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ABSTRACT

The Delaware Student Testing Program ties student achievement to the state's content standards that define the knowledge and skills Delaware students need to succeed beyond high school. This report explains the testing program to teachers and presents a guide to interpreting test results. Section 1 introduces the testing program, which tests students in English language arts and mathematics at grades 3, 5, 8, and 10. Sections 2 and 3 contain information on the Language Arts Report and the Mathematics Report, respectively. This information includes state norms and performance levels, the rank of the teacher's classroom and comparisons of scores for the classroom, school, and state. Comments on instructional needs are provided, along with materials for parent-teacher conferences about the reports. (SLD)

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# Delaware Student Testing Program

## A SCORE RESULTS GUIDE FOR TEACHERS

Prepared by the Assessment and Analysis Group  
Assessment and Accountability Branch

Delaware Department of Education  
December, 1998

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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. For the past several years Delaware educators have been developing the Delaware Student Testing Program (DSTP), which now will serve 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 honest assessment of where we are is the first step towards getting where we want to be.

In the Spring of 1998, the Department of Education, along with Harcourt Brace Educational Measurement, began its annual administration of the DSTP to students in grades 3, 5, 8, and 10, to provide us with an accurate measure of how our students are doing relative to Delaware's rigorous content standards.

## Purpose of the test

The Delaware Student Testing Program is designed to:

- serve as a measure of progress toward the Delaware 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;
- serve as a primary indicator in the statewide accountability system;
- help districts deal with the issue of who should and should not be promoted from grade to grade.

# Questions and answers about the 1998 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, 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:** Many aspects of reading are assessed using literary, technical, and informational passages. Students are asked to read passages and then demonstrate their ability to analyze and interpret what they have read by answering multiple choice questions, short answer questions, and extended response questions. Because reading is fundamental to success in all areas of education, the reading test is particularly important. Student performance on the reading test will determine whether or not students will be promoted.

**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 (question or statement). Second, students are asked to write a short response to a question about a reading passage. This is done so students recognize that reading and writing are integrally connected.

**Mathematics:** The mathematics section reflects that success in mathematics depends on a student’s ability to grasp key concepts and solve realistic problems. Multiple choice questions, short answer questions, 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 mathematics test will determine whether or not students will be promoted.

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

Student correct responses to test items are called raw scores. On the DSTP the reading and mathematics raw scores are converted to a scale score 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. The scaled scores on the DSTP permit comparison of the scores of a student over time from grade 3 to grade 5 to grade 8 to grade 10. Scaled scores allow 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 five types of scores that can be reported:

1. Individual student scores
2. Classroom scores (if requested by the classroom teacher)
3. School scores
4. District scores
5. State scores

### **Student scores:**

The results are reported to parents and to schools so they can see indicators of their child's academic strengths and weaknesses. In turn both parents and teachers can then begin to assist the student in meeting the rigorous content standards.

After the DSTP test is administered to Delaware students in 1999, the results will be used to develop decision points for promotion of students and for graduation. Students will need a score equal to or greater than the decision point score to be promoted to the next grade, or to be granted an academic diploma in the State of Delaware.

### **Classroom Scores (optional upon request):**

The results of all students in a classroom are reported if the teacher or principal requests the report. This request must be made prior to mailing the answer sheets for scoring. The report can assist the teacher identify common problems students are having in the classroom so that she/he can begin to address them using class time and resources. These problems can be addressed through classroom instruction and/or individual instruction.

### **School Scores:**

The results from student performance on the DSTP for the entire school can assist the principal in evaluating how the curriculum is increasing student learning: 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? DSTP results can provide a signal to the principal that additional resources may be needed or reallocated to assist the teachers in improving instruction.

### **District Scores:**

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

### **Statewide Scores:**

The results of the statewide scores permit the Department of Education and legislators in Delaware to monitor the 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 identify strengths and weaknesses and continue to work for changes to improve the educational process.

## Reports

DSTP reports are distributed to parents, teachers, school administrators, and Boards of Education as indicated. Examples of each report are included in Appendix A.

### Reports sent to parents

Parents receive two reports:

1. The 1998 DELAWARE STUDENT TESTING PROGRAM English Language Arts Individual Report, and
2. The 1998 DELAWARE STUDENT TESTING PROGRAM Mathematics Individual Report.

### Reports sent to teachers

If requested, teachers receive two reports for each request:

1. The 1998 DELAWARE STUDENT TESTING PROGRAM English Language Arts Report for the Classroom, and
2. The 1998 DELAWARE STUDENT TESTING PROGRAM Mathematics Report for the Classroom.

