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ABSTRACT

This guide contains information to help teachers understand and use reports from the Delaware Student Testing Program (DSTP). The DSTP is designed to be a measure of progress toward Delaware's content standards that helps ensure that students can apply their academic skills to realistic, everyday problems. The DSTP aims to promote better instruction and curriculum and to identify student weaknesses. In spring 2001, the DSTP tests were given in reading, writing, and mathematics at all tested grades, and the science and social studies tests were administered in grades 8 and 11, with the grades 4 and 6 science and social studies tests scheduled for October 2001. The first section of this report introduces the DSTP and its reports and answers some commonly asked questions. The second section focuses on the English Language Arts report, discussing the grades tested, testing dates, test form used, and norms. Score comparisons, percentile ranks, instructional needs, and performance levels are discussed. Section 3 contains similar information for the mathematics report, and section 4 describes the science and social studies report. Section 5 contains a discussion of understanding reading and mathematics in grades 2, 4, 6, 7, 9, 11, and 12. An appendix contains sample reports. (SLD)

Delaware Student Testing Program

A SCORE RESULTS GUIDE FOR EDUCATORS

Prepared by the Assessment and Analysis Group
Assessment and Accountability Branch

Delaware Department of Education
Spring 2001

Available on the Department of Education Website at
www.doe.state.de.us/aab

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SECTION I: INTRODUCTION TO THE DSTP

Delaware students must meet world-class standards if they are to be competitive and successful in a global economy. To prepare our students for their future, our schools must support rigorous standards and each of our teachers must set high expectations. Our students must also commit themselves to the achievement of excellence.

Any system that hopes to accomplish such ambitious goals must have a yardstick by which to measure its progress. Delaware educators have developed the Delaware Student Testing Program (DSTP) that now serves as such a yardstick. The tests are tied to the Delaware content standards that define the knowledge and skills required for our students to succeed beyond high school. The results of the DSTP provide us with an understanding of how well we are preparing students to meet the many challenges that lie ahead. Whatever the results, Delaware students and educators will understand where we are so that we can tell how far we have to go. An accurate assessment of where we are is the first step towards getting where we want to be.

This past spring, the annual administration of the DSTP reading, writing, and mathematics tests were administered to provide us with an accurate measure of how well our students are doing relative to Delaware's rigorous content standards. The science and social studies tests were also administered in grades 8 and 11. The grades 4 and 6 science and social studies items will be administered in October, 2001.

Purpose of the test

The Delaware Student Testing Program is designed to:

- serve as a measure of progress toward the Delaware content standards;
- ensure that students can apply their academic skills to realistic, everyday problems;
- promote better instruction and curriculum by providing timely reports of students' strengths and weaknesses;
- ensure that students are formally provided with extra instruction when needed;

- serve as a primary indicator in the statewide accountability system and help districts determine who should and should not be promoted from grade to grade.

Questions and answers about the 2001 DSTP

What are "Standards"?

The standards are the result of several years of work by Delaware educators to determine what Delaware students should know and be able to do as a result of their education. The standards for English language arts (reading and writing), mathematics, science and social studies were approved by the State Board of Education in 1995. Since then, Delaware's standards have been widely recognized as among the best in the nation by publications such as *Time*, *Forbes*, and *Education Week*. Each teacher and each administrator in Delaware has a copy of the Standards.

What kind of information is tested in each part of DSTP?

Reading: Reading is assessed using literature that informs, entertains or explains how to perform a task. Students are asked to read passages and then demonstrate their ability to comprehend, analyze and interpret what they have read by answering multiple choice, short answer, and extended response questions.

Because reading is fundamental to success in all areas of education, the reading test is especially important. ***The results of the spring 2001 reading test at grades 3, 5 and 8 will determine whether or not students will be required to have an Individual Improvement Plan (IIP) for the 2001-2002 school year.***

Writing: In this section of the test, writing is assessed in two ways. First, students are asked to provide a written response to a prompt with a specific purpose and audience in mind. Second, students are asked to write a response to a question about a reading passage. This is done to assess students' ability to recognize that reading and writing are integrally connected.

Mathematics: The mathematics section assesses a student's ability to grasp key concepts and solve realistic problems. Multiple choice, short answer, and extended response questions are used to assess students' conceptual knowledge, procedural knowledge, and knowledge of mathematical processes across core areas such as computation, measurement, algebra, and geometry. Because the test is focused on reasoning and analysis, students are permitted to use calculators on some parts of the test. ***The results of the Spring 2001 mathematics test at grade 8 will determine whether or not students will be required to have an Individual Improvement Plan (IIP) for the 2001-2002 school year.***

Science: The science section assesses a student's ability to grasp key scientific principles and solve realistic problems. Multiple choice questions and short answer questions are used to assess students' conceptual knowledge, procedural knowledge, and knowledge of scientific principles across core areas such as ecology, diversity of

living things, life processes, dynamic systems, space, energy, properties of materials, and the nature and application of science and technology. The test is focused on reasoning and analysis.

Social Studies: The social studies section assesses a student's ability to grasp key concepts and apply this knowledge to everyday living within a diverse world, and within a democratic system. Multiple choice questions and short answer questions are used to assess students' conceptual knowledge and analytical abilities across core areas such as civics, economics, geography, and history. The test is focused on reasoning and analysis across core areas.

What are scaled scores and what is the advantage of using them?

The number of correct responses a student gives to test items is called a raw score. The reading and mathematics raw scores are converted to scaled scores by use of the Item Response Theory, Rasch Model process. This is a widely accepted scaling procedure used by testing companies. The primary purpose of converting raw scores to scaled scores is to aid in interpreting students' test results. Scaled scores allow comparison of the scores of a student over time from grade 3 to grade 5 to grade 8 to grade 10. This permits an examination of the student's growth over time. Scaling also permits the examination of other trends in performance of **groups of students** over time.

What are the scores and how are they going to be used?

There are four types of scores that are reported via written reports:

1. Individual student scores;
2. School scores;
3. District scores; and
4. State scores.

There are five types of reports available on the DSTP-OR registered user system (four like those on the written reports plus a special group report). Superintendents, principals, and registered teachers have access to student information.

Note that school, district, and state summary reports (that do not contain individual student scores) can be accessed by the public using the Department of Education website at: **www.doe.state.de.us/aab.**

Individual Student Scores:

The results are reported to parents and to schools so parents, teachers, and administrators can review the indicators of the student's academic strengths and weaknesses and can begin to assist students in meeting the content standards. After the administration of the **DSTP** in the spring of 1999, the results were used to develop decision points for performance.

School Scores for the DSTP:

The results of student performance on the **DSTP** for the entire school can assist school staff in evaluating how the curriculum is functioning: What are the strengths of the curriculum? What are the weaknesses? What overall curriculum changes might be necessary to assist students in meeting the standards? The school scores can provide a signal to the principal that additional resources may be needed or reallocated to assist teachers in providing the necessary instruction.

District Scores for the DSTP:

The results of district-wide student performance on the **DSTP** allow district staff to identify strengths and weaknesses common to the schools in the district. This information permits the district administrators to examine district-wide curriculum that works, curriculum that needs adjustment, resource allocation, and/or any other adjustment that might be necessary.

Statewide Scores for the DSTP:

The results of the statewide scores permit the public to monitor the collective progress of students toward meeting the Delaware content standards. It is anticipated that the statewide scores on the **DSTP** will increase for students as teachers and school administrators begin to identify strengths and weaknesses and to continue to work for changes to improve the educational process.

Reports

Written DSTP reports are distributed to parents and education administrators.

Reports sent to parents

Parents of students in grades 3, 5, 8, and 10 receive two reports:

1. The 2001 DELAWARE STUDENT TESTING PROGRAM English Language Arts Individual Report, and
2. The 2001 DELAWARE STUDENT TESTING PROGRAM Mathematics Individual Report.

Parents of students in grades 4, 6, 8, or 11 receive a third type of report:

3. The 2001 DELAWARE STUDENT TESTING PROGRAM Science and Social Studies Individual Report. Reports for 8th and 11th grade students will be sent in September of 2001, reports for 4th and 6th grade students will be sent in February 2002.

Parents of students in grades 2, 4, 6, 7, 9, 11, and 12 receive a fourth type of report:

4. The 2001 SAT9 Reading Comprehension (Reading) and Problem Solving (Mathematics) report.

Reports available to teachers and administrators

Through on-line reporting teachers have:

1. English language arts scores for each student in the class,
2. Mathematics scores for each student in the class, and/or

3. Science and social studies scores for each student in the class.

Public Access Reports

DSTP On-line summary reports are available for public access. These reports can be accessed through the Delaware Department of Education website: www.doe.state.de.us/aab. After connecting with the website, click on the "DSTP Online Report" green tile. The following reports can be accessed:

- overall summary reports,
- disaggregated reports,
- matched-scores reports,
- summary by district, and
- District and school summaries.

DSTP results from the spring 1998, 1999, 2000, and 2001 testing years are also available for reading, writing and mathematics; and the fall and spring 2000 DSTP results are available for science and social studies.

SECTION II: Understanding the English Language Arts Report

The score report you received contains six sections of information regarding student performance on reading and writing:

A. Grade, testing date and SAT9/Level and Form, and the date the SAT9 Norms were developed.

B. The reading scaled score for an individual student compared to other students at the **same grade level** in the school;
The average reading scaled score for the **school** (for students in the **same grade** as an individual student);
The average reading scaled score for the **district** (for students in the **same grade** as an individual student);
The average reading scaled score for the **State of Delaware** (for students in the **same grade** as an individual student);

C. The writing score of an individual student compared to other students at the **same grade level** in the school;
The average writing score for the **school** (for students at the **same grade** as an individual student);
The average writing score for the **district** (for students in the same grade as an individual student);
The average writing score for the **State of Delaware** (for students in the **same grade** as an individual student);

D. An individual student's SAT9 percentile rank for reading;

E. An individual student's Instructional Needs for reading and writing; and

F. An individual student's Performance Level and score in reading and in writing.

Each section of the English Language Arts Individual Report is discussed separately.

A. Grade, Testing Date, SAT9 Level/Form and SAT9 Norms

This part of the score report provides general information about the administration of the test:

- The grade level of an individual student (03, 05, 08, or 10) is reported next to **Grade**.
- The date an individual student took this test is then listed.

SAT9 Level/Form and Norms

Following the test date is the SAT9 **Level/Form**. The SAT9 is an acronym for the *Stanford Achievement Test-Ninth Edition*. The SAT9 is a standardized, nationally administered test. To create the national norms for the SAT9, it was administered to a representative sample from 225,000 to 250,000 students nationwide. Their score results are referred to as national norms, or more usually, "norms". The norms become a reference point against which to compare the performance of any student who then takes the SAT9. The norms for this test were developed in 1995.

B. Score Comparisons of Grade Tested: Reading

This section contains score comparisons of an individual student's reading score against all of the students in the school at the **same grade** who took the test. An individual student's score is found on the line between the lowest scale score listed on the left-hand side of the line and the maximum scale score on the right. Remember that the individual student is being compared with other students in the school at the **same grade** who took the test. You can also compare an individual student's performance to the performance of all same grade students in the district and in the state.

