

Understanding FCAT 2.0 Reports

Science and Reading Retake

Spring 2015

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Introduction

This booklet has been prepared to help you understand the reports for the Florida Comprehensive Assessment Test® 2.0 (FCAT 2.0). It includes explanations of the reports, a glossary of the terms used in these reports, and information about the *Next Generation Sunshine State Standards* (NGSSS) content assessed on the FCAT 2.0. The explanations provided for the sample reports apply to all grade levels except where otherwise noted. Information regarding FCAT Mathematics Retake reports may be accessed in the 2009 edition of *Understanding FCAT Reports*, which is posted at http://www.fldoe.org/accountability/assessments/k-12-student-assessment/history-of-fls-statewide-assessment/fcat/understing-fcat-reports.stml.

Note: Terms defined in the glossary are cross-referenced and appear in **bold text** the first time they are referenced in a paragraph.

Purpose of the FCAT 2.0

The FCAT 2.0 measures student achievement of the **NGSSS** in science. In 2014-15, Florida began transitioning to the Florida Standards Assessments (FSA) in English language arts (which includes reading and writing) and in mathematics. House Bill 7069, passed in the 2015 legislative session, requires a validity study to be performed on the new FSA assessments before results are released. More information on the reports for the FSA will be provided in the fall, pending the results of the validity study.

Subjects/Grade Levels Tested in 2015

- FCAT 2.0 Reading Retake
- FCAT 2.0 Science—Grades 5 and 8
- FCAT Mathematics Retake

Most students, including English language learner (ELL) and exceptional student education (ESE) students, enrolled in the tested grade levels participate in the FCAT 2.0 administration. Administration accommodations are provided to eligible ELL and ESE students.

Note: In accordance with Section 1008.22(3)(b)1., Florida Statutes, "Middle grades students enrolled in Algebra I or geometry must take the statewide, standardized EOC assessment for those courses and are not required to take the corresponding grade-level FCAT."

Testing Format

The FCAT 2.0 Reading Retake and FCAT Mathematics Retake are computer-based tests, and FCAT 2.0 Science assessments are paper-based tests.

Accommodated test forms (i.e., large print, braille, and one-item-per-page), including regular print paper-based versions of computer-based tests, are provided for students with disabilities who require allowable accommodations, as specified in their Individual Educational Plans (IEPs) or Section 504 plans.

Question Formats

• **Selected-response** questions appear on grades 5 and 8 Science and the FCAT 2.0 Reading Retake. Students choose the best answer from four answer choices.

FCAT 2.0 Scores

FCAT 2.0 results are reported in several formats. Reports are distributed to students, schools, and districts. Table 6 provides a list of FCAT 2.0 reports, the grade levels at which each report is provided, and the page number on which each report is described. Information about **FCAT 2.0 scores** and reports is also available on the FCAT 2.0 website at http://www.fldoe.org/accountability/assessments/k-12-student-assessment/fcat2.stml.

FCAT 2.0 Science Scores

The FCAT 2.0 Science score scales range from 140 to 260 for both grades 5 and 8. The **scale score** range for each FCAT 2.0 Science **Achievement Level** is provided in Table 3.

Student Progression and Passing Score Requirements for FCAT 2.0

Students who entered grade 9 in the 2010-11 school year through 2012-13 must score in **Achievement Level** 3 or above on the Grade 10 FCAT 2.0 Reading for graduation purposes. Students who entered grade 9 in the 2009-10 school year qualify for an alternative passing score of 241 or above on the FCAT 2.0 Reading Retake for graduation purposes (this score is equivalent to an **FCAT Equivalent DSS** of 1926 on the 2011 Grade 10 FCAT 2.0 Reading). This group of students must also score an FCAT Mathematics **DSS** of 1889 (**scale score** of 300) or above or earn a concordant score on the SAT or ACT for graduation purposes.

Students who entered grade 9 in 2013-14 and beyond will take the grade 10 Florida Standards Assessment (FSA) in English language arts (ELA). For information about graduation options, consult the *Graduation Requirements for Florida's Statewide Assessments* document posted at

http://www.fldoe.org/core/fileparse.php/3/urlt/fcatpass.pdf. This document also provides information pertaining to students who entered grade 9 in the 2008-09 school year or prior.

Pursuant to Senate Bill 1076, which was passed during the 2013 legislative session, the State Board of Education established passing scores for each FCAT 2.0 assessment on January 21, 2014. The passing score on FCAT 2.0 Science assessments and each Florida EOC Assessment is the minimum score in Achievement Level 3. These passing standards are consistent with the current proficiency standards used for Florida's accountability system.

Achievement Levels

Achievement Levels describe the level of success a student has achieved with the content assessed. Achievement Levels range from 1 (lowest) to 5 (highest). To be considered on grade level, students must achieve Level 3 or higher. Level 3 indicates satisfactory performance. The State Board has established the minimum score in Achievement Level 3 as the passing score for all FCAT 2.0 Reading Retake and Science assessments.

