to add information about strengths in the local educational program, typically overlooked in press coverage.

HOW TO REPORT: The system frequency distributions are useful to describe aspects of the data lost in reporting only averages. Some systems may want to report skill summary data, although this may be too technical to interest the general public. Signs of growth should be stressed. Relative standings rather than absolute numbers may be more understandable to the public. If percentile scores are reported, the reference group must be specified.

If there is some need to compare one system to another, remember that many factors outside the influence of the school enter into student achievement. Comparisons should only be attempted between schools or systems which are more nearly equal on as many of these factors as possible (for example, average daily attendance, student ability level within the system, socio-economic background of the students).

In addition, the system will probably want to inform the public regarding any special programs being engaged in to correct known weaknesses. A sample press release is found on page

WHICH SCORES TO REPORT: Reporting the results in such a way as to be meaningful to school boards and to the general public can be difficult. Providing numbers without appropriate reference points, benchmarks, or explanations can be misleading. For example, to report only average scores for the entire system would omit much useful information about schools within the system who are making progress, and this gives no information about the many pupils within the system who are achieving far beyond the "average."

Similarly, it is difficult to select the most appropriate measures to report, whether grade equivalent, standard score, or percentile. Grade equivalents are popular because they appear to be easily understandable, but they are subject to some misconceptions. Grade equivalents designate the grade levels at which a typical (median) pupil makes a particular raw score. They are an indicator of developmental level of performance (in comparison to a norm group) but they are not valid for estimating appropriate grade placement. That is, a fourth grader earning a grade equivalent of 6.1 on the math problem-solving subtest is not necessarily a candidate for sixth grade math placement. He may lack many of the skills necessary for sixth grade math. Grade equivalents are not suitable for illustrating status within a group and do not necessarily have the same meaning from one subtest to another. They would be ideal for illustrating developmental growth of the same children tested year after year. They should be used with discretion in reporting results from statewide testing. When reporting the average grade equivalent score for a class, a school or a system, it is important to point out that there is a wide range of scores, that X percent of students score well, that a particular average grade equivalent does not mean that all pupils are functioning at that level (many people, for example, interpret a fourth grade system average G. E. of 3.6 to mean that no pupils in a system are doing fourth grade level work, an obvious misconception).

Standard scores provide the most reliable (statistically speaking) group averages for reporting to the public and are less likely to be misused than grade equivalents. However, they are much harder to explain, especially to the public, and the normative meaning is less clear. They do lend themselves well to graphic presentation and to comparisons across subtests. When reporting standard scores in the media, it will be helpful to provide some standard or benchmark for comparison. That is, if X standard score is reported on the reading subtest, indicate that this is approximately on grade level nationally or statewide (comparing to the appropriate average for those two groups) or slightly above or below, or whatever is appropriate. Merely to list the numbers is meaningless. Again, it is important to point out something about the range of performance.

Percentile ranks refer to the percent of a group which scores below a given score, not to the percent of items answered correctly. Percentile ranks are ideal for indicating relative standing in comparison to a particular reference group. In the statewide reports this year it will be possible for a system to obtain its national percentile rank on the various subtests for this year and previous years. These figures should be fairly easily communicated to the general public. It is important to remember to report the reference group. (Similarly, for the classroom teacher, it is important to designate the reference group when utilizing percentile scores for her students. These are most useful for the teacher in instructional planning, as can be seen in pages 52-68 of this manual.)

In summary, there are no hard-and-fast rules about which type of scores to report. Probably some combination of scores will be the most useful in reporting to the public, taking care to provide some explanations. For general use, consider the user, whether individuals or groups are being assessed, and the purpose, whether to assess status or growth.

SAMPLE NEWS RELEASE (can be prepared utilizing statewide reports and local frequency distributions)

Estimate from scores found in the Statewide Report

Recently released scores from the annual Statewide Testing Program indicate that _____ school system ranks in the (top or lower third, middle, top or lower half) as compared to other systems in the State according to (System) school Superintendent _____.

Tests were given in all Georgia schools last fall in the fourth, eighth and eleventh grades to all students present on test days. Fourth and eighth graders took the Iowa Tests of Basic Skills, which measure vocabulary, reading comprehension, language skills such as spelling and punctuation, work study skills such as map reading and use of reference materials, and mathematics skills. Eleventh graders were given the Tests of Academic Progress, which appraise student progress toward "widely accepted academic goals of secondary school education."