If you have students at different grade levels, you will see that grade levels have different scale values. For tenth grade students, the scale listed ranges from 250 to 800; for eighth grade students, it ranges from 225 to 775; for fifth grade students, it ranges from 175 to 700; and for third grade students, it ranges from 150 to 675. It is expected that older students will perform at a higher level than younger students.

The Individual Student's Score

In this section you can see how well an individual student is performing, as compared to all the students in the same grade in the school who took the test, by locating the position of the individual students' score on the scale relative to the position of the score for all students who took the test at the **same grade** level in the school. You can also compare an individual student's performance to the performance of all same grade students in the district and in the state.

The School's Score

Also, you can see how all the students in your school are performing on reading compared to all the students in the district who took the test at that grade level by examining the position of the school's score on the scale relative to the district's score. You can also compare the school's score to the performance of all **same grade** students in the state.

The District's Score

Also, you can see how all the students in your school district are performing on reading compared to all the Delaware students who took the test at the same grade level by examining the position of the district's score on the scale relative to the state's score. Remember that these scores reflect performance of all district students in the **same grade** as an individual student.

The State of Delaware's Score

In addition, you can see how all the students who took the test in the State of Delaware are performing on reading by examining the position of the state's score on the scale. Remember that these scores reflect the performance of all students in the **same grade** as the individual student.

C. Score Comparisons of Grade Tested: Writing

This section contains score comparisons of an individual student's writing score against students who took the test in the school, in the district, and in the State of Delaware. This score is the total points a student received on two writing prompts. The first prompt is based on a reading passage and is called a text-based writing prompt; that is, students must read a passage and then answer a question and write about what they read. They have approximately 30 minutes to do this, however it is untimed.

The second prompt stands by itself. Students respond to a few sentences that prompt them to write about a topic or an issue. Students have about 2 hours to respond to this prompt. The text-based prompt is scored by one judge, the stand-alone prompt is scored by two judges, and the total writing Score is the combination of all three scores. A maximum of 5 points and a minimum of 1 point can be awarded by each judge, thus the maximum score is 15 (5+5+5) and the minimum score is 3 (1+1+1). The student's writing score is found on the line between the 1 to 15 scale.

The Individual Student's Score

In this section you can see how well a student is performing in writing as compared to all the students in the same grade in the school by locating the position of an individual student's score on the scale. Remember that the student is being compared with other students at the **same grade level** in the school who took the test. You can also compare the student's performance to the performance of all same grade students in the district and in the state.

The School's Score

Also, you can see how all the students in your school are performing on writing compared to all the students in the district who took the test by examining the position of the school's score on the scale. Remember that these scores reflect performance of students in the **same grade** as an individual student. You can also compare the school's score to the performance of all same grade students in the state.

The District's Score

Also, you can see how all the students in your school district are performing on writing compared to all the Delaware students who took the test by examining the position of the district's score on the scale. Remember that these scores reflect the performance of all district students in the **same grade** as the individual student.

The State of Delaware's Score

In addition, you can see how all the students who took the test in the State of Delaware are performing on writing by examining the position of the state's score on the scale. Remember that these scores reflect the performance of all district students in the **same grade** as the individual student.

D. A Student's Percentile Rank for Reading

SAT9

The percentile rank for reading is obtained from the abbreviated form of the SAT9 that is embedded in the DSTP. The SAT9 is the timed portion of the DSTP and is included for several reasons:

- It allows comparisons of the reading performance of Delaware students on a nationally used standardized test, thus permitting the comparison of student performance on general reading proficiency to other students across the United States.
- A subset of the SAT9 items are directly related to the Delaware Reading Standards and are a part of the DSTP score.
- The SAT9 items included in the DSTP permit the important and efficient psychometric process of equating and scaling the DSTP from one administration of the test to subsequent administrations of the test.

Percentile Rank

A percentile rank is a way of looking at how well a student performed on the SAT9 reading test relative to all the same grade students in the national norms. Percentile rank gives you the additional information as to what percentage of **same grade** students in the norms scored higher or lower than an individual student. For example, if a student had a reading percentile rank of 91, it means that 91 percent of the students in the national norms scored **below** the student and only 9 percent scored **at or higher** than the student. If a student had a reading percentile rank of 54, it means that 54 percent of the students in the national norms scored **below** the student and that 46

percent scored **at or higher** than the student. If a student had a percentile rank of 29, it means that 29 percent of students in the national norms scored **below** the student and that 71 percent scored **at or higher** than the student.

In some cases a student might score higher or lower on the SAT9 reading test than on the DSTP reading test. It must be kept in mind that a student's SAT9 percentile rank score cannot be directly compared to the relative scale position of the DSTP reading test score. There are several reasons why these scores are non-comparable:

- The SAT9 reading test is not directly aligned with Delaware reading content standards. A portion of the SAT9 reading test is related to the reading content standards and is included in the DSTP score, whereas the DSTP reading test is **completely aligned** with the English language arts content standards.
- The SAT9 is entirely comprised of multiple-choice items, whereas the DSTP is comprised of multiple choice, short answer, and extended response items. Writing short answers and extended responses requires very different skills than selecting the answer on a multiple-choice item. Because the items on the SAT9 and the DSTP reading test are very different in format (multiple choice vs. multiple choice, short answer, and extended response), they measure very different aspects of reading and their results cannot be directly compared.
- The score for the DSTP reading test is based on a substantially larger number of test items than the score for the SAT9 reading test. This means that the DSTP reading test samples a larger portion of the student's reading skills as defined by the English language arts content standards than does the SAT9.

E. Instructional Needs: Reading and Writing

This section of the report provides feedback that depends on what items an individual student answered correctly and incorrectly, and/or how the items were answered. For that reason, each student's report will likely differ from another student's report.

Reading

In reading, comments are produced depending on the kind of items a student can and cannot answer. For example, if a student answered incorrectly a series of open-ended reading items that needed more details, a comment would be produced suggesting that the student needed to work on "providing enough details from the text to answer open-ended questions." Likewise, if items that measured the student's ability to understand the central ideas in a piece of text are answered incorrectly, a comment would be produced stating that the student needed to work on "interpreting meaning by drawing conclusions about the central ideas in a text." The instructional needs comments provide the student, the parent, and the teacher with information about the areas in which the child needs to improve performance.

On the School Summary Report, all comments produced (triggered) by all students in your school are listed. On the District Summary Report, all comments produced by all students in your district are listed. For each comment, the number, and the percent of students that triggered the comment is reported. The summary of individual student

instructional needs for your school can provide information about the areas in which the students need to improve performance. **It is strongly recommended that in addition to reading your school summary report, you also review the individual student report for each student in your classroom.** When reviewing the individual reports, you will find that each student's report will likely differ from another student's report in this section.

It should be noted that the comments on the instructional needs in reading:

- reflect the Delaware content standards for reading;
- are listed from basic to complex as indicated in the Delaware content standards for reading;
- were developed to help teachers examine the instructional needs of their students; and

The reading standards support twelve broadly stated comments that relate to reading. Not all comments are triggered at all grade levels. Following are the comments that can be triggered by student responses to one or more of the reading items:

- providing enough details from the text to answer open-ended questions,
- determining meaning by reading more carefully to retell or restate information from the text,
- determining meaning by using strategies to understand the text,
- interpreting meaning by drawing conclusions about the central ideas in a text,
- interpreting meaning by using information to make inferences,
- interpreting meaning by identifying and understanding why a text was written,
- extending meaning by drawing conclusions and using critical thinking to connect and synthesize information within and across text, ideas, and concepts,
- extending meaning by understanding the effects of author's techniques and decisions,
- extending meaning by using text to formulate, express, and support opinions,
- extending meaning by making, supporting, and extending inferences about contents, events, characters, setting, theme and style, and/or
- continuing use of good reading strategies. Congratulations!

The instructional needs comments provide the student, the parent, the teacher, and the administrator with information about the areas in which the child needs to improve performance.

Writing

In writing, a cluster of comments is produced (triggered) according to a student's "average" performance score across two writing prompts. Triggering the cluster of comments in this way allows us to create a hierarchy of comments that will help push all students towards the upper end of the state writing rubric (scoring guide), and thus toward the state standards for writing.

It should be noted that the comments on the Instructional Needs in writing:

- reflect the Delaware content standards for writing;
- provide parents with information regarding their student's strengths and weaknesses in writing;
- were developed to help teachers examine the instructional needs of their students;
- occur in "clusters" as opposed to individual comments to better reflect the integrated nature of the writing rubric (scoring guide) and the Delaware writing standards.

The writing standards support four broadly stated clusters of comments that relate to writing. The clusters are hierarchical in nature, that is, Cluster 1 more in-depth instructional needs a student requires for improvement, and Cluster 4 requires less in-depth remediation needs.

Each student who took the test will receive a cluster of comments that match their scores. Following are the comments that can be triggered by an individual student's written responses. The comments come directly from the state writing rubric (scoring guide) and the state standards. Two comments: "organizing their writing around a simple topic or central idea" and "working to avoid errors in conventions of English usage, grammar, spelling, and punctuation that interfere with understanding," are repeated in clusters 1 and 2 to show that developing writers need continued instruction in these areas.

Cluster 1

- organizing the writing around a single topic or central idea.
- writing in complete sentences with a variety of length and structure.
- working to avoid errors in conventions of English usage, grammar, spelling, and punctuation that interfere with understanding.
- doing more than restating the prompt.

Cluster 2

- organizing the writing around a simple topic with an introduction, closing, and some transitions.
- working to avoid errors in conventions of English usage, grammar, spelling, and punctuation that interfere with understanding.
- supporting ideas with more specific details.
- doing more than making generalities regarding the prompt.

Cluster 3

- using effective introduction and closing.
- writing in a consistent style with precise vivid word choice.
- writing with a clear logical progression of ideas using smooth transitions.
- including relevant details that are fully elaborated.

Cluster 4

- Congratulations on an excellent performance on at least one of the two writing

prompts. The comments below are to encourage the student to strive for excellence by:

- continuing to write using distinctive voice and style,
- showing an exceptional awareness of readers' needs.

It is strongly recommended that in addition to reviewing your school summary report, you also review the individual score report for each student in your classroom. These reports can be obtained from the DOE website DSTP-OR intranet system. When reviewing the individual reports, you will find that students who have similar scores will have the same comments triggered.

The instructional needs comments contain information that you can utilize when making decisions about writing instruction for students. Remember that the school summary report will indicate the number and percent of students in the school for whom the comment clusters were triggered. This means that the higher the percentage of students indicated as having a need, the more likely it is that additional instruction in that area of the standards will improve test scores.

