FCAT Reading and Mathematics Test Content
Grades 4 and 5
2007 - 2010

This document contains pages from the *FCAT Test Construction Specifications* related to selection of test content for reading and mathematics for the years 2007 through 2010. Also included are selected pages from working documents produced during the construction of each year's tests for Grades 4 and 5 in reading and mathematics. Together, this set of documents allows a comparison of the intended and actual consistency of the content of each test across the given years. For additional analysis of consistency across years, a comparison of content focus reports from 2007 through 2010 is also provided for Grades 4 and 5 in reading and mathematics.

FCAT 2007 Test Construction Specifications

1. Purpose of the Document

For the 2007 FCAT test administration, Harcourt Assessment, Inc. (HAI), in collaboration with the Florida Department of Education (FDOE), will construct test forms for the following domains and grades: Reading and Mathematics, grades 3 through 10; Science, grades 5, 8, and 11; and Writing, grades 4, 8, and 10. At each grade level, each form will be composed of core items as well as an embedded set of items used for year-to-year equating or field-testing of future FCAT items. Forms that include a set of equating items will be referred to as *anchor forms,* while forms that include a field test section will be referred to as *field test forms*. As a general guideline, there will be 4 anchor forms and 26 field test forms produced for each grade/subject combination, but these numbers may vary by content and grade.

The purpose of this document is to provide both content and statistical guidelines for FCAT 2007 Reading, Mathematics, Science, and Writing+ operational test form construction, as well as to design the anchor and field test sections of these assessments. This document has been prepared for internal review and documentation within HAI and the FDOE and includes the following sections:

- Content Guidelines for Reading, Mathematics, Science, and Writing+
- Statistical Guidelines
- Anchor Items
- Test Construction Checklist

The following list identifies similarities between the 2006 and 2007 FCAT test construction specifications:

- As a general rule, FCAT Reading, Mathematics, Science, and Writing+ assessments for 2007 will have four external anchor forms, just as the 2006 FCAT assessments did.
- The 2007 FCAT will contain anchor and field test items embedded throughout the forms as in the 2006 FCAT.
- In 2007, just as in 2006, only multiple-choice (MC) and gridded-response (GR) items will be used for anchoring. However, Reading, Mathematics, and Science anchor forms may include either short-response (SR) or extended-response (ER) filler in the field test positions.

2. Content Guidelines

Construction of the 2007 operational FCAT forms will follow the content guidelines described in this section. Test construction will also follow the statistical and psychometric guidelines described in Section 3.

Each grade level in FCAT Reading, Mathematics, Science, and Writing+ will have a maximum of 50 core items per form. Grades 3 and 4 may have as few as 40 core items. Reading forms will have 45 core items in all grades, but the items may vary by item type. Science will have approximately 45 core items per form at each of the three grade levels. Writing+ will have 44 core items as outlined in the test design. To construct the core item sets for Reading, Mathematics, Science, and Writing+, Harcourt will follow the content guidelines used for previous FCAT operational forms.

The remainder of this document details guidelines and/or requirements for test construction, based on information provided by the following sources: *Mathematics Test Item and Performance Task Specifications (2005)*, *Reading Test Item and Performance Task Specifications (2000)*, *Science Test Item and Performance Task Specifications (2002)*, *1999–2000 Test Design: Additional FCAT Tests,* and *Writing+ Test Design and Construction Specifications (2005).* Content guidelines are broken down into the following sections:

- Reading
- Mathematics
- Science
- Writing+

The subscore is the strand, cluster, or reporting category. Coverage of the reporting categories for the 2007 FCAT test administration in grades 3 through 10 in Mathematics will be based on the guidelines established for the 1998–2006 operational forms. Coverage in grades 3 through 10 in Reading, and in Grades 5, 8, and 11 in Science will reflect the fact that reading and science benchmarks have been grouped into "clusters," and that student reading and science performance will be reported at the cluster level. This subscore coverage (strand information in the case of mathematics, cluster information in the case of reading and science) is best considered in terms of the number of points, rather than the number of items. MC and GR items receive 1 point each, while SR items receive a maximum of 2 points each and ER items receive a maximum of 4 points each.

2.1 Reading Content Guidelines

2.1.1 Subscore Coverage

As mentioned before, coverage of the reporting categories in grades 3 through 10 in Reading will reflect the fact that reading benchmarks are grouped into "clusters," and that student reading performance is reported at the cluster level.

The passages and questions used in the FCAT Reading test require students to construct meaning from both literary and informational text. As indicated in Table 2.1.1.1, the relative emphasis given to literary passages decreases gradually from grade 3 through grade 10, while the relative emphasis given to informational passages increases. The numbers of items of different types included in Reading assessments in grades 3 through 10 are presented in Table 2.1.1.2.