The following **Achievement Level** Policy Definitions apply to FCAT 2.0 Reading Retake and Science:

- **Level 5** Students at this level demonstrate mastery of the most challenging content of the **Next Generation Sunshine State Standards**.
- **Level 4** Students at this level demonstrate an above satisfactory level of success with the challenging content of the *Next Generation Sunshine State Standards*.
- **Level 3** Students at this level demonstrate a satisfactory level of success with the challenging content of the *Next Generation Sunshine State Standards*.
- **Level 2** Students at this level demonstrate a below satisfactory level of success with the challenging content of the *Next Generation Sunshine State Standards*.
- **Level 1** Students at this level demonstrate an inadequate level of success with the challenging content of the *Next Generation Sunshine State Standards*.

Tables 1 – 2 list the score scale ranges for FCAT 2.0 Reading Retake and Science **Achievement Levels**.

Table 1: Achievement Levels for the FCAT 2.0 Reading Retake Scale Scores (188-302)

Grade	Level 1	Level 2	Level 3	Level 4	Level 5
10/Retake	188-227	228-244	245-255	256-270	271-302

Table 2: Achievement Levels for the FCAT 2.0 Science Scale Scores (140 to 260)

Grade	Level 1	Level 2	Level 3	Level 4	Level 5
5	140-184	185-199	200-214	215-224	225-260
8	140-184	185-202	203-214	215-224	225-260

Content Area Scores

The FDOE encourages educators to use FCAT 2.0 results in any way that is statistically appropriate. The comparisons that are described in this section provide possibilities for evaluation of content area scores at the school and district levels.

Content area scores are the actual number of questions answered correctly within each **reporting category**. These scores are also known as raw scores. Reporting categories represent groups of similar student skills, or **benchmarks**, that are assessed within each grade and subject. The **state mean** for each reporting category is also provided to allow for comparisons to average performance statewide.

For educators to gather reliable information from the FCAT 2.0, it is important to identify the comparisons at the content area score level that yield valid interpretations of student performance. The comparisons described in the following paragraphs can be applied in school- and district-level evaluations.

One valid comparison is of performance in a given **reporting category** among schools, districts, and the state. A school's content area score results can be compared to other schools', districts', or the state's content area score results. District results can be compared to other district results and state results. Since students in any group (school, district, or state) will take the same set of test **items** in a given year, regardless of varying item difficulty at the content-area level, their results are comparable.

In Table 3, students in two schools (Sunshine and Evergreen) and students in a district (Coastal) can be compared to students in the state, based on their performance on FCAT 2.0 Science, **Reporting Category** 1.

Table 3: Percentage Correct for Grade 5 FCAT 2.0 Science, Reporting Category 1 2015 School Year (mock data)

Sunshine Elementary	Evergreen Elementary (mock data)	Coastal District	State of Florida
(mock data)		(mock data)	(mock data)
48%	62%	64%	57%

In Table 4, 2015 mock results for all **reporting categories** for Evergreen Elementary are compared to both the district (Coastal) and the state.

Table 4: Percentage Correct for Grade 5 FCAT 2.0 Science, 2015 School Year Comparison of School to District and School to State (mock data)

Reporting Category	Evergreen Elementary (mock data)	Coastal District (mock data)	Difference (mock data)	Evergreen Elementary (mock data)	State of Florida (mock data)	Difference (mock data)
Reporting Category 1	62%	64%	-2%	62%	57%	5%
Reporting Category 2	64%	57%	7%	64%	63%	1%
Reporting Category 3	57%	60%	-3%	57%	72%	-15%
Reporting Category 4	70%	72%	-2%	70%	64%	6%

This presentation of data provides another perspective of student performance and program effectiveness. For example, in **Reporting Category** 2, Evergreen Elementary had a higher percentage correct statistic than the Coastal District (64 percent versus 57 percent, respectively); however, Evergreen Elementary's results were comparable to the state (64 percent versus 63 percent, respectively). If this variance were to remain consistent over time, there would be good reason to identify and share best practices in Evergreen Elementary with the rest of the district.

Another meaningful finding from Table 4 is illustrated in **Reporting Category** 4 results. In this **content area**, Evergreen Elementary had a slightly lower percentage correct than Coastal District (70 percent versus 72 percent, respectively); however, this same statistic was higher than that of the state (70 percent versus 64 percent, respectively). While Evergreen Elementary's performance on Reporting Category 4 was lower than that of the district, the performances of both were substantially higher than the state's performance. Therefore, targeting additional resources to improve performance in Reporting Category 4 should be a lower priority.

Yet another type of valid comparison is the trend of any of the aforementioned comparisons (e.g., school to school, school to district). As an example, educators in a low-performing school may be interested in tracking the gap between their students' performance on **Reporting Category** 1 and students' performance in their district and the state on Reporting Category 1. Evaluating trend data in order to compare student performance over time can provide valuable insight.