F. Performance Levels: Reading and Writing

Cut Point Development

During the fall of 1999, a group of 188 participants consisting of 83% teachers, 7% administrators, 9% parents, and 1% participants from organizations or from the community, met under the guidance of Harcourt Educational Measurement, to develop the "Meets the Standard" and "Exceeds the Standard" cut points. A subset of these participants developed the cut points for reading and writing. The methodology used by judges for setting the cut points is referred to as "Item Mapping" by some measurement companies, and "Bookmarking" by other companies. This procedure required several groups of judges to examine a book of DSTP items arranged from the easiest to the most difficult and inserting "bookmarks" at the items they felt most strongly defined where a cut should be placed. Each group of judges worked with a single test at a single grade. Once the judges' recommendations for the "Meets the Standard" and "Exceeds the Standard" performance levels had been finalized, the Department of Education, with the technical assistance of Harcourt Educational Measurement, calculated the cut points for the "Below the Standard" and "Well Below the Standard" levels, and the cut point for the "Distinguished" performance level.

There are five performance levels in reading and writing that are consistent with Delaware's accountability law. The following describe each level:

Performance Level		Described as:
Level 5	Distinguished Performance	Exemplary performance
Level 4	Exceeds the Standard	Very Good
Level 3	Meets the Standard	Good
Level 2	Below the Standard	Needs Improvement
Level 1	Well Below the Standard	Needs Significant Improvement

Cut Points for Reading:

The cut points for the DSTP reading scale score are as follows:

	Well Below the Standard	Below the Standard	Meets the Standard	Exceeds the Standard	Distinguished Performance
Grade 3	386	387	411	465	482
Grade 5	426	427	451	508	529
Grade 8	474	475	500	564	584
Grade 10	476	477	502	573	593

Each scale score indicates the lowest score on the DSTP a student could earn and still achieve the indicated level.

Cut Points for Writing:

The cut points for the DSTP writing raw score are as follows:

	Well Below the Standard	Below the Standard	Meets the Standard	Exceeds the Standard	Distinguished Performance
Grade 3	4	5	7	11	13
Grade 5	5	6	8	11	13
Grade 8	5	6	8	11	13
Grade 10	5	6	8	11	13

Each raw score indicates the lowest score on the DSTP a student could earn and still achieve the indicated level.

Reports Generated by the DSTP-OR System

A DSTP-OR system report can be obtained through the Delaware DOE Web site. The site is **secure** and a password is required to access student information. **Contact your principal regarding the policy for requesting this secure information.** Teachers may obtain a password through approval of their principal to directly access student data. The reports provide student score information for English language arts (reading and writing), mathematics, science, and social studies. There are several DSTP-OR reports that may be of special interest to you as a classroom teacher:

- a report of test scores and/or performance levels of selected students in your classroom or school;
- a summary report of test scores and/or performance levels of selected students in your classroom or school;
- instructional needs report for selected students or school;
- student DSTP performance level comparison based on matched scores.

Teachers and Principals Using the Instructional Needs: Reading and Writing

Ideas for reflection: Reading

Following is a list of broadly stated questions that you can ask yourself and can discuss with other educators as you reflect on the instructional needs comment reports for reading in an attempt to help students improve. As no two classrooms are exactly alike, it is our hope that these questions will lead you to answers that are specific to the needs of your students.

- How does reading instruction in your school align with the Delaware standards for reading?
- What does reading instruction look like in the classroom?
- What pre-reading strategies are used to help students get ready to read?
- What strategies are used to help students self-monitor their comprehension?
- What strategies are used to help students critically analyze and evaluate text?
- What strategies are used to help students identify the central ideas in a text?
- Do students have ample opportunity to read?
- Do students keep reading logs or reading journals?
- How do students select books and other materials for independent reading?
- What strategies are used to encourage students to read a variety of materials, e.g., literary, informative, technical?
- What opportunities are provided for students to talk about what they have read?
- Do students write about what they have read?
- How are students encouraged to compare and contrast information from a variety of sources?
- How is students' reading assessed?
- How do students assess their own reading?
- Have students had an opportunity to take practice test questions like those administered on the DSTP?

Ideas for reflection: Writing

Following is a list of broadly stated questions that you can ask yourself and discuss with other educators as you reflect on the writing instructional needs reports in an attempt to help students improve their writing skills. As no two classrooms are exactly alike, it is our hope that these questions will lead you to answers that are specific to the needs of students.

- How does the writing instruction align with the Delaware standards for writing?
- What does writing instruction look like in your school?
- Is writing process taught?
- Do students have ample opportunity to write?
- Do students have ample opportunity to write for different purposes and audiences using a variety of forms?
- How are the students helped to generate content for their writing?
- How do you help students organize their writing?
- What strategies are used to encourage your students to revise their writing?
- Are students encouraged to write in different content areas?
- How is writing assessed?
- Is the state writing rubric used to teach and/or assess writing?
- How do students assess their writing?
- How is assessment data used to improve your students' writing?
- Have students had an opportunity to take practice test questions like those administered on the DSTP?

Utilizing instructional needs

For the teacher and principal to best utilize the information in the instructional needs part of the classroom report, the following steps are recommended.

1. Meet with other teachers according to standards grouping (i.e., K-3, 4-5, 6-8, 9-10/11) to review the comments and the related standards. It is highly desirable that all teachers within a grade cluster participate in the discussions. The accountability system and the DSTP reflect the degree of success at reaching the standards, which is much broader and more comprehensive than a single grade level.

2. Discuss the kinds of practices, assignments, teaching strategies, etc. that you are using, and whether or not those practices are in line with the standards and address the comments. Some suggestions are included in this guide.

3. Work through the reports with the groups of teachers, discussing strengths, and areas for improvement. If a school seems to have all the comments triggered at about the same rate, teachers should be encouraged to prioritize their efforts so they don't feel as if they have to do everything all at once. Be sure to talk about the kinds of activities that you feel would help students in the particular area(s) of the standards where they seem to need some help.

4. Go through each comment and the related standards to discuss what you might say to a parent whose child has had a particular comment triggered. The comments were intentionally written in teacher/standards language, which will be foreign to some parents, and they will need some clarification. Be prepared to explain to parents how you intend to address their concerns in your teaching practices.

5. Meet regularly throughout the year to review your progress in teaching the standards, working with parents, etc.

This kind of strategy should help make the best use of the instructional needs data, particularly in terms of helping understand the standards and what they can do to help students perform at even higher levels. We would encourage you to read the data carefully and make decisions about how and what to teach.

We would also encourage you not to expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not. The DSTP was specifically designed to help identify student strengths and weaknesses, but working to enhance their strengths and to overcome their weaknesses is best placed in your hands as professionals who instruct students on a daily basis.

Parent-Teacher Conference Materials

Several recently published documents may be of value to you when meeting with parents about the test scores of their children:

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- Student learning
- Tips to motivate your children to do well in school
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- Help your child learn at home
- Making learning enjoyable
- Know your child's learning style
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Parent's Declaration of Responsibilities

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- Communication: Parent/Family Responsibilities and School Responsibilities
- Parenting: Parent/Family Responsibilities and School Responsibilities
- Student Learning: Parent/Family Responsibilities and School Responsibilities

- Volunteering: Parent/Family Responsibilities and School Responsibilities
- School Decision Making and Advocacy: Parent/Family Responsibilities and School Responsibilities
- Collaborating with the Community: Parent/Family Responsibilities and School Responsibilities

Superintendents and Boards of Education

Test scores are a **powerful tool when used properly** by the Chief School Officer and Boards of Education. They provide a measure of progress made and can be an indicator of priorities. In the beginning, superintendents and school boards should find monitoring the reading and writing scores of the schools in their district, as well as the statistics associated with the reading and the writing instructional needs comments, useful information to drive decision making and resource allocation. This monitoring should be done over time.

Caution must be used during the monitoring process. Reaction without thorough analysis of trend data, and the analysis of the underlying factors related to the scores trends would not be prudent. It should be a goal to treat the causes of low scores, and not the symptoms. Remember that instructional programs often help improve scores. Various programs can be explored with principals and teachers in the district to best benefit the districts, schools, teachers, and most importantly, the students.

A process that is an excellent first step that can be used by districts seeking to improve achievement is **curriculum alignment**. This activity involves studying what is written about the curriculum, what is taught in the district's classrooms, and what is assessed or tested. District curriculum workers, principals, and teachers should analyze the instructional programs of the district and schools in regard to these elements and then take whatever steps are needed to bring the three into alignment. For example, if a study shows that by the end of a grade cluster, students are expected to be able to respond to literary texts representing various historical periods in English Language Arts, then all students must have opportunities to acquire those skills during that cluster. For districts to conduct alignment activities in English language arts and writing that center on Delaware's Content Standards, they will need the documents that are available to all Delaware districts: The alignment teams will need:

- ***New Directions: State of Delaware English Language Arts curriculum Framework, 1995;***
- ***Teacher's Desk Reference, Grades 6-8, 1998;***
  or
- ***Teacher's Desk Reference, Grades 9-12;***
- ***Delaware Student Testing Program Item Samplers, 1998, 1999, and 2000.***

The 1995 document forms the foundation on which the DSTP is based; however, it should be noted that the performance indicators for English language arts are essentially the same as those found in the frameworks, so that a district could use either in its alignment work. Of course, districts will want to include local curriculum documents in the study as well.

Standards-based alignment also poses new issues to boards of education, superintendents, and other curriculum planners. In the days before standards, norm reference tests asked students to "identify", or "choose", or "match." This required factual learning and rarely asked students to do anything with what they were supposed to have learned. The Delaware State Testing Program, grounded as it is in high standards for all learners, asks students to "analyze," "evaluate," "apply," and more. To help students meet or exceed these high standards and to apply what they have learned requires classrooms in which problem solving, inquiry, and application are fostered.

We would also encourage administrators and boards of education **not to** expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not. The DSTP was specifically designed to help identify student strengths and weaknesses, but working to enhance their strengths and to overcome their weaknesses is best placed in the hands of the professionals who instruct students on a daily basis. The document is considered a public document; therefore, it can be downloaded and/or unlimited copies can be made of various sections for any conferences.

SECTION III: UNDERSTANDING THE MATHEMATICS REPORT

The reports received from Harcourt Educational Measurement contain six sections of information regarding student performance:

A. Grade, testing date and SAT9/Level and Form; and the date the SAT9 Norms were developed.
B. The mathematics scaled score for each **student** compared to other students at the **same grade level** in the school;
   The average mathematics scaled score for the **school** (for students in the **same grade** as the student);
   The average mathematics scaled score for the **district** (for students in the **same grade** as the student);
   The average mathematics scaled score for the **State of Delaware** (for students in the **same grade** as the student);
C. The student's SAT9 percentile rank for mathematics;
D. The student's instructional needs in mathematics; and
E. The student's Performance Level and score in mathematics.

Each section of the Mathematics Individual Report is discussed separately.

A. Grade, Testing Date, SAT9 Level/Form and SAT9 Norms

This part of the score report provides general information about the administration of the test:

- The grade level of the students (03, 05, 08, or 10) is reported next to **Grade**.
- The date the students took this test is then listed.