### Reports sent to administrators

#### The School Report

Each school receives two reports for each 3<sup>rd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, or 10<sup>th</sup> grade level:

1. The 1998 DELAWARE STUDENT TESTING PROGRAM English Language Arts Report for the School, and
2. The 1998 DELAWARE STUDENT TESTING PROGRAM School Mathematics Report for the School.

#### The District Report

Each District Superintendent (and ultimately the Board of Education) receives two reports for each 3<sup>rd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, or 10<sup>th</sup> grade level:

1. The 1998 DELAWARE STUDENT TESTING PROGRAM English Language Arts Report for the District, and
2. The 1998 DELAWARE STUDENT TESTING PROGRAM Mathematics Report for the District.

# SECTION II: Understanding the Language Arts Report

If you or your principal requested the English Language Arts Classroom Summary Report, there will be five sections of information regarding the performance of your students in reading and writing:

1. Grade, testing date and SAT9 Level and Form.
2. Score comparisons of grade tested for reading for the whole class.
3. Score comparisons of grade tested for writing for the whole class.
4. Percentile score for reading for the whole class.
5. Instructional needs for reading and writing for the whole class.

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

## 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 in your classroom (03, 05, 08, or 10) is reported next to **Grade**.
- The date the students took this test is then listed.
- Following the test date is the **SAT9 Level/form**. The SAT9 is an acronym for the *Stanford Achievement Test-Ninth edition*. This test is a standardized, nationally administered test.

## **SAT9 Norms**

The SAT9 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 used to compare the performance of any student who then takes the SAT9 test. The year the norms were developed for reading was 1995.

## **Score Comparisons of Grade Tested: Reading**

This section contains score comparisons of your students' reading score against all students at the same grade level in Delaware. You can also compare your students' performance to the performance of all same-grade students in the school, in the district, and in the state. If you have classes 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 of the students at each different grade level, and simply provides an additional piece of information to teachers. Your School's Score

### **Your Classroom Score**

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

### **Your District's Score**

In this section you can also see how all the students in the school district are performing on reading 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 same grade students.

### **The State of Delaware's Score**

In this section you can also 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 each respective grade level score report reflects performance of all district students at that grade level.

## **Performance Levels**

This information is not yet available because the performance levels in reading for Delaware students have not yet been determined. The process to set the decision points for the performance levels will take place during the summer of 1999 after the spring administration of the 1999 DSTP. A summary of the number and percent of students at each performance level will be reported on the classroom report.

Beginning with the 2000 test administration, for each individual student, decision points based on Performance Level for **reading** and **mathematics** will be used for promotion and graduation decisions. The level at which a student performs will then be used to determine if the student will attend summer school, whether or not a student is promoted to the next higher grade, or whether or not a student will graduate with a State of Delaware diploma.

## Your Classroom's Rank (Percentile Rank) On Reading

A percentile score is another way of looking at how well your students performed on the reading test. The percentile rank, like the scale scores shows how your students performed 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 students in your classroom. For example, if your class of students had a reading percentile score of 91, it means that 91 percent of the students in the national norms scored below your students and only 9 percent scored at or higher. If your class had a reading percentile of 54, it means that 54 percent of the students in the national norms scored below your students and that 46 percent scored at or higher than your students. If your class had a percentile score of 29, it means that twenty percent of students in the national norms scored below the students in your class and that 71 percent scored at or higher than your class.

## Instructional Needs Comments: Reading

This section of the report provides feedback that depends on what items each student answered correctly and incorrectly, and/or how the items were answered. All comments produced (triggered) by all students in your classroom are listed. For each comment, the number and the percent of students that triggered the comment is reported. **It is strongly recommended that in addition to reading your classroom summary report, you also review the 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. For example, if a student answered incompletely a series of open-ended **reading** items that needed more details, then a comment would be produced suggesting that the child work on "producing enough details to answer a open-ended questions."

### Using the comments

For a teacher to best utilize the information in this 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 the subsequent sections of this guide.
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. 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.
4. Go through each comment and the related standards 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.
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 the hands of the professionals who instruct students on a daily basis.

Finally, we would point out that the most INAPPROPRIATE thing that could be done with the Instructional Needs Comments report is to compare classrooms, either with each other or with a state or district average. The comments supplied in the reports were designed to provide valid data at the individual classroom level only.