Table 5: Percentage Correct for Grade 5 FCAT 2.0 Science, Reporting Category 1 2012 to 2015 (mock data)

Year	Sunshine Elementary	State of Florida	Difference
	(mock data)	(mock data)	
2012	45%	75%	30%
2013	48%	71%	23%
2014	52%	72%	20%
2015	58%	73%	15%

In Table 5, the trend results from 2012 to 2015 provide important evaluative information to the educators in Sunshine Elementary. While student performance in Sunshine Elementary was consistently lower on **Reporting Category** 1 than the performance of all grade 3 students in Florida, the progress that has been made over the four-year period is substantial enough to warrant another look at program initiatives (e.g., the school may have introduced an after-school program that can be linked to an improvement in performance).

FCAT 2.0 Student, School, District, and State Reports

Table 6: FCAT 2.0 Reports

FCAT 2.0 Report Title	Grades	Page of Report Description				
Student Reports						
Science Student Report	5 and 8	10				
Reading Retake Student Report	10-Adult	11				
School Reports						
Science School Report of Students	5 and 8	13				
Reading Retake School Report of Students	10-Adult	13				
District Reports	District Reports					
Science District Report of Schools	5 and 8	17				
Reading Retake District Report of Schools	10-Adult	15				
Science District Summary	5 and 8	17				
Reading Retake District Summary	10-Adult	15				
State Reports						
Science State Report of Districts	5 and 8	17				
Reading Retake State Report of Districts	10-Adult	15				
Science State Summary	5 and 8	17				
Reading Retake State Summary	10-Adult	15				

Codes for No Data Reported

The following abbreviations may appear on some student and educator reports.

NT (Not Tested) indicates that no data are reported for the student because he or she was not tested for that subject.

NR (Not Reported) indicates that no data are reported for the student. Reports containing student results will indicate that no data are reported for one of the following reasons:

- NR2—Did Not Meet Attemptedness Criteria
- NR3—Marked Do Not Score
- NR5—Off-Grade Tester
- NR6—Duplicate Record
- NR7—FDOE Hold
- NR8—FDOE Invalidated

If a student receives an NR code, the parent or student should consult the student's designated guidance counselor.

NA (Not Available) indicates that data are not reported for the student because no data were available, or that the data do not apply at that grade level.

NM (No Match to Previous Year) indicates that no data were reported from the prior year.

NF (Not Found) indicates that no prior data were available for the student for that year, or that student's record for 2014 was not matched to the student's record for 2011, 2012, and/or 2013.

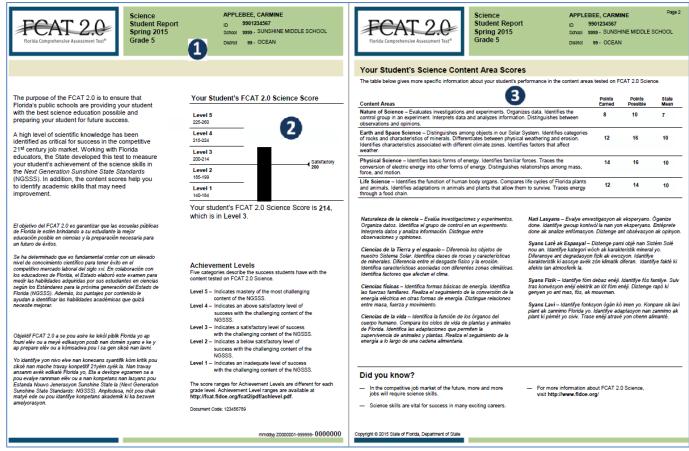
U (Unscorable) indicates that the student's FCAT 2.0 Writing response does not meet the criteria for being considered valid and is considered "Unscorable" for one of the following reasons:

- U-A—Blank Response
- **U-B**—Off-Topic
- U-C—Illegible, Incomprehensible, or Insufficient
- U-D—Foreign Language

A dash (—) on the reports indicates that no data are reported because fewer than 10 students were tested or all students would be reported in the same category (e.g., the same **Achievement Level**). To provide meaningful results and to protect the privacy of individual students, data are reported only when the total number of students in a group is at least 10 and when the performance of individuals cannot be determined.

An asterisk (*) on the FCAT 2.0 Reading Retake School Report of Students indicates that the student is eligible for the alternate passing score of 241 or above. Eligible students are those who entered grade 9 in the 2009-10 school year or prior.

FCAT 2.0 Science Student Report

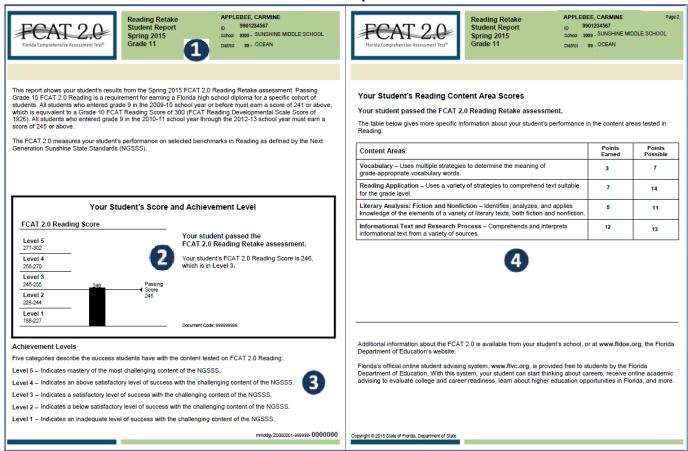


The format shown above is used for the *FCAT 2.0 Science Student Report*, which is a two-page report. Page 1 provides the student's results and important information about the test. Page 2 provides the student's content area scores. The information on both of these pages is translated into Spanish and Haitian Creole.