SAT9 norms

Following the test date is the SAT9 **Level/Form**. The SAT9 is an acronym for the *Stanford Achievement Test-Ninth edition*. The SAT9 is a standardized, nationally administered test. To create the norms, the SAT9 Mathematics test was administered to a representative sample of approximately 250,000 students nationwide, and their mathematics score results are referred to as "norms". The norms become a reference point used to compare the performance of any student who then takes the SAT9. For the 2000 tests, the year the norms were developed for mathematics was 1995.

B. Score Comparisons of Grade Tested

Individual Student Score

This section contains score comparisons of the student's mathematics score against all of the students at the **same grade level** who took the test in the school, in the district and in the state. The students' average score is found on the line between the lowest scale score listed on the left-hand side of the line and the maximum scale score on the right. Remember that each student in your school is being compared with other students at the **same grade** level in the school, in the district and in the state.

If you have students at different grade levels, you will see that different grade levels have different scale values. This difference is related to the highest and lowest score that the students would normally be expected to achieve at each different grade level. For tenth grade students, the scale listed ranges from 300 to 800; for eighth grade students, the scale ranges from 250 to 750; for fifth grade students, it ranges from 175 to 700; and for third grade students, it ranges from 150 to 650. It is expected that older students will perform at a higher level than younger students will. Appendix A contains a copy of individual score report.

The School Score

In this section you can also see how all the students in your school are performing on mathematics compared to all the students in the district who took the test by examining the position of the school's score on the scale. Remember that these scores reflect performance of students in the **same grade** as your students. The individual student report shows the school's average mathematics score as does a copy of your school's score report sent to your principal.

The District Score

In this section you can also see how all the students in your school district are performing on mathematics compared to all the Delaware students who took the test by examining the position of the district's score on the scale. Remember that these scores reflect performance of all district students in the **same grade** as your students. The

district score is reported on the individual score report and the school summary report as well the district summary report sent to superintendents.

The State of Delaware Score

In this section you can also see how all the students who took the test in the State of Delaware are performing on mathematics by examining the position of the state's score on the scale. Remember that these scores reflect the performance of all students in the **same grade** as your students. The state score is reported on the individual score report, the school summary report, and the district summary report as well as the statewide summary report sent to the Department of Education

C. A Student's Percentile Rank

SAT9

The percentile rank for mathematics is obtained from the abbreviated form of the SAT9 that is embedded in the DSTP. The SAT9 is the timed portion of the DSTP, and is included for several reasons:

- It allows comparisons of the mathematics performance of Delaware students on a nationally used standardized test, thus permitting the comparison of student performance on general mathematics proficiency to other students in the United States.
- A subset of the SAT9 items is directly related to the Delaware Mathematics Standards and is part of the DSTP score.
- The embedded SAT9 items permit the important and efficient psychometric process of equating and scaling the DSTP test from one administration of the test to subsequent administrations of the test.

Percentile rank

An average percentile rank is a way of looking at how well and individual student in your school performed on the SAT9 Mathematics test relative to all the same grade students in the national norms. Percentile rank gives you the additional information as to what percent of **same-grade** students in the norms scored higher or lower than the individual student. For example, if a student in your school had a mathematics percentile rank of 91, it means that 91 percent of the students in the national norms scored **below** the average rank of the student and only 9 percent scored **at or higher**. If the student had an average mathematics percentile rank of 54, it means that 54 percent of the students in the national norms scored **below** the students and that 46 percent scored **at or higher** than your students. If the student had an average percentile rank of 29, it means that 29 percent of students in the national norms scored **below** the student and that 71 percent scored **at or higher**.

In some cases a student might score higher or lower on the SAT9 Mathematics test than on the DSTP Mathematics test. It must be kept in mind that the student's average SAT9 percentile rank score cannot be directly compared to the relative scale position of

the DSTP Mathematics test score. There are several reasons why these scores are non-comparable:

- The SAT9 Mathematics test is not directly aligned with Delaware Mathematics Content Standards. A portion of the SAT9 Mathematics test is related to the Mathematics Content Standards and is included in the DSTP score, whereas the DSTP Mathematics test is **completely aligned** with the Mathematics Content Standards.
- The SAT9 is entirely comprised of multiple-choice items, whereas the DSTP is comprised of multiple choice, short answer, and extended response items. Writing short answers and extended responses require very different skills than selecting the answer on a multiple-choice item. Because the items on the SAT9 and the DSTP Mathematics test are very different in format (multiple choice vs. multiple choice, short answer, and extended response), they measure very different aspects of mathematics, and their results cannot be directly compared.
- The score for the DSTP Mathematics test is based on a substantially larger number of test items than the score for the SAT9 Mathematics test. This means that the DSTP Mathematics test samples a larger portion of the student's mathematics skills as defined by the Mathematics Content Standards than does the SAT9.

Appendix A contains a copy of an individual score report containing percentile ranks.

D. Instructional Needs

This section of the report provides feedback that depends on what items each student in your classroom answered correctly and incorrectly, and/or how the items are answered. The number of students and the percent of students who triggered each comment are provided. **It is strongly recommended that in addition to reviewing your school summary report, you also review the individual student report for each student in your classroom.** When reviewing the individual reports, you will find that students who have similar scores will have the same comments triggered.

E. Performance Levels

Performance levels were developed during the fall of 1999. To determine performance level, cut scores were first developed.

Cut point development

During the fall of 1999, a group of 188 participants consisting of 83% teachers, 7% administrators, 9% parents, and 1% of participants from organizations or from the community, met under the guidance of Harcourt Educational Measurement, to develop the "Meets the Standard" and "Exceeds the Standard" cut points. A subset of these participants developed the cut points for mathematics. The methodology used by judges for setting the cut points is referred to as "Item Mapping" by some measurement companies, and "Bookmarking" by other companies. This procedure required several groups of judges to examine a book of DSTP items arranged from the easiest to the most difficult and inserting "bookmarks" at the items they felt most strongly defined

where a cut should be placed. Each group of judges worked with a single test at a single grade. Once the judges' recommendations had been finalized, the Department of Education, with the technical assistance of Harcourt Educational Measurement, calculated the cut points for the "Below the Standard" and "Well Below the Standard" levels, and the cut point for the "Distinguished" performance level.

There are five performance levels in mathematics that are consistent with Delaware's accountability law. The following describe each level:

Performance Level		Described as:
Level 5	Distinguished Performance	Exemplary performance
Level 4	Exceeds the Standard Performance	Very Good
Level 3	Meets the Standard Performance	Good
Level 2	Below the Standard Performance	Needs Improvement
Level 1	Well Below the Standard Performance	Needs Significant Improvement

The cut points for the DSTP mathematics Scale Score are as follows:

	Well Below the Standard	Below the Standard	Meets the Standard	Exceeds the Standard	Distinguished Performance
Grade 3	381	382	407	464	499
Grade 5	423	424	449	503	525
Grade 8	468	469	493	531	549
Grade 10	499	500	525	559	574

Each scale score indicates the lowest score on the DSTP a student could earn and still achieve the indicated level.

Beginning with this spring 2000 DSTP score results, students who fall into the "Below the Standard" and "Well Below the Standard" in mathematics in grade 8 will be required to have an Individual Improvement Plan (IIP) developed for them. In the future, the Performance Level for mathematics for each individual student will be used to determine if the student will receive recognition and awards, whether or not the student will attend summer school, be promoted to the next higher grade, or be eligible for a State of Delaware diploma.

Reports Generated by the DSTP-OR System

A DSTP-OR system report can be obtained through the Delaware DOE Web site. The site is **secure** and a password is required to access student information. Teachers can obtain a password through approval of their principal to directly access student data. . Contact your principal regarding the policy for requesting this secure information.

The reports provide student score information for English language arts (reading and writing), mathematics, science, and social studies. There are several reports that may be of special interest to you:

1. List of test scores and/or performance levels of selected students in a classroom or school;
2. Summary report of test scores and/or performance levels of selected students in a classroom or school;
3. Instructional needs report for selected students or school
4. Student DSTP performance level comparison based on matched scores.

Using Instructional needs

Instructional needs reports provide the number and percent of students in a class who received each indicator comment for mathematics. The mathematics instructional needs comments contain information that teachers can utilize when making decisions about mathematics instruction for their students. Remember that the instructional needs report will indicate the number and percentage of students for whom the comment was triggered. This means that the higher the percentage of students indicated as having a need, the more likely it is that additional instruction in that area of the standards will improve test scores.

It should be noted that the mathematics instructional needs:

- reflect the Delaware content standards for mathematics;
- are listed in a manner consistent with the Delaware standards for mathematics;
- were developed to help teachers examine the instructional needs of their students.

The mathematics standards support approximately twelve broadly stated comments—depending on the grade level—that relate to mathematics. Not all comments are triggered at all grade levels. The comments for the mathematics instructional needs reports were developed by grouping together several of Delaware's mathematics content standards with similar content. For example, content standards 5 and 6 are reported under the category *Number Concepts*. Standards 7 and 10 are reported under the category *Patterns, Algebra, and Functions*. Following are all the comments that can be triggered by student responses to the mathematics items. They are listed according to grade level so that teachers can see the connections and integration of concepts across the curriculum.

Grade 3

Number Concepts

- measuring
- using computation strategies with understanding

- using estimation skills to approximate an answer
- using the concept of place value
- using fractions to represent part of a whole

Patterns, Algebra, and Functions

- using basic number properties such as even/odd, reversibility of multiplication, etc.
- recognizing and extending a variety of patterns

Geometry

- recognizing and transforming geometric figures
- analyzing properties of simple geometric figures

Probability and Statistics

- constructing, reading, and interpreting simple graphs
- determining the likelihood of simple events

Reasoning and Communication

- using mathematical reasoning in solving multi-step problems
- communicating mathematical arguments

Grade 5

Number Concepts

- measuring length, time, area, or volume
- using computation or estimation strategies with understanding
- using the concept of relative size of numbers
- modeling fractions and decimals with situations and pictures
- using estimation skills to approximate an answer

Patterns, Algebra, and Functions

- using algebraic reasoning
- recognizing and extending a variety of patterns

Geometry

- recognizing and transforming geometric figures
- analyzing properties of simple geometric figures

Probability and Statistics

- constructing, reading, and interpreting simple graphs
- determining the likelihood of simple events
- calculating and using the mean (average) of a set of values in meaningful context

Reasoning and Communication

- using mathematical reasoning to solve multi-step problems
- communicating mathematical arguments

Grade 8

Number Concepts

- using estimation skills to approximate an answer
- modeling fractions and decimals with situations and pictures
- determining the equivalence or relative sizes of fractions, decimals, percents, and exponential expressions
- applying the concepts of area and volume

Patterns, Algebra, and Functions

- representing concrete situations using graphs or variables
- recognizing, extending, or generalizing a variety of patterns
- solving simple equations using informal methods

Geometry

- analyzing properties of geometric figures

Probability and Statistics

- interpreting a variety of statistical graphs
- determining the probability of events

Reasoning and Communication

- using mathematical reasoning to solve multi-step problems
- communicating mathematical arguments

Grade 10

Number Concepts

- using mathematical operations, including those involving exponents, roots, and matrices with understanding
- finding the area of regions or volumes of space shapes

Patterns, Algebra, and Functions

- using algebra to describe and analyze situations
- constructing and interpreting graphs
- solving equations and inequalities

Geometry

- analyzing and applying properties of geometric figures
- coordinate geometry
- applying right triangle relationships

Probability and Statistics

- determining the probability of events
- analyzing data and graphs

Reasoning and Communication

- using mathematical reasoning to solve multi-step problems
- communicating mathematical arguments

Ideas for Reflection

Following is a list of broadly stated questions that you can ask as you reflect on the instructional needs reports in an attempt to help your students improve. As no two schools are exactly alike, it is our hope that these questions will lead teachers and administrators to answers that are specific to the needs of their students.