Data available in Statewide report. Look at yearly figures for subtest areas at various grade levels

"Test results indicate that current fourth, eighth and eleventh grades in (System) are functioning at (below, the same, above) the level of last year's fourth, eighth and eleventh graders," Superintendent _____ said.

Insert here information about any special local programs or efforts

"In the four years since the testing began, (System) appears to be making some gains, particularly in the area(s) of (one or more subtest areas) at the _____ grade level. This reflects some of our (Special programs, projects, new curriculum efforts) instituted in the past (year, two years, etc.)."

_____(supt.)_____ emphasized that in considering previous years results with this year's results, it is possible to compare only the current level at which each group is functioning. It is not possible to compare the various results in terms of achievement growth, because different groups of students have been tested, each only once. Achievement growth can be determined next year, however, for eighth graders who were tested as fourth graders in the first year's testing program.

4th Grade: Use ITBS composite from System Frequency Distribution Average Range—3.8 to 4.3

8th Grade: Use ITBS composite from System Frequency Distribution Average Range—7.8 to 8.3

11th Grade: Use TAP scores from System Frequency Distribution or statewide report Average Ranges—49 to 51

This year's average 4th grade student in _____ system appears to be (within/from _____ to _____ months) (below/above) the national average range of performance on the Iowa Tests of Basic Skills. On the same battery of tests, the average eighth grade students rank from _____ to _____ months (below/above) the average range of performance. On the Tests of Academic Progress, the average eleventh grader scored from _____ to _____ points (below/above) the national average range of performance in composition, _____ to _____ points (below/above) in reading, and _____ to _____ points (below/above) in mathematics.

Can be figured from System Frequency Distribution

"_____ percent of our fourth graders, _____ percent of our eighth graders and _____ percent of our eleventh grade students scored within or above this average range," _____ (SUPT.) said.

The Superintendent added that administrative and instructional staff will analyze the system results and use this to aid in planning for instructional and staff development priorities. Data on individual student performance is also available for use by teachers in planning individual instructional programs for students.

A Model for Conducting Local Inservice Program

Program Director: Local Coordinator, Counselor, Curriculum Director

Participants: Instructional Staff

Consultants: Counselor, Psychometrist, Principal, Instructional Supervisor, CESA personnel

Materials Needed: Copy of objectives of SWTP
Computer Reports
Glossary of measurement terms
Skill Classification Sheets
Manuals for ITBS and TAP
Handouts (optional) based on materials in this Guide on Utilization of Tests (pp.)
Overlays (optional)
Guide

Step 1: Discuss the objectives of the SWTP. (See under General questions pp. of this Guide) (See Note #1)

a. Discuss local objectives relating to assessment.
b. Relate SWTP to local needs

Step 2: Discuss the abilities and skills that are being tested. (See Note #2)

a. ITBS
b. TAP

Step 3: Describe the comparisons being used. (See Note #3)

a. normative
b. criterion-referenced
c. idiographic

Step 4: Describe the type of scores being used. (See Note #4)

a. grade equivalents
b. percentiles
c. summary and descriptive statistics

Step 5: "Decode" and interpret computer reports. (See Note #5)

a. information contained in the computer reports
b. organization of computer reports

Step 6: Discuss uses of test results. (See pp. of this Guide) (See Note #6)

a. General discussion of types of uses.
b. Illustration for classroom teachers utilizing test results in instructional planning.

Step 7: Discuss how consultant can aid classroom teacher. (See Note)

a. Counselor
b. psychometrist, school psychologist, special education staff
c. instructional supervisor or curriculum specialist

Note 1: The objectives here are to acquaint local personnel with the objectives of the SWTP and to establish the relationship of these objectives to local needs for assessment.

Note 2: Describe the ITBS and TAP and indicate general areas assessed. General description is available in the General Questions section of this Guide. More specific information can be found in the publishers' manuals. A classification of the skills assessed by the various subtests is available in this Guide and also is listed on the reverse side of Student Item Response Report and Item Summary Reports.