- **1** Top of Report: The test, student, school, and district are identified on the top of pages 1 and 2 of the report.
- **PCAT 2.0 Scores:** The graph on the right side of page 1 displays the student's **FCAT 2.0 Score** and **Achievement Level**. On each report, the graph also shows whether the student performed at a satisfactory level; for each grade, "Satisfactory" indicates that the student passed the test. The graph displays the score ranges for Achievement Levels 1 through 5. Beneath the graph, a statement indicates the student's FCAT 2.0 Score and Achievement Level. A note below this statement describes the range within which a student's FCAT 2.0 Score would likely fall if the student were to take the test again without additional instruction. Definitions for the FCAT 2.0 Score and Achievement Levels are provided beneath the student's score information.
- Content Area Scores: This section appears on the top half of page 2; it lists and defines the FCAT 2.0 Science content areas assessed, also called reporting categories. Spanish and Haitian-Creole translations of this information are provided. The titles of the reporting categories are the same for both grade levels of FCAT 2.0 Science. Page 18 of this booklet describes the content areas assessed on FCAT 2.0 Science.

The "Points Earned" column shows the actual number of points earned in each of the content areas. The number of points earned reflects the number of questions a student answered correctly. The "Points Possible" column provides the total number of points possible for each of the content areas. The "State Mean" is provided on the far right for comparison. The state mean shows the mean earned by students across the state.

FCAT 2.0 Reading Retake Student Report



The format shown above is used for the FCAT 2.0 Reading Retake Student Report, which is a two-page report that provides results for students who took the FCAT 2.0 Reading Retake. Page 1 provides the student's results and important information about the test and its passing requirements. Page 2 provides the student's content area scores.

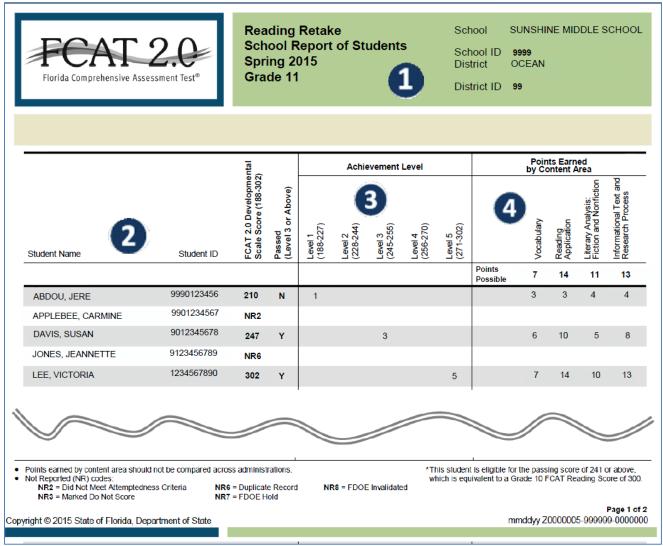
- **1** Top of Report: The test, student, school, and district are identified on the top of pages 1 and 2.
- **FCAT 2.0 Scores:** The area labeled "Your Student's Score and **Achievement Level**" contains a graph that displays the student's **FCAT 2.0 Score** and Achievement Level and indicates whether the student earned a passing score on the test. The graph also displays the score ranges for Achievement Levels 1 through 5. To the right of the graph, a statement indicates whether the student earned a passing score, followed by a statement identifying the student's FCAT 2.0 Reading Score and Achievement Level. A note below this statement describes the range within which a student's FCAT 2.0 Reading Score would likely fall if the student were to take the test again without additional instruction. Students who receive additional instruction would likely improve their score.

A description of passing requirements is provided above this section of the report. For students who entered grade 9 in the 2010-11 school year through 2012-13, the passing score for high school graduation is the minimum **scale score** in **Achievement Level** 3; therefore, the passing score on the Grade 10 FCAT 2.0 Reading report is 245 or above. Students who entered grade 9 in the 2009-10 school year or prior must earn a passing score that is equivalent to or higher than a Grade 10 FCAT Reading Score of 1926 (scale score of 300); therefore, the passing score for these students is 241 or above. Districts identify the passing score requirement for each student.

- **3** Achievement Levels: Definitions for Achievement Levels 1 through 5 are provided at the bottom of page 1.
- **4** Content Area Scores: This section appears at the top of page 2. It first restates the student's passing status and then provides a table containing the student results for each content area assessed. The table lists and defines the FCAT 2.0 Reading content areas assessed, also called reporting categories. Page 24 of this booklet describes the content areas assessed on FCAT 2.0 Reading.

The "**Points Earned**" column shows the actual number of points earned in each of the **content areas**. The number of points earned reflects the number of questions a student answered correctly. The "**Points Possible**" column provides the total number of points possible for each of the content areas.