- Are there areas of instruction that seem to require more attention than they are currently receiving? For example, are probability and statistics integrated into the ninth and tenth grade mathematics curriculum?
- Are the topics that seem to need additional attention actually taught? For example, do sixth and seventh grade teachers "get to" geometry?
- When topics are presented, does the mode of instruction fit the desired outcomes? For example, do all elementary level students "estimate and then measure" a variety of objects using standard and non-standard units?
- Do teacher questions during instruction elicit higher-order thinking about the mathematics?
- Are students required to explain their work on tests and quizzes in writing or by drawing graphs or charts? Are rubrics used to score student responses?
- Do students need more experience applying concepts in context? Are problem contexts used to promote access for diverse learning?

Teachers Utilizing Instructional Needs

For a teacher to best utilize the information in this part of the report we would recommend the steps below. A brief vignette of a discussion around the geometry standard is included to help illustrate the process.

1. Teachers from a standards grouping (i.e., K-3, 4-5, 6-8, 9-10/11) meet to review the comments and the related standards. It is highly desirable that all teachers within a grade cluster participate in the discussions.

   A group of middle level mathematics teachers meet to examine the geometry comments triggered by their students. Teachers come prepared with the standards, their lesson plans, and their district curriculum guides.

2. Discuss the kinds of practices, assignments, teaching strategies, etc., that you are using, and whether or not those practices are in line with the standards and address the comments. Some suggestions are included in this guide.

   Teachers examine the comments and the patterns by which they were triggered. In our hypothetical example 25% of the students triggered transforming geometric figures, and 60% triggered Analyzing properties of geometric figures. Teachers should discuss the significance of the results—in this instance it would appear that they have done a fairly good job addressing the need identified in the standards to "recognize, construct, and transform geometric figures." However, it would also appear that some changes might be required if students were to improve at "analyzing properties of and discovering relationships among geometric figures." Teachers should be guided through Mathematics Standard 8, spatial sense and geometry, in an attempt to see where their own curriculum addresses the parts of the standards that the test indicates need to be addressed.

3. Work through the reports discussing strengths and areas for improvement. If a school seems to have all the comments triggered at about the same rate, teachers should be encouraged to prioritize their efforts so they don't feel as if they have to do everything all at once. Be sure to talk about the kinds of activities that you feel would help students in the particular area(s) of the standards where they seem to need some help.

   Teachers discuss the reasons why one of the bullets was triggered more often than the other. Was it a timing issue in the curriculum? Something the adopted text doesn't cover? etc. Is the conversation one that will require teachers from the elementary or the high school and/or the district as well to ensure that materials covered at one level are built on at the next level rather than just repeated?

   Or is it the way the material is being presented? Are students being asked to discover or investigate the properties, as opposed to just listing them to pass a quiz or test? If a close examination reveals that procedural rather than conceptual knowledge is being valued, what changes are needed to bring conceptual knowledge to the fore?

   Also, teachers need to be reminded that no value judgments can or should be made from this information—this simply provides a starting point for the discussion that can help focus efforts over the coming year.

4. Go through each comment and the related standards in order to discuss what you might say to a parent whose child has had a particular comment triggered. The comments were intentionally written in teacher/standards language, which will be foreign to some parents, and they will need some clarification. Be prepared to explain to parents how you intend to address their concerns in your teaching practices

   Teachers discuss the changes they intend to make as a result of the scores. For example, they recommend some adjustments to the curriculum by

including more activities in geometry (e.g., investigations using computer software, to help students build conceptual knowledge.) Teachers point to those changes and identify that they either have been or will be made with the specific intent of helping the students in a particular area.

5. Meet regularly throughout the year to review their progress in teaching the standards, working with parents, etc.

   Teachers remind themselves that change does not occur overnight, that help is available, and then work hard to track progress over time.

This kind of strategy should help you make the best use of the instructional needs data, particularly in terms of helping understand the standards and what they can do to help students perform at even higher levels. We would encourage you to peruse the data carefully as they make decisions about how and what to teach.

We would also encourage you not to expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not. The DSTP was specifically designed to help identify student strengths and weaknesses, but working to enhance their strengths and to overcome their weaknesses is best placed in your hands as professionals who instruct students on a daily basis.

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- Collaborating with the Community: Parent/Family Responsibilities and School Responsibilities

The document is considered a public document; therefore, it can be downloaded and/or unlimited copies can be made of various sections for parent-teacher conferences.

Principals Using Instructional Needs

Remember that the school level instructional needs comments report will indicate the number and percentage of students in the school for whom the comments were triggered. This means that the higher the percentage of students indicated as having a need, the more likely it is that additional instruction in that area of the standards will improve test scores.

Ideas for reflection

Following is a partial list of broadly stated questions that you and your teachers can ask and discuss as you reflect on the instructional needs in an attempt to help students improve. As no two schools are exactly alike, it is our hope that these questions will begin to lead principals and teachers to answers that are specific to the needs of their schools and students.

- Are there areas of instruction that seem to require more attention than they are currently receiving? For example, are probability and statistics integrated into the ninth and tenth grade mathematics curriculum?
- Are the topics that seem to need additional attention actually taught? For example, do six and seventh grade teachers "get to" geometry?
- When topics are presented, does the mode of instruction fit the desired outcomes? For example, do all elementary level students "estimate and then measure" a variety of objects using standard and non-standard units?
- Do teacher questions during instruction elicit higher-order thinking about the mathematics?
- Are students required to explain their work on tests and quizzes in writing or by drawing graphs or charts? Are rubrics used to score student responses?
- Do students need more experience applying concepts in context? Are problem contexts used to promote access for diverse learning?

For the principal to best utilize the information in this part of the report we would recommend the steps below. A brief vignette of a discussion around the geometry standard is included to help illustrate the process.

1. Gather together the teachers from a standards grouping (i.e., K-3, 4-5, 6-8, 9-10/11) to review the comments and the related standards. It is highly desirable that all teachers within a grade cluster participate in the discussions. The accountability system and the DSTP reflect a schools' degree of success at reaching the standards, which is much broader and more comprehensive than a single grade level.

   For example, a principal or administrator could gather a group of middle level mathematics teachers to examine the geometry comments triggered by their students. Teachers should come prepared with the standards, their lesson plans, and their district curriculum guides.

2. Discuss the kinds of practices, assignments, teaching strategies, etc. that teachers are using, and whether or not those practices are in line with the standards and address the comments. Some suggestions are included in the subsequent sections of this guide.

   Examine the comments and the patterns by which they were triggered. In our hypothetical example 25% of the students triggered transforming geometric figures, *and 60% triggered* Analyzing properties of geometric figures. *Teachers should discuss the significance of the results—in this instance it would appear that they have done a fairly good job addressing the need identified in the standards to "recognize, construct, and transform geometric figures." However, it would also appear that some changes may be required if students are to improve at "analyzing properties of and discovering relationships among geometric figures." Teachers should be guided through Mathematics Standard 8, spatial sense and geometry, in an attempt to see where their own curriculum addresses the parts of the standards that the test indicates need to be addressed.*

3. Work through the reports with the groups of teachers, discussing strengths and areas for improvement. All teachers should be reminded that year one of the DSTP is a baseline year and subsequently no value judgments about student performance should be made from test scores, although inferences about the possibilities for improvement are entirely justified. After that, however, if a school seems to have all the comments triggered at about the same rate, teachers should be encouraged to prioritize their efforts so they don't feel as if they have to do everything all at once. Be sure to talk about the kinds of activities that teachers feel would help students in the particular area(s) of the standards where they seem to need some help.

   Discuss the reasons why one of the bullets was triggered more often than the other. Was it a timing issue in the curriculum? Something the adopted text doesn't cover? etc. Is the conversation one that will require teachers from the elementary or the high school and/or the district as well to ensure that materials covered at one level are built on at the next level rather than just repeated?

   Or is it the way the material is being presented? Are students being asked to discover or investigate the properties, as opposed to just listing them to pass

a quiz or test? If a close examination reveals that procedural, rather than conceptual knowledge is being valued, what changes are needed to bring conceptual knowledge to the fore?

Also, teachers need to be reminded that no value judgments can or should be made from this information—this simply provides a starting point for the discussion that can help focus efforts over the coming year.

4. Have teachers go through each comment and the related standards in order to discuss what they might say to a parent whose child has had a particular comment triggered. The comments were intentionally written in teacher/standards language, which will be foreign to some parents, and they will need some clarification. Be prepared to explain to parents how you intend to address their concerns in your teaching practices

   Teachers could discuss the changes they intend to make as a result of the scores. For example, schools might make some adjustments to the curriculum by including more activities in geometry, e.g., investigations using computer software, to help students build conceptual knowledge. Teachers could point to those changes and identify that they either have been or will be made with the specific intent of helping the students in a particular area.

5. Have teachers meet regularly throughout the year to review their progress in teaching the standards, working with parents, etc.

   Remind the teachers that change does not occur overnight, that help is available, and then work hard to track progress over time.

This kind of strategy should help principals and teachers make the best use of the instructional needs information, particularly in terms of helping understand the standards and what can be done to help students perform at even higher levels. We would encourage principals and teachers to peruse the data carefully as they make decisions about how and what to teach.

We would also encourage administrators and teachers not to expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not. The DSTP was specifically designed to help identify student strengths and weaknesses, but working to enhance their strengths and to overcome their weaknesses is best placed in the hands of the professionals who instruct students on a daily basis.

Superintendents and Boards of Education

Test scores are a **powerful tool when used properly** by the Chief School Officer and Boards of Education. They provide a measure of progress made and an indicator of priorities. In the beginning superintendents and school boards should find monitoring the mathematics scores of the schools in their district, as well as the statistics associated with the mathematics instructional needs useful information to drive decision

making and resource allocation. This monitoring should be done over time. The best process is one where there is the wisest use of resources.

Caution must be used during the monitoring process. Reaction without thorough analysis of trend data and analysis of the underlying factors that are related to the scores trends would not be prudent. It should be a goal to treat the causes of low mathematics scores, and not the symptoms.