Note 3: Three main types of comparisons can be used in analyzing test results. The most typical type is normative—comparing an individual or a group (class or system) to some particular reference group. This may be a "national norm group," the sample of students selected from across the nation to estimate the average student performance at a given grade level. In Georgia there are two other comparison groups—all state students tested at the three grade levels and the students tested in each local system.

A second type of comparison is to assess progress toward some standard of performance. At present in the Statewide Testing Program this type of comparison is mainly done informally as subjectively at the local level, particularly using item data. In future years, Georgia will employ criterion-referenced tests in several instructional areas designed specifically for this type of comparison.

A third type of comparison is idiographic—comparing a student (or group) with himself. With current Statewide Testing Program results, student performance on various subtests can be compared in a relative way. Student achievement growth cannot be assessed at present, however, since a different group of students is tested each year.

Important: Keep in mind the group to which comparisons are being made. Make sure it is appropriate for your purposes.

Note 4: When discussing any score, remember that only an estimate of a student's "true" ability or level of skill development is being obtained.

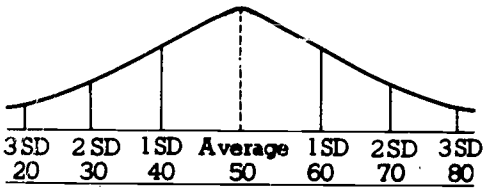
A score should not be thought of as a fixed point, but rather as a point within a range of possible scores which might be obtained. (The term "standard error of measurement" refers to this range of possible scores. It reflects the amount by which an actual obtained score may differ from the hypothetical "true" score, due to errors of measurement.)

Scores reported on the statewide test results are in the form of grade equivalents, standard scores and percentiles. Grade equivalent (g.e.) is the grade equivalent assigned to the raw score earned by the median (typical) student at a particular grade level. The first digit of the value (such as 29, 35, etc.) is the grade level, the second digit, the month of the school year. (Grade equivalent scores are not absolute measures of status since, in any norm group, students at a particular grade level score lower or higher than the median score of any particular level. They merely are the "typical" scores.) These scores are suitable for measuring growth and may be averaged for group comparisons. They are subject to misuse (see pp. of this Guide). For example, when they are regarded as absolutes or estimates of where a student should be placed in grade organization. Also identical grade equivalents earned on different tests do not necessarily represent equally good performance (this is because the range of G. E. scores differs from one test to another).

Percentile scores represent rank within a national, state or local system group. Such a score indicates what percent of students score at or below a certain score level. Percentiles are useful to determine a student's standing in his grade or his relative performance on different tests. They will differ with the comparison group, with the test, with the time of year.

Standard scores are obtained by transforming raw scores into a particular form of distribution, in this instance, a distribution with a particular mean and standard deviation. The standard score describes the position of a score within a set of scores by measuring how far it is from the mean (or average) and expressing this distance in standard units.

Example: On the TAP the mean score is 50 and standard deviation is 10. A person with a SS of 59 would be found to be within 1 S.D. above the mean and a person with a SS of 28 would be beyond 2 S.D.'s below the mean. This is based on the normal or bell-curve and is a description of relative position. Most people fall between 1 S.D. above and 1 S.D. below the average. Those who fall beyond 2 or 3 S.D.'s above or below the average are therefore performing above or below the average ability or achievement level.



Other scores reported on the computer reports are in the form of summary and descriptive statistics. When tests are administered to groups of students, there will be a range of scores, from a low to a high point, and scores will tend to cluster around a certain point. To summarize the array of scores, median and quartile statistics are used (scores below which twenty-five percent, fifty percent and seventy-five percent of the students score). To describe the clustering of scores, or the central tendency, mean and standard deviation statistics are used. An earlier section of this Guide provides further clarification of terminology.

Group activities which are helpful for illustration purposes include role-playing such situations as parent-teacher conferences in which the teacher is explaining the nature of the tests and the types of scores being used; simulating response to a PTA study group which is studying the results of the testing program; simulating a Board presentation.

Note 5: Present and interpret each computer report, and follow with questions and answers. Be sure to include

- the definition of symbols
- what information each symbol conveys
- what segment of the report contains the information needed to interpret test results and their meaning to individual students and parents
- what segment of the report contains the information needed to describe a group of students or an entire grade

Show how the reports are organized; for example, make sure the classroom teacher knows where summary data for her class can be found on the class record sheet. Depending on the make-up of the inservice group, information about system level data may not need to be stressed.