FCAT 2.0 Science and Reading Retake School Report of Students



The format shown above is used for the FCAT 2.0 Reading Retake School Report of Students. Only authorized district and school personnel may access this report, since it contains confidential student information.

- **1 Top of Report:** The title of the report is printed here. It identifies the content of the report and the grade level of the data included in the report. The name and number of the district and school are also printed in this area.
- **Left Side of Report:** This section of the report displays an alphabetical list of students whose tests were submitted for scoring. The name and student ID of each student appear in the first two columns. For FCAT 2.0 Reading Retake, the FCAT 2.0 **Developmental Scale Score (DSS)**, also called the **FCAT 2.0 Score**, is provided in the third column. For FCAT 2.0 Science, the **scale score** is provided in the third column. For students receiving "NR" in the DSS column, the footnote at the bottom of the report details reasons why the score is not reported (see page 9 for NR codes). If a student has "NT" in the DSS column, this means that the student was not tested.

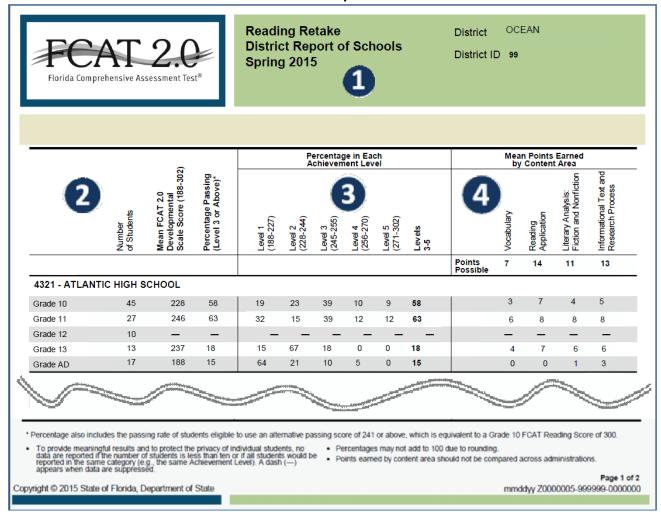
The "Passed" column only appears on the FCAT 2.0 Reading reports for Retake students because these students must pass the test for graduation purposes. For students who entered grade 9 in the 2010-11 to the 2012-13 school year, the passing score for high school graduation is the minimum scale score in Achievement Level 3; therefore, the passing score on the Grade 10 FCAT 2.0 Reading report is 245 or above. Students who entered grade 9 in the 2009-10 school year or prior must earn a passing score that is equivalent to or higher

than a Grade 10 FCAT Reading Score of 1926 (scale score of 300); therefore, the passing score for these students is 241 or above. The *School Report of Students* indicates whether a student earned a passing score with a "Y" (Yes) or "N" (No). On the *FCAT 2.0 Reading Retake School Report of Students*, an asterisk (*) next to the "Y" or "N" indicates that the student is eligible for the alternate passing score of 241 or above.

- **3** Achievement Level Section: This section of the report indicates the student's Achievement Level. The DSS range for each Achievement Level is provided in the header.
- Points Earned by Content Area: The first row of information shown in this section provides the "Points Possible" for each content area, or reporting category. The points possible vary by subject and grade level. If the student received a score, the points earned by content area appear on each student's row. The number of points earned is the number of questions a student answered correctly.

The School Report of Students does not contain summary information.

FCAT 2.0 Reading Retake State and District Reports of Results



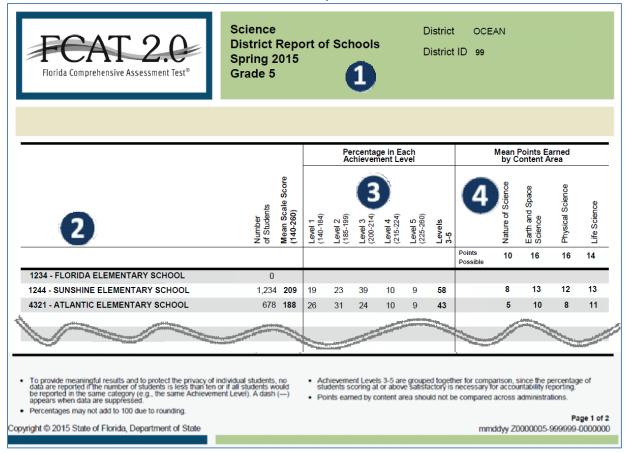
The format shown above is used for the following different FCAT 2.0 Reading Retake reports: District Report of Schools, District Summary, State Report of Districts, and/or State Summary.