A process that is an excellent first step that can be used by districts seeking to improve achievement is **curriculum alignment**. This activity involves studying what is written about the curriculum, what is taught in the district's classrooms, and what is assessed or tested. District curriculum workers, principals, and teachers should analyze the instructional programs of the district and schools in regard to these elements and then take whatever steps are needed to bring the three into alignment. For example, if a study shows that by the end of a grade cluster, students are expected to be able to use tables and graphs to describe patterns in mathematics then all students must have opportunities to acquire those skills during that cluster.

For districts to conduct alignment activities in mathematics that center on Delaware's content Standards, they will need some documents that are available to all Delaware districts. Alignment teams will need:

- ***New Directions: State of Delaware Mathematics curriculum Framework, 1995;***
- ***Teacher's Desk Reference, Grades 6-8, 1998;***
  and/or
- ***Teacher's Desk Reference, Grades 9-12, 1999;***
- ***Delaware Student Testing Program Item Samplers, 1998, 1999 and 2000;***

The 1995 document forms the foundation on which the DSTP is based; however, it should be noted that the performance indicators for mathematics are essentially the same as those found in the frameworks, so that a district could use either in its alignment work. Of course, districts will want to include local curriculum documents in the study as well.

Standards-based alignment also poses a new issue to boards of education, superintendents, and other curriculum planners. In the days before standards, norm reference tests asked students to "identify", or "choose", or "match." This required factual learning and rarely asked students to apply what they were supposed to have learned. The Delaware State Testing Program, grounded as it is in high standards for all learners, asks students, for example, to "analyze," "evaluate," "apply," and more. To help students meet or exceed these high standards and to apply what they have learned requires classrooms in which problem solving, inquiry, and application are fostered. Often a concentration of instructional programs will help improve scores. This can be explored with principals and teachers in the district.

We would also encourage boards of education, administrators and teachers **not to** expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not. The DSTP was specifically designed to help identify student strengths and weaknesses, but working to enhance their strengths and to overcome their weaknesses is best placed in the hands of the professionals who instruct students on a daily basis.

The document is considered a public document; therefore, it can be downloaded and/or unlimited copies can be made of various sections for parent-teacher conferences.

SECTION IV: UNDERSTANDING THE SCIENCE AND SOCIAL STUDIES REPORT

The Science and Social Studies Individual Report has three sections of information on student performance:

A. Grade and testing date.

B. The Science and Social Studies scaled scores for an **individual student** compared to other students at the **same grade level** in the school;
The average Science and Social Studies scaled scores for the **school;**
The average Science and Social Studies scaled scores for the **district** ;
The average Science and Social Studies scaled scores for the **State of Delaware**;

C. An individual student's points earned compared with the average points earned by other students in the school, district and state for each area within the science test: Inquiry, Physical science, Earth science, and Life science. An individual student's points earned and percent of points earned for each area within social studies: Civics, Economics, Geography, and History.

D. Individual students Levels on Performance in Science and Social Studies;

Each section of the Science and Social Studies Individual Report is discussed.

A. Grade and Testing Date

Like the English Language Arts and Mathematics Report, this part of the score report provides general information about the administration of the test:

- The grade level (4, 6, 8, or 11) of the student is reported next to **Grade.**
- The date the individual student took this test is then listed.

Unlike the reading and mathematics score report, there are no national standardized tests in science and social studies that match the Delaware Content Standards, thus no national norms are available.

B. Score Comparisons of Grade Tested: Science and Social Studies

This section contains score comparisons of individual student's science and social studies scores against all students who took the tests at the **same grade** level in the individual student's school. You can compare an individual student's performance to the performance of all same grade students in the school, district and in the state. The scale on the right is the social studies score and is structured similarly.

The Individual Student's Score

In this section you can see how well the individual student is performing in science and social studies by locating the position of an individual student's score on the scale. Remember that an individual student is being compared with other students at the **same grade** level in this school year who took the test. You can also compare an individual student's performance to the performance of all same grade students in the district and in the state.

The School's Score

Also, you can see how all the students in your school are performing in science and in social studies compared to all the **same grade** students in the district or state by examining the position of the school's score on the scale. Remember that these scores reflect performance of students in the **same grade** as the individual student.

The District's Score

Also, you can see how all the students at the individual student's same grade level in your school district is performing in science and in social studies compared to all the same grade level Delaware students who took the test by examining the position of the district's score on the scale.

The State of Delaware's Score

In addition, you can see how all the students who took the science and social studies tests in the State of Delaware are performing by examining the position of the state's score on the scale. Remember that these scores reflect performance of all students at the **same grade** level as the individual student.

C. Sub-Scores

Science

This section provides feedback that reflects the number of items an individual student answered correctly in each of the following areas of science: inquiry, physical science, earth science, and life science. Listed in the left hand column is the number of points out of a total, the individual student scored in each area. The corresponding columns give the average number of points scored by other students in the school, district, and state.

Social Studies

This section of the report provides feedback that depends on the number of items an individual student answered correctly in each of the following areas of social studies: civics, economics, geography, and history. Listed in the left hand column is the number of points out of a total, the individual student scored in each area. The corresponding columns give the average number of points scored by other students in the school, district, and state.

D. Performance Levels

During the summer of 2001 performance levels were established for grades 8 and 11 Science and Social Studies. The same process used for determining the performance levels in Mathematics and Reading was implemented.

Using the Test Performance Analysis

The individual student score report lists the number of points earned and the percent of the total points a student received. The school, district and state reports lists the **mean (average) number of points** students earned rather that the percent of points earned.

Science

Ideas for reflection

Following is a partial list of broadly stated questions that you can ask and discuss as you reflect on the science test performance analysis. As no two classrooms are exactly alike, it is our hope that these questions will begin to lead teachers to answers that are specific to the needs of their students.

- Are there areas that are not actually being taught?
- Are there areas of instruction that need more attention than they are currently receiving?
- When areas are presented, does the mode of instruction fit the desired outcomes?

- During instruction, do teachers ask for explanations and/or require students to provide evidence about the science concepts taught?
- Are students required to collect, organize, and analyze data?
- Do students need more experience applying concepts across earth, physical, and life sciences?
- Are test questions administered in class similar to those on the DSTP? (See the item sampler for science on the DOE website.)

Utilizing the information: Teachers and Principals

To best use the information we would recommend the steps below:

1. Meet with other teachers from a standards grouping (i.e., K-3, 4-5, 6-8, 9-12) to review the analyses. It is highly desirable that all teachers within a grade cluster participate in the discussions. The accountability system and the DSTP reflect the degree of success at reaching the standards, which are much broader and more comprehensive than a single grade level.
2. Discuss the kinds of practices, assignments, teaching strategies, etc. that the teachers are using, and whether or not those practices are in line with the standards and address the comments.
3. Work through the analyses with the groups of teachers, discussing strengths and areas for improvement. Teachers should be encouraged to move forward and to prioritize their efforts so they don't feel as if they have to do everything all at once. Be sure to talk about the kinds of activities that you feel would help students in the particular area(s) of the standards where they seem to need some help.
4. Go through each analyzed area and their related standards to discuss what you might say to a parent whose child has had a problem in that area. You should be prepared to explain to parents how they intend to address parental concerns in their teaching practices.
5. Meet regularly throughout the year to review progress in teaching the standards, working with parents, etc.

This kind of strategy should help you make the best use of the test performance analysis data, particularly in terms of helping understand the standards and what you can do to help students perform at even higher levels. We would encourage everyone to peruse the data carefully as they make decisions about how and what to teach. We would also encourage you not to expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not.

Social Studies

Ideas for reflection

Following is a partial list of broadly stated questions that you and other teachers can ask and discuss as you reflect on the social studies test performance analysis. As no two classrooms are exactly alike, it is our hope that these questions will begin to lead principals and teachers to answers that are specific to the needs of their students.

- Are there content areas that seem to require more attention than they are currently receiving?
- Are there content areas that could be integrated into social studies instruction?
- Does the mode of instruction fit the desired outcomes?
- Do questions during instruction elicit higher-order thinking as reflected in the social studies standards?
- Are students required to think using social studies data, such as graphs, maps, charts, artifacts, and documents?
- Are students required to explain their work on tests and quizzes in writing or by drawing diagrams, graphs, or charts? Are rubrics used to score students responses?
- Do students need more experience applying concepts in context? Are problem contexts used to promote access for diverse learning?
- Do you administer tests that require application of knowledge?
- Do you administer test questions in class similar to those on the DSTP? (See the item sampler for social studies on the DOE website.)

Using the information: Teachers and Principals

To best utilize the information we would recommend the steps below:

1. Meet with other teachers from a standards grouping (i.e., K-3, 4-5, 6-8, 9-12) to review the analyses. It is highly desirable that all teachers within a grade cluster participate in the discussions. The accountability system and the DSTP reflect the degree of success at reaching the standards, which are much broader and more comprehensive than a single grade level.
2. Discuss the kinds of practices, assignments, teaching strategies, etc. that the teachers are using, and whether or not those practices are in line with the standards and address the comments.
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4. Go through each analyzed area and their related standards to discuss what you might say to a parent whose child has had a problem in that area. You should be prepared to explain to parents how they intend to address parental concerns in their teaching practices.
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This kind of strategy should help you make the best use of the test performance analysis data, particularly in terms of helping understand the standards and what you can do to help students perform at even higher levels. We would encourage everyone to peruse the data carefully as they make decisions about how and what to teach.
We would also encourage you not to expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not.

Parent-Teacher Conference Materials

Several recently published documents may be of value to you when meeting with parents about the test scores of their sons or daughters:

PTA Parent/Family Resource Guide

This guide is published by the Delaware PTA, and found in every school, community center, and library in Delaware. The guide can also be found on the web page of the Delaware PTA at: **www.delawarepta.org**. Particularly relevant sections of the handbook cover the following topics:

- Student learning
- Tips to motivate your children to do well in school
- Homework hints
- Help your child learn at home
- Making learning enjoyable
- Know your child's learning style
- Activities to help your child as a reader

The handbook is considered a public document; therefore, it can be downloaded or unlimited copies can be made of various sections for parent-teacher conferences.

Parent's Declaration of Responsibilities

This document is published by the Delaware PTA, and found in every school, community center, and library in Delaware. It can also be found on the web page of the Delaware PTA at: **www.delawarepta.org**. Provided is information on how the parent and family can get involved in the education of their children. Topics covered include:

- Communication: Parent/Family Responsibilities and School Responsibilities
- Parenting: Parent/Family Responsibilities and School Responsibilities
- Student Learning: Parent/Family Responsibilities and School Responsibilities
- Volunteering: Parent/Family Responsibilities and School Responsibilities
- School Decision Making and Advocacy: Parent/Family Responsibilities and School Responsibilities
- Collaborating with the Community: Parent/Family Responsibilities and School Responsibilities

Superintendents and Boards of Education

Test scores are a **powerful tool when used properly** by the Chief School Officer and Boards of Education. They provide a measure of progress made and an indicator of priorities. In the beginning, superintendents and school boards should find monitoring the science and social studies scores of the schools in their district, as well as the statistics associated with the science and social studies test performance analysis useful information to drive decision making and resource allocation. This monitoring should be done over time. The best process is one where there is the wisest use of resources. Caution must be used during the monitoring process. Reaction without

thorough analysis of trend data and analysis of the underlying factors that are related to the scores trends would not be prudent. It should be a goal to treat the causes of low science or social studies scores, and not the symptoms.