The instructional comments for reading provide information that you can utilize when making decisions about reading instruction for your students. Remember that the classroom level report will indicate the number and percent of students in the classroom 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 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.

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.

1. Providing enough details to answer open-ended questions<sup>1</sup>
2. Reading more carefully to better understand what is happening in a text
3. Understanding the central ideas in a text
4. Identifying information necessary to understanding a text
5. Using information to make reasonable interpretations
6. Identifying and understanding why a text was written
7. Drawing conclusions based on information in the text
8. Understanding the effects of an author's decisions
9. Connecting and synthesizing information into a clear interpretation within and across texts, ideas, and concepts
10. Formulating, expressing, and supporting opinions
11. Making and supporting inferences about contents, events, characters, setting, theme, and style
12. Continuing use of good reading strategies

### **Ideas for reflection**

Following is a list of broadly stated questions that you can ask yourself and can discuss with other teachers as you reflect on the Instructional Needs comment reports in an attempt to help their 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 your reading instruction align with the Delaware standards for reading?
- What does reading instruction look like in your classroom?
- What pre-reading strategies do you use to help students get ready to read?
- What strategies do you use to help students self-monitor their comprehension?
- What strategies do you use to help students critically analyze and evaluate text?
- What strategies do you use to help students identify the central ideas in a text?
- Do your students have ample opportunity to read?
- Do you or your students keep reading logs or reading journals?
- How do your students select books and other materials for independent reading?
- What do you do to encourage students to read a variety of materials, e.g., literary, informative, technical?
- What opportunities do you provide for students to talk about what they have read?
- Do your students write about what they have read?

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<sup>1</sup> This comment refers to the degree to which students provided complete answers to constructed response items.

- How do you encourage students to compare and contrast information from a variety of sources?
- How do you assess students' reading?
- How do your students assess their own reading?

## **Score Comparisons of Grades Tested: Writing**

This section contains score comparisons of your students' writing score against all students at the same grade level who took the test in Delaware. You can also compare your students' performance to the performance of all same-grade students in the school, in the district, and in the state.

The writing score is the average number of correct responses your students made to the items over the two writing tests administered. Your students' writing score is found on the line between the 3 to 15 scale. A score of 3 is the lowest score a student can obtain, and a score of 15 is the highest score a student can obtain.

### **Your School's Score**

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

### **Your District's Score**

In this section you can also see how all the students in the 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 performance of all district same grade students.

### **The State of Delaware's Score**

In this section you can also 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 each respective grade level score report reflects performance of all district students at that grade level.

## **Performance Levels**

This information is not yet available because the performance levels for Delaware students have not yet been determined. This process will take place during the summer of 1999 after the spring administration of the 1999 DSTP. After this process is completed, the next classroom report will contain a summary of the number and percent of students at each performance level.



# Instructional Needs Comments: Writing

This section of the report provides feedback that depends on the score based on the average number of correct responses over the two writing tests administered to each student in your class. All comments produced (triggered) by all students in your classroom are listed. For each comment, the number and the percent of students that triggered the comment are reported. It is strongly recommended that in addition to reviewing your classroom summary report, you also review the 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.

## Using the Comments

The Instructional Needs comments contain information that you can utilize when making decisions about writing instruction for your students. Remember that the classroom level 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.

A cluster of comments is triggered according to a student's "average" performance score across two writing prompts. Triggering the cluster of comments related to the student's score allows us to create a hierarchy of comments that can help push all students towards the upper end of the state writing rubric, and thus towards 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;
- 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 and the Delaware writing standards.

The writing standards support four broadly stated clusters of comments that relate to writing. Each student that took the test will receive a cluster of comments to relate to their scores. Following are the hierarchical clusters of comments that can be triggered by the students' 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 simple 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 or central idea
- 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 and varied introductions and closings
- writing in a consistent style with precise vivid word choice
- writing with a clear logical progression of ideas using smooth transitions
- responding directly to the prompt

### **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 in the same effective manner
- trying new and varied approaches when producing written work

### **Ideas for reflection**

Following is a list of broadly stated questions that you can ask yourself and discuss with other teachers as you reflect on the diagnostic reports in an attempt to help students improve their writing. 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 your writing instruction align with the Delaware standards for writing?
- What does writing instruction look like in your classroom?
- Do you teach the writing process?
- Do your students have ample opportunity to write?
- Do your students have ample opportunity to write for different purposes and audiences using a variety of forms?
- How do you help your students generate content for their writing?
- How do you help your students organize their writing?
- What strategies do you use to encourage your students to revise their writing?
- Do you encourage students to write in different content areas?
- How do you assess writing?
- Do you use the state writing rubric to teach and/or assess writing?
- How do your students assess their writing?
- How do you use assessment data to improve your students' writing?