- **Top of Reports:** The title of the report is printed here identifying the **subject area** of the report; the *District Report of Schools* and *State Report of Districts* provide the grade level of the data included in the report. The name and number of the district are also printed in this area on district-level reports.
- **2** Left Side of Reports: Identifying information for the district or school is provided in the first column. On the *District Summary* and *State Summary*, the grade level for the data is provided in this column as well. The number of students tested appears in the second column of all reports. The **Mean Developmental Scale Score** (**DSS**) is provided in the third column. The "Percentage Passing" column only appears on the FCAT 2.0 Reading reports of results for grade 10 and Retake students and indicates the percentage of students who earned a passing score. For students entering grade 9 in the 2010-11 through 2012-13 school year, the passing score for high school graduation is the minimum **scale score** in **Achievement Level** 3; therefore, the passing score on the Grade 10 FCAT 2.0 Reading report is 245 or above. Students who entered grade 9 in the 2009-10 school year or prior must earn a passing score that is equivalent to or higher than a Grade 10 FCAT Reading Score of 1926 (scale score of 300); therefore, the passing score for these students is 241 or above. The "Percentage Passing" column on the FCAT 2.0 Reading Retake report includes the passing rate of students eligible to use the alternative passing score. On the *FCAT 2.0 Reading State* and *District Summary Reports*, "NA" appears in the "Percentage Passing" column for grades 3-9 to indicate that passing information for these

reports was not applicable at the time the templates were developed. On January 21, 2014, the State Board of Education established passing scores for all FCAT 2.0 assessments, as required by Section 1008.22(3)(d)3., Florida Statutes. Although state law does not require students in grades 4-9 to pass FCAT 2.0 for student progression or graduation purposes, each district has its own student progression plan that may include the use of these passing scores.

- Percentage in Each Achievement Level: This section of the report indicates the percentage of students who scored within each Achievement Level, as well as the percentage of students scoring in Achievement Levels 3–5, since the percentage of students scoring at or above satisfactory is necessary for accountability reporting. The DSS range for each Achievement Level is provided in the header of the *District Report of Schools* and *State Report of Districts*. Tables providing the DSS ranges for the Achievement Levels for each grade and subject are provided at the bottom of the *District Summary* and *State Summary*.
- Mean Points Earned by Content Area: The first row of information shown in this section provides the "Points Possible" for each content area, or reporting category, which varies by subject and grade level. The other information in this section varies depending on the report:
 - The *District Report of Schools* displays **mean points earned** by school.
 - The State Report of Districts displays mean points earned by district.
 - The District Summary displays district- and state-level mean points earned, grouped by grade level.
 - The State Summary displays state-level mean points earned, grouped by grade level.

FCAT 2.0 Science State and District Reports of Results



The format shown above is used for the following different FCAT 2.0 Science reports: District Report of Schools, District Summary, State Report of Districts, and/or State Summary.

- **Top of Reports:** The title of the report is printed here identifying the **subject area** of the report; the *District Report of Schools* and *State Report of Districts* provide the grade level of the data included in the report. The name and number of the district are also printed in this area on district-level reports.
- **2 Left Side of Reports:** Identifying information for the district or school is provided in the first column. On the *District Summary* and *State Summary*, the grade level for the data is provided in this column. The number of students tested appears in the second column of all reports. The **Mean Scale Score** is provided in the third column.
- Percentage in Each Achievement Level: This section of the report indicates the percentage of students who scored within each Achievement Level, as well as the percentage of students scoring in Achievement Levels 3–5, since the percentage of students scoring at or above satisfactory is necessary for accountability reporting. The FCAT 2.0 Scale Score range for each Achievement Level is provided in the header of the *District Report of Schools* and *State Report of Districts*. Tables providing the FCAT 2.0 Scale Score ranges for the Achievement Levels for each grade are provided at the bottom of the *District Summary* and *State Summary*.
- **4** Mean Points Earned by Content Area: The first row of information shown in this section provides the "Points Possible" for each content area, or reporting category, which varies by grade level. The other information in this section varies depending on the report:
 - The District Report of Schools displays mean points earned by school.
 - The State Report of Districts displays mean points earned by district.
 - The District Summary displays district- and state-level mean points earned, grouped by grade level.
 - The State Summary displays state-level mean points earned, grouped by grade level.

FCAT 2.0 Content Areas

The content of each FCAT 2.0 Reading and Science assessment is organized by **reporting categories** that are used for test design, scoring, and reporting purposes. Reporting categories group the assessed student knowledge and skills, or **benchmarks**, into broad **content areas**. In reading, students build upon fundamental reading skills as they progress from grade to grade; therefore, the same reporting categories organize the reading skills assessed by FCAT 2.0 Reading for all grade levels. The difficulty of the concepts assessed on FCAT 2.0 Science progresses systematically from grade 5 to grade 8.

FCAT 2.0 Reading Reporting Categories

FCAT 2.0 Reading measures student achievement of the **Next Generation Sunshine State Standards** in reading and literature. For grade 10, FCAT 2.0 Reading consists of **selected-response items** that assess students' comprehension of various types of reading selections.

FCAT 2.0 Reading assesses what students know and are able to do in the broad reporting categories listed below.

Grade 10

Vocabulary

Students use multiple strategies to determine the meaning of grade-appropriate vocabulary words.

Reading Application

Students use a variety of strategies to comprehend text suitable for the grade level.

Literary Analysis: Fiction and Nonfiction

Students identify, analyze, and apply knowledge of the elements of a variety of literary texts, both fiction and nonfiction.