A process that is an excellent first step that can be used by districts seeking to improve achievement is **curriculum alignment**. This activity involves studying what is written about the curriculum, what is taught in the district's classrooms, and what is assessed or tested. District curriculum workers, principals, and teachers should analyze the instructional programs of the district and schools in regard to these elements and then take whatever steps are needed to bring the three into alignment. For example, if a study shows that by the end of a grade cluster, students are expected to be able to use tables and graphs to describe patterns in science or social studies, then all students must have opportunities to acquire those skills during that cluster.

For districts to conduct alignment activities in mathematics that center on Delaware's content Standards, they will need some documents that are available to all Delaware districts. Alignment teams will need:

- ***New Directions: State of Delaware Social Studies Curriculum Framework, 1995;***
- ***New Directions: State of Delaware Science Curriculum Framework, 1995;***
- ***Teacher's Desk Reference, Grades 6-8, 1998;***
  and/or
- ***Teacher's Desk Reference, Grades 9-12, 1999;***
- ***Delaware Student Testing Program Item Samplers, 1998, 1999, and 2000;***

The 1995 document forms the foundation on which the DSTP is based; however, it should be noted that the performance indicators for science and social studies are essentially the same as those found in the frameworks, so that a district could use either in its alignment work. Of course, districts will want to include local curriculum documents in the study as well.

Standards-based alignment also poses a new issue to boards of education, superintendents, and other curriculum planners. In the days before standards, norm reference tests asked students to "identify", or "choose", or "match." This required factual learning and rarely asked students to apply what they were supposed to have learned. The Delaware State Testing Program, grounded as it is in high standards for all learners, asks students, for example, to "analyze," "evaluate," "apply," and more. To help students meet or exceed these high standards and to apply what they have learned requires classrooms in which problem solving, inquiry, and application are fostered. Often a concentration of instructional programs will help improve scores. This can be explored with principals and teachers in the district.

We would also encourage boards of education, administrators and teachers **not to** expect easy solutions, quick fixes, or step-by-step approaches that presume the test has been designed to solve problems—it has not. The DSTP was specifically designed

to help identify student strengths and weaknesses, but working to enhance their strengths and to overcome their weaknesses is best placed in the hands of the professionals who instruct students on a daily basis.

The document is considered a public document; therefore, it can be downloaded and/or unlimited copies can be made of various sections for parent-teacher conferences.

Section V: Understanding Reading and Mathematics in Grades 2, 4, 6, 7, 9, 11, and 12

The spring of 2001 was the first time the **DSTP** was administered at these grade levels. The first-time administration included items being field-tested and the abbreviated SAT9 for reading (Reading Comprehension) and for mathematics (Problem Solving). Field Test Items are not used to generate any student level data, therefore for the Spring 2001 DSTP in these grades there is only a percentile score for the individual student.

SAT9 Score Report Information

The SAT9 is an acronym for the *Stanford Achievement Test-Ninth Edition*. The Abbreviated SAT9 is a short version of the SAT9, and is a standardized, nationally administered test. To create the national norms for the SAT9 and the Abbreviated SAT9, they were administered to a representative sample of 225,000 to 250,000 students nationwide. Their score results are referred to as national norms, or more usually, "norms". The norms become a reference point against which to compare the performance of any student who then takes the SAT9 or the Abbreviated SAT9. The norms for this test were developed in 1995.

APPENDIX A: SAMPLE REPORTS

Following are samples of the various reports from the 2001 administration of the DSTP. These reports **do not contain real data**. The reports included are:

A1. English Language Arts Individual Report (Reading and Writing)

A2. Mathematics Individual Report

A3. Science and Social Studies Individual Report

A4. Grade 2, 4, 6, 7, 9, 11, and 12 SAT9 Reading Comprehension and Problem Solving Report and score definitions

A5. DSTP On-line Reports

A6. Score Definitions

A7. Normal Curve/Normal Curve Equivalents/Stanines

A1. English Language Arts Individual Report (Reading and Writing)

2001 DELAWARE STUDENT TESTING PROGRAM
English Language Arts Individual Report for

Student ID#:

GRADE:	03
TEST DATE:	03/15/01
SAT9 LEVEL/FORM:	P2/T
SAT9 NORMS:	1995 PD 14

SCHOOL:
DISTRICT:

PERFORMANCE LEVELS

This test is designed to measure your child's progress in terms of the Delaware Content Standards. The Reading and Writing performance of this student falls into one of the five levels.

Performance Levels are:	Reading Level and score	Writing Level and score
Distinguished		
Exceeds the standard		
Meets the standard		
Below the standard	✓ 439	✓ 6.00
Well below the standard		

SCORE COMPARISONS OF GRADE TESTED

	Reading (175–700)	Writing (1–15)
Student	439	6.00
School	463	7.26
District	463	7.26
State	471	7.34

Certain items on the Reading part of the test were administered to a national sample of students. The percentile below represents how your child performed on those items compared to other students in the same grade throughout the country.

1 ——— 50 ——— 99

INSTRUCTIONAL NEEDS

To achieve a higher level in READING, your child should work on:

- [illegible] details from the text to answer [illegible] questions
- determining meaning by reading more [illegible] to recall or [illegible] information from the text
- determining meaning by using [illegible]
- interpreting meaning by drawing conclusions about the central idea of a text
- extending meaning by drawing conclusions and using critical thinking to connect and [illegible] information within and across text [illegible]
- extending meaning by using text to formulate, express, and support [illegible]
- extending meaning by making, supporting, and extending judgments about [illegible], events, characters, setting, theme and style

To achieve a higher level in WRITING, your child should continue to work on:

- organizing the writing around a single topic or central idea
- writing in complete sentences with a variety of length and structure
- working to [illegible] errors in conventions of English usage, grammar, spelling, and punctuation that interfere with understanding
- adding more than restating the prompt

COPY 01

Please see your child's teacher for more information.

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A2. Mathematics Individual Report

2001 DELAWARE STUDENT TESTING PROGRAM

Mathematics Individual Report for

Student ID#:

SCHOOL:
DISTRICT:

GRADE: 05
TEST DATE: 03/15/01
SAT9 LEVEL/FORM: 12/T
SAT9 NORMS: 1995 PD 14

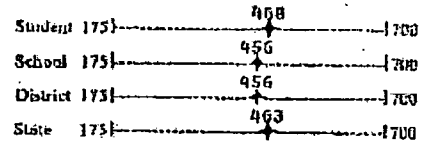
PERFORMANCE LEVELS

This test is designed to measure your child's progress in terms of the Delaware Content Standards. The Mathematics performance of this student falls into one of the five levels.

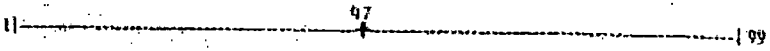
Performance Levels are:	Mathematics Level and score
Distinguished	
Exceeds the standard	
Meets the standard	468
Below the standard	
Well below the standard	

SCORE COMPARISONS OF GRADE TESTED

Mathematics



Certain items on the Mathematics part of the test were administered to a national sample of students. The percentile below represents how your child performed on those items compared to other students in the same grade throughout the country.



INSTRUCTIONAL NEEDS

To achieve a higher level in MATHEMATICS, your child should work on:

Number Concepts

Geometry

Reasoning and Communication

COPY 01

Please see your child's teacher for more information.

2001 DELAWARE STUDENT TESTING PROGRAM

Science & Social Studies Individual Report for

JOHN DOE
Student ID#: 000000

SCHOOL: SPRINGFIELD MIDDLE - 000
DISTRICT: SPRINGFIELD - 00

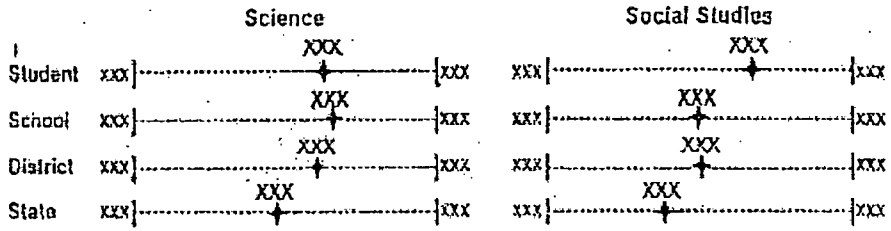
GRADE: 08
TEST DATE: 05/01/01

PERFORMANCE LEVELS

This test is designed to measure your child's progress in terms of the Delaware Content Standards. The Science and Social Studies performance of this student falls into one of the five levels.

Performance Levels are:	Science level and score	Social Studies level and score
Distinguished		
Exceeds the standard		
Meets the standard	✓ XXX	✓ XXX
Below the standard		
Well Below the standard		

SCORE COMPARISONS OF GRADE TESTED



CONTENT AREAS

SCIENCE:

	Total Points Possible	Student Points Earned	Average Points Earned School	District	State
Inquiry	12	XX	XX.X	XX.X	XX.X
Physical Science	17	XX	XX.X	XX.X	XX.X
Earth Science	17	XX	XX.X	XX.X	XX.X
Life Science	22	XX	XX.X	XX.X	XX.X

SOCIAL STUDIES:

	Total Points Possible	Student Points Earned	Average Points Earned School	District	State
Civics	17	XX	XX.X	XX.X	XX.X
Economics	17	XX	XX.X	XX.X	XX.X
Geography	17	XX	XX.X	XX.X	XX.X
History	17	XX	XX.X	XX.X	XX.X

COPY 01

Please see your child's teacher for more information.

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ATTACHMENT # 28 – Page 6 of 10

A3. Science and Social Studies Individual Reports

A4. SAT9 Reading Comprehension and Problem Solving

08/06/2001 06:50 FAX 2109218700 007

STANFORD ACHIEVEMENT TEST SERIES, NINTH EDITION
ABBREVIATED

STUDENT REPORT FOR

Age:
Student No:

SCHOOL:
DISTRICT:
TEST TYPE: MULTIPLE CHOICE

GRADE: 04
TEST DATE: 03/01

SUBTESTS AND TOTALS	No. of Items	Raw Score	Scaled Score	National PR-S			
Reading Comp.	30	14	612	[illegible]			
Problem Solving	30	13	587	18-3			

NATIONAL GRADE PERCENTILE BANDS

1 10 30 50 70 90 99

Recently this student took the *Stanford Achievement Test*. This brief description of the scores presented above tells how the student did on the tests compared to the performance of students in the same grade from across the country. This student did not complete enough of the Stanford battery to yield a global indication of performance on the test.

In reading, the score is somewhat below average for the grade. Continued opportunities to read a variety of materials should be helpful.

In mathematics, the score is low. The student seems to be having difficulty in this area. Additional experience with mathematics procedures and problem solving could be helpful to future learning in mathematics.