# 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](http://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](http://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

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

# SECTION III:

# Understanding the Mathematics Report

The mathematics individual report has four sections of information on classroom performance:

1. Grade, testing date and SAT9 Level and Form
2. Score comparisons of grade tested for mathematics
3. Percentile score for mathematics
4. Instructional needs for mathematics.

Each section of Mathematics Report is discussed below.

## 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 in your classroom (03, 05, 08, or 10) is reported next to **Grade**.
- The date the students took this test is then listed.
- Following the test date is the **SAT9 Level/form**. The SAT9 is an acronym for the *Stanford Achievement Test-Ninth edition*. This test is a standardized, nationally administered test.

### SAT9 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 a “norms”. The norms become a reference point used to compare any

individual student's performance. For the 1998 tests, the year the norms were developed for mathematics was 1995.

## **Score Comparisons of Grade Tested: Mathematics**

This section contains score comparisons of your students' mathematics score against all students at the same grade level who took the test in Delaware. You can also compare your students' performance to the performance of all same-grade students in the school, in the district, and in the state.

If you have classes 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 of the students at each different grade level, and simply provides an additional piece of information to teachers.

### **Your Classroom Score**

In this section you can see how well your students are performing by locating the position of your classroom score on the scale. Remember that your students are being compared with other students at the same grade who took the test in Delaware. You can also compare your students' performance to the performance of all same-grade students in the school, in the district, and in the state.

To assist you in providing help to your students in mathematics, comments have been provided under the "Instructional Needs" section of the report to guide you. All comments triggered by the students in your class are listed. Suggestions on ways of helping your students in reading are found at the end of this section.

### **Your School's Score**

In this section you can also see how all the students at the same-grade level in your school are doing in mathematics compared to all the Delaware students in the same grade who took the test by examining the position of the school's score on the scale.

### **Your District's Score**

In this section you can see how well all the students at the same grade level in your district are performing in mathematics as compared to all students at their grade level in Delaware who took the test by examining the position of the district's score on the scale.

### **The State of Delaware's Score**

In this section you can also see how all the students at the same grade level in the state of Delaware are doing on mathematics by examining the position of the state's score on the scale.

## Performance Levels

This information is not yet available because the performance levels in mathematics for Delaware students have not yet been determined. The process to set the decision points for the performance levels will take place during the summer of 1999 after the spring administration of the 1999 DSTP. After this process is completed the next report will contain a summary of the number and percent of students at each performance level.

Beginning with the 2000 test administration, for each individual student, decision points based on Performance Level for **reading** and **mathematics** will be used for promotion and graduation decisions. The level at which a student performs will then be used to determine if the student will attend summer school, whether or not a student is promoted to the next higher grade, or whether or not a student will graduate from a Delaware school.

## Your Classroom's Rank (Percentile Rank) On Mathematics

A percentile score is another way of looking at how well your students performed on the mathematics test. The percentile rank, like the scale scores shows how your students performed relative to the students in the national norms. Percentile rank gives you the additional information as to what percent of students in the norms scored higher or lower than students in your classroom. For example, if your class of students had a mathematics percentile score of 98, it means that 98 percent of the students in the national norms scored below your students and only 2 percent scored at or higher. If your class had a mathematics percentile of 45, it means that 45 percent of the in the national norms scored below your students. If your class had a percentile score of 20, it means that twenty percent of students in the norms scored below the students in your class and that 80 percent scored at or higher than your class.

## Instructional Needs Comments

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 reading your classroom report, you also review the student reports for each student in your classroom.**

### Using the Comments

The mathematics Instructional Needs comments contain information that teachers can utilize when making decisions about mathematics instruction for their students. Remember that the classroom level diagnostic report will indicate the number and percentage of students in the classroom 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 comments:

- 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 diagnostic 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

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### Number Concepts

- measuring
- using appropriate computation strategies
- 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

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

### Reasoning and Communication

- solving multi-step problems
- communicating mathematical arguments

## Grade 5

---

### Number Concepts

- measuring length or finding the area of simple figures
- using appropriate computation or estimation strategies
- using the concept of place value
- modeling fractions and decimals with situations and pictures
- using mathematical operations with understanding

### Patterns, Algebra, and Functions

- using algebraic reasoning
- recognizing and extending a variety of patterns
- reading and interpreting simple graphs