Informational Text and Research Process

Students comprehend and interpret informational text from a variety of sources.

FCAT 2.0 Science Reporting Categories

FCAT 2.0 Science measures student achievement of the **Next Generation Sunshine State Standards** in science. For grades 5 and 8, the FCAT 2.0 Science assessment includes only **selected-response items**.

For both grade levels tested, FCAT 2.0 Science assesses what students know and are able to do in the broad **reporting categories** listed below. The difficulty of the concepts assessed on FCAT 2.0 Science progresses systematically from grade 5 to grade 8.

Grade 5

Nature of Science

Students evaluate investigations and experiments; organize data; identify the control group in an experiment; interpret data and analyze information; and distinguish between observations and opinions.

• Earth and Space Science

Students distinguish among objects in our Solar System; identify categories of rocks and characteristics of minerals; differentiate between physical weathering and erosion; identify characteristics associated with different climate zones; and identify factors that affect weather.

Physical Science

Students identify basic forms of energy; identify familiar forces; trace the conversion of electric energy into other forms of energy; and distinguish relationships among mass, force, and motion.

Life Science

Students identify the function of human body organs; compare life cycles of Florida plants and animals; identify adaptations in animals and plants that allow them to survive; and trace energy through a food chain.

Grade 8

Nature of Science

Students identify test and outcome variables in an experiment; differentiate between experiments and investigations; analyze information to make inferences or predictions; differentiate between replication and repetition; and distinguish between theories and laws.

• Earth and Space Science

Students relate the positions of the Sun, Moon, and Earth that result in tides, moon phases, and eclipses; identify Earth changes due to weathering, erosion, and plate tectonics; and recognize that the Sun's energy influences global atmospheric patterns.

Physical Science

Students classify substances by physical properties; differentiate between physical and chemical change; distinguish between kinetic and potential energy; and differentiate contact forces and forces acting at a distance.

Life Science

Students identify functions of the human body systems; classify organisms; identify ways genetic variation contributes to the scientific theory of evolution; determine probabilities for genotypic and phenotypic combinations; and distinguish relationships among organisms in a food web.

Glossary

Note: Terms defined in this glossary that have been cross-referenced appear in **bold text** the first time they are referenced in a definition other than their own.

Achievement Levels—Five categories of achievement that represent the success students demonstrate with the content assessed. The Achievement Levels are helpful in interpreting what a student's score represents. Achievement Levels range from 1 to 5, with Level 1 being the lowest and Level 5 being the highest. Achieving a score in Level 3 or higher is considered satisfactory. Beginning with the 2013-14 school year, the minimum score in Achievement Level 3 is the passing score for each assessment.

Benchmark—A specific statement that describes what students should know and be able to do. The benchmarks are part of the **Next Generation Sunshine State Standards**.

CBT Tools—Tools available to students in the **computer-based testing** platform. CBT tools vary slightly depending on the **subject area**. The FCAT 2.0 CBT tools provided on all computer-based tests are as follows: highlighter, eraser, eliminate-choice, review, and help. FCAT 2.0 Reading also has a notepad, and FCAT 2.0 Mathematics has a straightedge and reference sheet. Students may use these tools at any time during the assessment.

Computer-Based Practice Test—Students participate in a practice test session at school that demonstrates the tools and **item** types they will see on the actual assessment. The practice test is delivered through an online tool, which mimics the software the students will use on the day of testing. This practice test is not intended to be a predictor of performance on the assessment. Students may practice on their own by accessing the appropriate practice test at www.FLAssessments.com/ePAT.

Computer-Based Testing (CBT)—Several Florida statewide assessments are now being administered using a computer-based format. In 2014, Grades 6–10 FCAT 2.0 Reading, Grades 5 and 6 FCAT 2.0 Mathematics, and the FCAT 2.0 Reading Retake were given in a computer-based format, with paper-based accommodations offered for eligible students. When testing on the computer, students make their answer choices using the mouse or keyboard, and they may use various CBT tools, such as the eliminate-choice tool or the review tool, as they work. Once they have completed the test, they submit their answers electronically. Before exiting the test and submitting their responses, students are taken to a screen that identifies questions that are answered, unanswered, and marked for review.

Content Area—See Reporting Category.

Content Area Scores—The actual number of questions answered correctly within each **reporting category** of FCAT 2.0 Reading and Science. Content area scores are also referred to as raw scores.

Developmental Scale Score (DSS)—A type of **scale score** used to determine a student's annual progress from grade to grade. During the fall of 2011, a vertical scaling study was conducted so that performance can be compared across all grade levels as it was for the FCAT. The DSS scale for FCAT 2.0 Reading ranges from 140 to 302 across grades 3-10. On the *FCAT 2.0 Reading Retake Parent and Student Reports*, the DSS is called the **FCAT 2.0 Score**.

DSS Change—A calculation made by the subtraction of the prior year's **Developmental Scale Score (DSS)** from the year of interest's DSS, which yields the amount of change across the two years, e.g., 2014 DSS – 2013 DSS = DSS Change. This number can be large for students who move from a low **Achievement Level 1** score to a low Achievement Level 2 score, or it may be small for a student who maintains a high score in Achievement Level 4. The DSS Change can be understood best when also considering the Achievement Level scores for the two years.