It is important to keep in mind that test scores give only one picture of how a student is doing in school and that many things can affect a student's test scores. Therefore, it is important to consider other kinds of information as well. The school has more detailed information about how the student is doing.

STANFORD LEVEL/FORM: Intermediate 1/T Copy 01
1995 NORMS: Period 11 National Process No. [illegible]

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Delaware Department of Education
Delaware Student Testing Program
Welcome!

Welcome to the Delaware Student Testing Program (DSTP) home page! DSTP is Delaware's initiative to measure how well our students are prepared relative to the Delaware Content Standards in English language arts, mathematics, science, and social studies. DSTP is the responsibility of the Assessment and Analysis Group at the Delaware Department of Education.

NEW TO THIS SITE

Examining the Effects of Drafting and Revising Patterns on Student's Writing Performance and the Implications in Writing Instruction

Establishing Targets and School Performance Ratings: Report and Recommendations to the Delaware State Board of Education

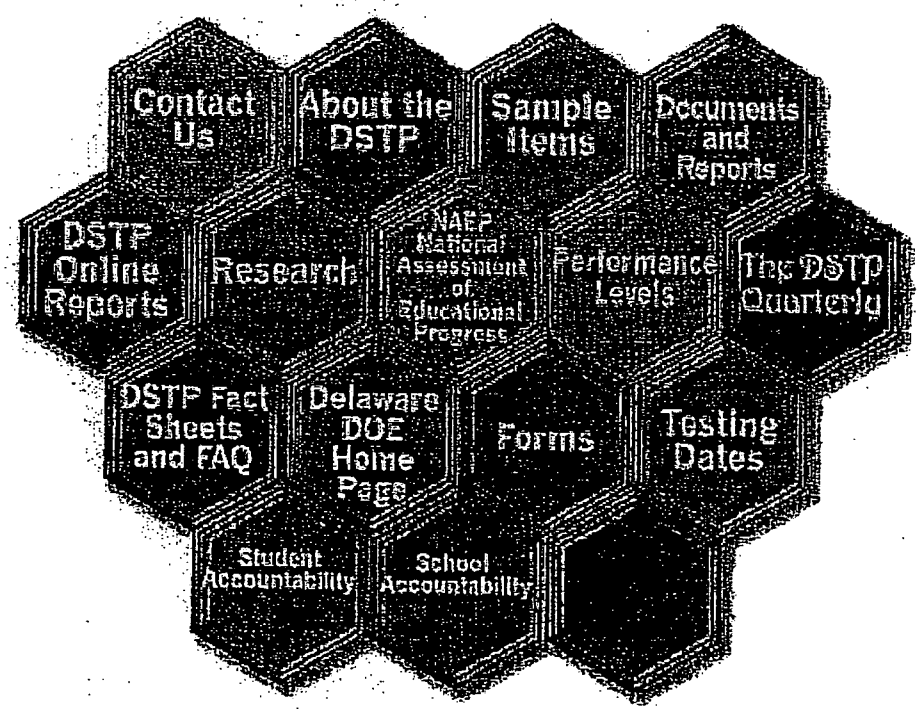
DSTP Technical Report 1998-2000

An Analysis of Achievement Gap between Black and White Students on a Statewide Assessment

Note: Links containing the icon require Adobe® Acrobat® Reader, available at no charge:

Download Microsoft Internet Explorer

Toll Free DSTP Hotline
1-877-838-3787



http://www.doe.state.de.us/aab/

RAW SCORE: A raw score is the number of questions answered correctly for a subtest or total.

USES: Raw scores are used to convert to the various derived scores.

SCALED SCORE: Scaled scores represent approximately equal units on a continuous scale, using numbers that range from 1 through 999. Scaled scores facilitate conversions to other score types and are suitable for studying change in performance over time. While scaled scores are equivalent across levels of the same subtest and domain total, they are not equivalent from one subtest to another.

USES: Scaled scores have the advantage of representing approximately equal units on a continuous scale. Thus, a difference of 5 points between two students' scores represents the same amount of difference in performance wherever it occurs on the scale. Once a raw score has been converted to its scaled score, it is not necessary to be concerned with the level of the test that was taken when the percentile rank, stanine, or grade equivalent for that score is obtained. This makes scaled scores especially suitable for comparing scores when different levels of the test have been administered and for studying change in performance over time.

NATIONAL PERCENTILE RANK: National percentile ranks indicate the relative standing of a student in comparison with other students in the same grade in the norm (reference) group who took the test at a comparable time. Percentile ranks range from a low of 1 to a high of 99, with 50 denoting average performance for the grade. The percentile rank corresponding to a given score indicates the percentage of students in the same grade obtaining scores equal to or less than that score.

JSES: Percentile ranks are useful for comparing a student's performance on a particular subtest relative to the performance of other students. Percentile ranks are also useful for comparing a student's performance across content areas in a score profile.

NATIONAL STANINE: Stanines are scores that range from a low of 1 to high of 9, with 5 designating average performance. National stanines, like national percentile ranks, indicate a student's relative standing in the national norm group. However, since stanines represent approximately equal units of ability, they are particularly useful for comparing a student's scores across subtests in a stanine profile.

ISES: Because of their equal-interval property (where the difference between stanines 2 and 4 represents about the same difference in ability as the difference between stanines 5 and 7), stanines make it easy to identify broad performance categories. Stanine scores of 1, 2, and 3 are usually considered to reflect below-average performance; stanines 4, 5, and 6 are generally thought of as average; and stanines 7, 8, and 9 are above average.

GRADE EQUIVALENTS: A grade equivalent is a score that represents the average performance of students tested in a given month of the school year. The grade equivalent scale ranges from K.0 (beginning Kindergarten) to 12.9 with scores above 12.9 designated PHS (post high school). The numeral to the left of the decimal point refers to the grade for which the score is typical, and the numeral to the right of the decimal point represents one tenth of the school year, or one school month.

USES: Grade equivalents are used most effectively in comparing students' performance with a national sample across grades, levels, and forms of a test. They can best be used to interpret the performance of groups of students.

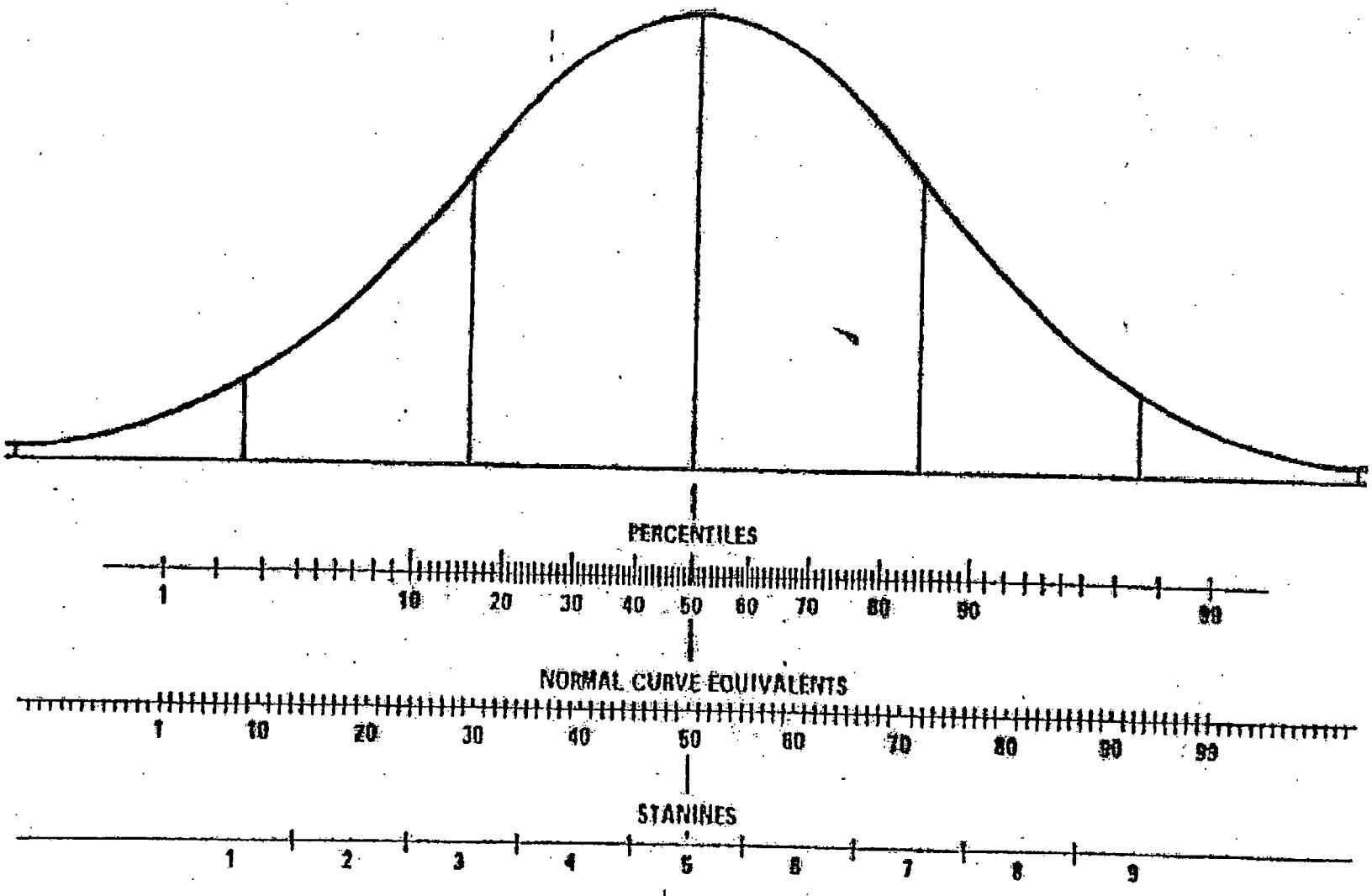
NORMAL CURVE EQUIVALENTS: The Normal Curve equivalent (NCE) is a standard score with a known mean and standard deviation, such that NCE scores of 1, 50 and 99 correspond to percentile ranks of 1, 50, and 99 respectively.

USES: Normal Curve Equivalents were developed as a way of reporting achievement in the evaluation of funded programs. Researchers who developed this score were looking for a score that combined the advantages of the other score types and had none of the disadvantages; i.e., a score that was norm-referenced (like percentile rank), could be used in computations (as with scaled scores and stanines), comprised smaller units than stanines, and was more interpretable than scaled scores.

ACHIEVEMENT/ABILITY COMPARISON: An Achievement/Ability Comparison (AAC) is available when an achievement test and an ability test are administered concurrently. The AAC describes a student's performance on each subtest and total score of the achievement test in comparison to other students earning the same grade stanine on the ability test. An AAC range of "High" (H) indicates the top 23% of the comparison group; "Low" (L), the lowest 23%; and "Middle" (M), the middle 54%.

USES: The AAC score allows a teacher to identify a skill area in need of additional attention. If, for example, a student has an AAC of "Low" for a given subtest, this indicates the achievement score for that subtest is low in comparison to that of other students of the same measured ability.

NORMAL CURVE



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