### 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

- solving multi-step problems
- communicating mathematical arguments
- reasoning about properties of numbers or geometric figures

## Grade 8

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### 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

- transforming geometric figures
- analyzing properties of geometric figures

## Probability and Statistics

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

## Reasoning and Communication

- solving multi-step problems
- communicating mathematical arguments

## Grade 10

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### Number Concepts

- using mathematical operations, including exponents and roots, 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

- multi-step problem solving
- communicating mathematical arguments

## Ideas for reflection

Following is a list of broadly stated questions that you can ask as you reflect on the diagnostic 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 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? Do students need more experience applying concepts in context? Are problem contexts used to promote access for diverse learning?

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 the subsequent sections of 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 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 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. 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 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 discuss the changes they intend to make as a result of the scores. For example, they recommend that 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 diagnostic 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 the hands of the professionals who instruct students on a daily basis.

Finally, we would point out that the most **INAPPROPRIATE** thing that could be done with these Instructional Needs comments is to compare classrooms, either with each other or with a state or district reports. The classroom reports were designed to provide valid data at the classroom level only. The total test scores provide the only valid point of comparison among schools, either over time or within a given year.

# 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](http://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 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](http://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

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

# Appendix A: Sample Reports

Following are samples of the various reports from the 1998 administration of the DSTP.  
The reports included are:

1. Individual Report for English Language Arts (Reading and Writing).
2. Classroom Report for English Language Arts (Reading and Writing).
3. State Report for English Language Arts (Reading and Writing).

1998 DELAWARE STUDENT TESTING PROGRAM  
English Language Arts Individual Report for

JANE DOE

Student ID#: 123456

GRADE: 03  
TEST DATE: 05/04/98  
SAT9 LEVEL/FORM: P3/T  
SAT9 NORMS: 1995 ES

TEACHER: SMITH - 1515  
SCHOOL: SPRINGFIELD ELEM - 12003  
DISTRICT: SPRINGFIELD - 12

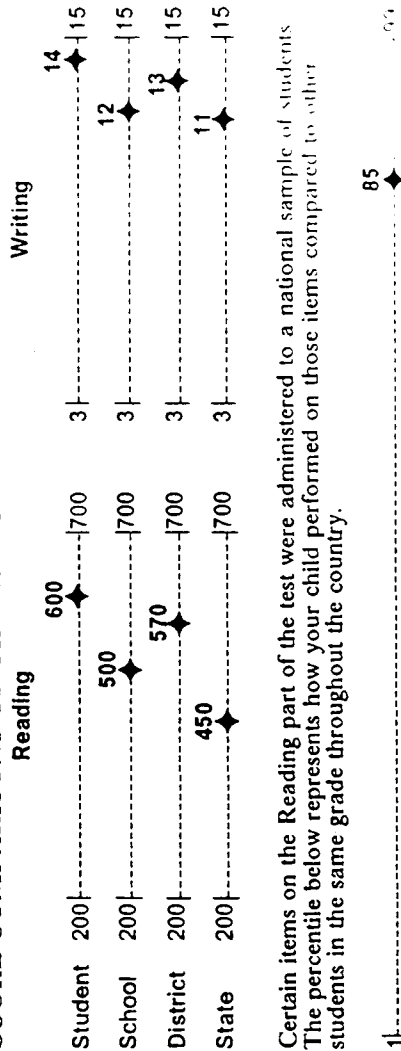
PERFORMANCE LEVELS

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

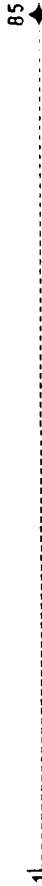
Performance Levels are: Reading level and score Writing level and score

**NOT YET AVAILABLE**

SCORE COMPARISONS OF GRADE TESTED



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.



INSTRUCTIONAL NEEDS

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

- providing enough details to answer open-ended questions
- reading more carefully to better understand what is happening in a text
- understanding the central ideas in a text
- identifying information necessary to understand a text
- using information to make reasonable interpretations

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

- organizing the writing around a simple 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

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**1998 DELAWARE STUDENT TESTING PROGRAM**  
English Language Arts Summary Report for

**SMITH**  
Group Code: 000

GRADE: 03  
TEST DATE: XX/XX/XX  
SAT9 LEVEL/FORM: P3/SA  
SAT9 NORMS: 1995 FS

SCHOOL: SPRINGFIELD ELEM - 000  
DISTRICT: SPRINGFIELD - 00

**PERFORMANCE LEVELS**

This test is designed to measure student's progress in terms of the Content Standards. The number and percent of students in this grade at each of the five Performance Levels for this group is reported below.