Equipercentile Linking Method—For the first year administered, **FCAT 2.0 Scores** were linked to the existing FCAT **score scale** through the equipercentile linking method. By this method, 2011 FCAT 2.0 Reading and Mathematics scores were linked to 2010 FCAT Reading and Mathematics scores and 2012 FCAT 2.0 Science scores were linked

to 2011 FCAT Science scores at the same **percentile rank**. During the transition year to FCAT 2.0 for each assessment, this linking method allowed FCAT 2.0 scores to be reported as **FCAT Equivalent Scores** (**FCAT Equivalent Scale Scores**, which range from 100–500, and **FCAT Equivalent DSS**, which range from 86–3008 across grades 3–10 and show a student's annual progress from grade to grade).

FCAT 2.0 Score—The FCAT 2.0 Scores reported for Science are **scale scores**, and the FCAT 2.0 Scores reported for Reading Retake are **Developmental Scale Scores (DSS)** that provide a way for parents to track their student's annual academic progress from grade to grade.

FCAT Equivalent Developmental Scale Score (DSS)—A type of **scale score** used in 2011 to determine a student's annual progress from grade to grade. The FCAT Equivalent DSS scale for the 2011 FCAT 2.0 Reading and Mathematics assessments used the existing FCAT scale ranging from 86–3008 across grades 3–10. These scores were linked to the existing FCAT **score scale** through the **equipercentile linking method**. The scores were reported in this way to maintain consistent student expectations during the transition year. The 2011 FCAT Equivalent DSS have been converted to the FCAT 2.0 **DSS** on the 2013 FCAT 2.0 reports that provide historical scores so that student performance can be shown on the new scale.

FCAT Equivalent Scale Score—The 2012 FCAT 2.0 Science and 2011 FCAT 2.0 Reading and Mathematics **scale scores** reported on the existing FCAT scale ranging from 100–500 for each grade level and **subject area**. These scores were linked to the existing FCAT **score scale** through the **equipercentile linking method**. The scores were reported in this way to maintain consistent student expectations during the transition year.

Items—Test questions that students are required to answer.

Mean—An average of the individual scores that describes the performance of a group of students. The mean is computed by finding the sum of all scores and dividing by the number of scores.

Median—A score that identifies the middle value of a group of data. The median is the point at which a group of numbers (scores) is divided in half (50 percent above and below).

Mode—The most frequently occurring score in a set of scores. If a distribution of scores is statistically normal, the **mean**, **median**, and mode are the same score.

Multiple-Choice—See Selected-Response.

Next Generation Sunshine State Standards (NGSSS)—The core content of the curricula taught in Florida in science and social studies. For 2014-15, the NGSSS specify the core content knowledge and skills that K-12 public school students are expected to acquire in the **subject areas** of science, social studies, visual and performing arts, physical education, health, and foreign languages. The NGSSS **benchmarks** identify what a student should know and be able to do at each grade level for each subject area.

Percentile Rank—The percentile rank is the percentage of scores that fall at or below a given score.

Points Earned— See Content Area Scores.

Points Possible—The number of "Points Possible" shows the total number of test questions for a **content area**, or **reporting category**, on a test. Each question counts as one point. The number of points possible in a content area may change slightly each year.

Reporting Category—The assessed student knowledge and skills, or **benchmarks**, are grouped into broad **content areas** called reporting categories. In reading, students build upon fundamental reading skills as they progress from grade to grade; therefore, the same reporting categories organize the reading skills assessed by FCAT 2.0 Reading for all grade levels. The difficulty of the concepts assessed on FCAT 2.0 Science progresses systematically from grade 5 to grade 8.

Scale Score—A score used to report results on the entire test. When a student takes FCAT 2.0 Reading, Mathematics, or Science, the student's **content area scores**, which are also called raw scores, are converted to a

scale score through an **equating** process. The equating process ensures that the scale scores represent the same level of difficulty each year.

Score Scale—The score range used for reporting scores on the entire test for FCAT 2.0 Reading, Mathematics, and Science. For FCAT 2.0 Reading and Mathematics, it is called a developmental score scale because it shows a student's annual progress from grade to grade. The FCAT 2.0 Reading developmental score scale across grades 3 through 10 ranges from 140 to 302; the FCAT 2.0 Mathematics developmental score scale across grades 3 through 8 ranges from 140 to 298; and the FCAT 2.0 Science score scale range for both grades 5 and 8 is 140 to 260.

Selected-Response—Test questions that present students with several options from which to choose the correct answer. FCAT 2.0 Reading Retake and Science assessments use selected-response **items** in which four choices are given, only one of which is correct.

State Mean—The average score for each grade used for comparison purposes. Individual student scores, school **mean** scores, or district mean scores can be compared to the state mean.

Subject Area—The information or skills contained in an area of study. The subject areas assessed on the 2015 FCAT 2.0 are reading (retake only) and science.