Table 2.1.1.1 FCAT 2007 Reading: Approximate Percentage of Points by Passage Type

Passage Type	Grade 3	Grades 4–6	Grades 7–8	Grades 9–10
Literary Text	60	50	40	30
Informational Text	40	50	60	70
TOTAL	**100**	**100**	**100**	**100**

Table 2.1.1.2 FCAT 2007 Reading: Number of Items by Item Type

Grade	Multiple-Choice	Short-Response	Extended-Response	Total Number of Items
3	45	0	0	45
4	41	3	1	45
5	45	0	0	45
6	45	0	0	45
7	45	0	0	45
8	41	3	1	45
9	45	0	0	45
10	41	3	1	45

At each grade level, four content clusters are reported (see Table 2.1.3.4 for reading benchmarks contained in each cluster):

- Words and Phrases in Context
- Main Idea, Plot, and Author's Purpose
- Comparison and Cause/Effect
- Reference and Research

The relative emphasis of each cluster in Reading assessments across grade levels is presented in Table 2.1.1.3. As mentioned before, this emphasis is given in percentage of points rather than percentage of items.

Table 2.1.1.3 FCAT 2007 Reading: Approximate Percentage of Points by Cluster

Cluster	Grades 3–5	Grades 6–8	Grades 9–10
1. Words and Phrases in Context	15–20	15–20	15–20
2. Main Idea, Plot, and Author's Purpose	30–55	30–55	20–50
3. Comparison and Cause/Effect	20–45	15–25	10–25
4. Reference and Research	5–15	10–30	20–40

The information in Table 2.1.1.4 indicates the maximum word-count totals for regular spring test administrations during the period from 2003 to 2006. Word-count totals may vary among forms in any single administration due to the variations in counts for field test passages.

Table 2.1.1.4 FCAT Reading: Maximum Total Word Count for Operational and Field Test Passages

Grade	2003 Test	2004 Test	2005 Test	2006 Test
3	2954	3196	3108	3463
4	3856	3716	3836	4460
5	4623	4675	5099	4635
6	5041	5307	5597	5436
7	5175	5360	5665	5678
8	6203	6112	6812	6111
9	7004	6932	6870	7095
10	7135	7265	8135	7395

2.1.2 Passage Guidelines

Passage Length. At each grade level, the reading passages used for the core form should vary in length. When reading tests are divided into two sessions, a long passage should be balanced with one or more shorter passages within each section. Also, each test form should be constructed so that it does not end with a relatively long passage.

The total number of words that a student is required to read in each core form should represent a logical progression in length from grade 3 to grade 10. For example, the total word count for grade 5 should not exceed the total word count for grade 6, and the total word count for grade 6 should be less than the total word count for grade 7. Based on these length requirements, the 2007 operational forms for FCAT Reading will each contain between five and seven passages, with one additional passage for the embedded field test or anchor items.

Passage Types. A sufficient number of both informational and literary passages must be selected for each form to satisfy the desired percentages shown in Table 2.1.1.1. Consideration will also be given to the genres of the passages in each form. Ideally, a poem should be included in each test at all grade levels, with the exception of grade 3; however, this may not always be possible.

In addition, a mix of literary genres, such as stories and essays, is highly desirable, as is the inclusion of a variety of informational genres, such as editorials, reports, and magazine articles.

Since some reading benchmarks are more accurately assessed with either literary or informational passages, a balance of passage types will help ensure that every benchmark and cluster receives adequate coverage. The appropriate benchmark coverage for each grade level is described in Section 2.1.3.

In addition, the selected passages on each form will represent a balance of *Sunshine State Standard* topics (e.g., science, social studies, the arts), as well as a variety of sources (e.g., children's magazines, newspaper articles, book excerpts).

Passage Difficulty. Core reading passages at each grade should represent a range of difficulties. Difficulty levels are determined by Florida educators serving on passage review committees. The difficulty rating for a passage (Easy, Medium, or Difficult) reflects the vocabulary and sentence structure in the passage and the complexity and density of the ideas contained in the passage.

In general, a difficult passage in the core should be balanced by an easier passage either immediately before or after the difficult passage. It is preferable to neither begin nor end a session with a difficult passage. Whenever possible, the first passage on every core form should be an engaging literary passage. When this is not possible, an easy, engaging informational passage may be used.

Limitations. While every effort is made to adhere to these passage guidelines, it is not always possible, due to extenuating circumstances. For example, permission to use a passage on the FCAT may be denied by the publisher or there may be a general shortage of passages for a specific topic.

2.1.3 Item Types and Benchmark Coverage

On the following pages, Tables 2.1.3.1, 2.1.3.2, and 2.1.3.3 show the item types available for each Reading benchmark. For the grades that use reading performance tasks (i.e., grades 4, 8, and 10), SR and ER items should represent approximately 15–20 percent of the total number of points in each form, with a maximum of 1 ER item and 3 SR items (excluding field test items) per form. All other grades will have forms that contain only multiple-choice items.

An SR or ER item should not appear as the first or second item within the set of items for each reading passage. If a set of items for a passage contains two SR items, or an SR and an ER item, these two items should be separated with at least two MC items between them. In addition, an ER item should not be the last item within the set of items for a passage except in field test forms.