Performance Levels are:    Reading level    Writing level  
  %                                    %  
  N                                    N

**NOT YET AVAILABLE**

**SCORE COMPARISONS OF GRADE TESTED**

	Reading		Writing	
Class	XXX	XXX	XXX	XX
School	XXX	XXX	XXX	XX
District	XXX	XXX	XXX	XX
State	XXX	XXX	XXX	XX

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

1|-----199                                    XX ◆

**READING:**

- N %
- XXXXX XXX    ■ providing enough details to answer open-ended questions
- XXXXX XXX    ■ reading more carefully to better understand what is happening in a text
- XXXXX XXX    ■ understanding the central ideas in a text
- XXXXX XXX    ■ identifying information necessary to understand a text
- XXXXX XXX    ■ using information to make reasonable interpretations
- XXXXX XXX    ■ identifying and understanding why a text was written
- XXXXX XXX    ■ drawing conclusions based on information in the text
- XXXXX XXX    ■ understanding the effects of an author's decisions
- XXXXX XXX    ■ connecting and synthesizing information into a clear interpretation within and across texts, ideas, and concepts
- XXXXX XXX    ■ formulating, expressing, and supporting opinions
- XXXXX XXX    ■ making and supporting inferences about contents, events, characters, setting, theme, and style
- XXXXX XXX    ■ continuing use of good reading strategies

**INSTRUCTIONAL NEEDS**

**WRITING:**

- N %
- XXXXX XXX    ■ organizing the writing around a simple topic or central idea
- XXXXX XXX    ■ writing in complete sentences with a variety of length and structure
- XXXXX XXX    ■ working to avoid errors in conventions of English usage, grammar, spelling, and punctuation that interfere with understanding
- XXXXX XXX    ■ doing more than restating the prompt
- XXXXX XXX    ■ organizing the writing around a simple topic or central idea
- XXXXX XXX    ■ working to avoid errors in conventions of English usage, grammar, spelling, and punctuation that interfere with understanding
- XXXXX XXX    ■ supporting the ideas with more specific details
- XXXXX XXX    ■ doing more than making generalities regarding the prompt
- XXXXX XXX    ■ using effective and varied introductions and closings
- XXXXX XXX    ■ writing in a consistent style with precise, vivid word choice
- XXXXX XXX    ■ writing with a clear, logical progression of ideas using smooth transitions
- XXXXX XXX    ■ responding directly to the prompt
- XXXXX XXX    ■ Congratulating 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 in the same effective manner
  - trying new and varied approaches when producing written work



**1998 DELAWARE STUDENT TESTING PROGRAM**  
English Language Arts Summary Report for  
**DELAWARE**

GRADE: 03  
TEST DATE: 05/04/98  
SAT9 LEVEL/FORM: P3/T  
SAT9 NORMS: 1995 ES

**PERFORMANCE LEVELS**

This test is designed to measure students' progress in terms of the Delaware Content Standards. The number and percent of students in this grade at each of the five Performance Levels for this group is reported below.

Performance Levels are:

Reading Level	Writing Level
%	%
N	N

**NOT YET  
AVAILABLE**

**SCORE COMPARISONS OF GRADE TESTED**

Reading  
Writing

State 150 |-----| 675 3 |-----| 115

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

|-----| 99

**STATE REPORT**

READING:  
N %

- providing enough details to answer open-ended questions
- reading more carefully to better understand what is happening in a text
- understanding the central ideas in a text
- identifying information necessary to understanding a text
- using information to make reasonable interpretations
- identifying and understanding why a text was written
- drawing conclusions based on information in the text
- making and supporting inferences about contents, events, characters, setting, theme, and style
- continuing use of good reading strategies

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**INSTRUCTIONAL NEEDS**

WRITING:  
N %

- organizing the writing around a simple 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
- organizing the writing around a simple topic or central idea
- working to avoid errors in conventions of English usage, grammar, spelling, and punctuation that interfere with understanding
- supporting the ideas with more specific details
- doing more than making generalities regarding the prompt
- using effective and varied introductions and closings
- writing in a consistent style with precise, vivid word choice
- writing with a clear, logical progression of ideas using smooth transitions
- responding directly to the prompt

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 in the same effective manner
- trying new and varied approaches when producing written work

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