Information about each report is found elsewhere in this Guide.

Note 6: This portion of the inservice program relates back to the initial objectives for testing. The focus is now on utilizing the test data to meet needs. A brief general introduction can illustrate situations in which test results can help meet certain instructional or guidance needs, but specific illustrations will be the most useful teaching device.

A useful activity again would be to divide the participants into small groups, preferably with one of the "consultants." Using their own printout data, the teachers can then discuss specific needs and approaches they can take to organizing instructional programs for their own students.

This final portion may need to be extended into a separate session after giving participants the opportunity to study results further. In part this will depend on how far ahead of the first session they have obtained their print-outs and attempted to make use of them.

Note 7: If consultants are not actively utilized in earlier portions of the program, make sure to explain their roles and how they might assist the classroom teacher. Be sure to provide information as to how the teacher can contact the appropriate persons.

Getting Ready to Test

PREPARATION: The best preparation for tests is good teaching. Preparation for the tests should go on every day of the year in classroom activities. The local school system should decide which skills measured by the Iowa Tests of Basic Skills or Tests of Academic Progress their students should master by a given grade level. Those skills selected should become a planned part of the instructional program for students. This program will, of course, contain many other objectives. Tests should reflect the behavioral objectives of the school, but they should not be the sole determiner of objectives.

Teachers need to be aware of the particular objectives a test is designed to measure, but they should never be encouraged to "teach the test." This involves coaching the students on specific items which appear on the test. This practice is DEFINITELY PROHIBITED. However, it should be noted that most of the skills measured by the Iowa tests are essentially the same as the skills found in typical instructional programs. Thus, students should be given practice in the skills that are assessed by the tests.

Other elements of the testing process which also should be a regular part of the instructional program are pacing and timing. Students should become accustomed to pacing and timing their work. Students' work habits play an important role both in classroom and achievement and in test performance.

Work habits can be informally evaluated to assess the level of skill development in this area. Student characteristics to assess include

listens attentively
follows directions
uses time wisely
works independently
plans and organizes work
completes work

By improving a student's work habits, the instructional process as well as the test-taking process will be improved.

MOTIVATION: One of the most important determiners of the value of any testing program is the attitude of teachers and students toward the tests. Teachers may know little about testing or feel threatened by the administration of standardized tests. They should be shown how the program can contribute to the effectiveness of their teaching and can aid in individualizing instruction. Administrators and teachers should evaluate the outcomes of instruction jointly. When this is done, teachers will not have a need to be defensive or compelled to have their students "make a good showing."

The attitude of students toward tests and student morale during testing can hardly be overemphasized. If they consider the tests nothing more than drudgery or a meaningless exercise, not only will they probably not do their best work, but also they may have undesirable attitudes toward any follow-up procedures. This is particularly true of less able students, who are likely to consider the tests as just another demonstration of their ineptitude.

Test anxiety may be a problem for some students, too. In many schools, with many students, tests are taken in stride. Other students get upset when they have to take a test, sometimes as a result of pressure from parents or teachers. Some students simply "do not test well." Students should be alert and motivated when they take tests, but not overanxious.

The best way to create a desirable attitude is prior to testing to involve students in discussions about why the tests are being given, what is being measured, and the potential values to the student as well as to the teacher and the school. The folder "How Are Your Skills?" (available from Houghton-Mifflin) is one aid to such discussions. Such discussions are not only aimed at improving attitudes during testing but also at assisting students in assuming some responsibility for their own development and learning. Follow-up conferences with students about their test performances are an important part of this process. FEEDBACK is ESSENTIAL.

As far as possible, parents need to be informed about the testing program in the school, preferably before they are confronted with their child's scores. Prior information about the broad purposes of testing and the nature and uses of tests may alleviate some parental concerns, which in turn may ease some of the pressure on the child. Follow-up conferences with parents after test results are known are, of course, time-consuming but need to be incorporated into the planning process for every child. Many teachers in many systems already routinely schedule parent conferences, and sharing test information can be a part of these. Techniques for sharing test information should be discussed as a part of inservice with the teachers.