Table 2.1.3.1 Benchmark Coverage for Grades 3–5 Reading

Cluster	BENCHMARK	PERCENT OF POINTS					
		Grade 3		Grade 4		Grade 5	
		Min.	Max.	Min.	Max.	Min.	Max.
1	LA.A.1.2.3	15	20	15	20	15	20
	Item Format	MC		MC, SR		MC	
2	LA.A.2.2.1	20	30	20	30	20	30
	Item Formats	MC		MC, SR, ER		MC	
2	LA.A.2.2.2	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
2	LA.E.1.2.2	8	13	6	11	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	LA.A.2.2.7	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
3	LA.E.1.2.3	5	10	5	10	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	LA.E.2.2.1	10	20	10	20	10	20
	Item Formats	MC		MC, SR		MC	
4	LA.A.2.2.8	2	7	4	9	5	10
	Item Formats	MC		MC, SR, ER		MC	

Table 2.1.3.2 Benchmark Coverage for Grades 6–8 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grades 6 and 7		Grade 8	
		Min.	Max.	Min.	Max.
1	LA.A.1.3.2	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.3.1	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	LA.E.2.3.1	5	15	5	15
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.3.2	10	20	10	20
	Item Formats	MC		MC, SR, ER	
3	LA.E.2.2.1	10	15	10	15
	Item Formats	MC		MC, SR, ER	
3	LA.A.2.2.7	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.3.5	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.3.8	5	15	5	15
	Item Formats	MC		MC, SR, ER	

Table 2.1.3.3 Benchmark Coverage for Grades 9–10 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grade 9		Grade 10	
		Min.	Max.	Min.	Max.
1	LA.A.1.4.2	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.4.1	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.4.2	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	LA.E.2.4.1	5	10	5	10
	Item Formats	MC		MC, SR, ER	
3	LA.E.2.2.1	5	15	5	15
	Item Formats	MC		MC, SR, ER	
3	LA.A.2.2.7	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.4.4	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.4.7	10	15	10	15
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.4.8	5	10	5	10
	Item Formats	MC		MC, SR, ER	

On the following page, Table 2.1.3.4 shows the desired reading benchmark coverage for 2007 FCAT Reading operational forms and the cluster associated with each benchmark. Coverage is given as a range of percentages of total raw score points in the core portion of the test (this excludes field test and anchor items).

Table 2.1.3.4 also indicates the relationship between the individual benchmarks assessed and the four reading benchmark clusters reported.

2.2 Mathematics Content Guidelines

2.2.1 Subscore Coverage

Table 2.2.1.1 shows the approximate percentages of points (±2%) by grade for the five Mathematics strands. In grades 3 and 4, each form should have the greatest percentage of points in Number Sense, Concepts, and Operations (Strand A). In grades 5 through 8, each form should have an equal percentage of points for each strand. In grades 9 and 10, each form should contain a greater percentage of points in two strands: Geometry and Spatial Sense (Strand C) and Algebraic Thinking (Strand D). Table 2.2.1.2 shows the number of items by item type to be included in mathematics tests in grades 3 through 10.

In addition to strand coverage, each Mathematics form should follow a content map for benchmark coverage, as discussed in Section 2.2.2.

Table 2.2.1.1 FCAT 2007 Mathematics: Approximate Percentage of Points by Strand

Strand	Grade 3	Grade 4	Grades 5–8	Grades 9–10
A: Number Sense, Concepts, and Operations	30	28	20	17
B: Measurement	20	20	20	17
C: Geometry and Spatial Sense	17	17	20	25
D: Algebraic Thinking	15	17	20	25
E: Data Analysis and Probability	18	18	20	17
TOTAL	**100**	**100**	**100**	**101**

Table 2.2.1.2 FCAT 2007 Mathematics: Number of Items by Item Type

Grade	Multiple-Choice	Gridded-Response	Short-Response	Extended-Response	Total Number of Items
3	40	0	0	0	40
4	40	0	0	0	40
5	33	11	4	2	50
6	33	11	0	0	44
7	33	11	0	0	44
8	30	14	4	2	50
9	29	15	0	0	44
10	28	16	4	2	50

2.2.2 Item Types and Benchmark Coverage

In Mathematics for grades 3 through 10, benchmark coverage and item formats for operational forms in the 2007 FCAT test administration will follow the guidelines established for the 1998–2006 operational forms (2001–2006 for norm-referenced task tests).

On the pages that follow, Tables 2.2.2.1, 2.2.2.2, 2.2.2.3, 2.2.2.4, and 2.2.2.5 show the benchmark coverage for the FCAT Mathematics tests. Coverage is given as a range rather than as specific numbers because of the constraints of available items. For some benchmarks, the minimum number in the range is zero because not every benchmark is tested at every grade every year; the primary consideration is the percentage of items within each strand. These tables also indicate the item types (MC, GR, SR, and ER) to be used on each form. Sometimes a combination of item types (e.g., MC/GR, MC/SR) may be included for particular benchmarks. Those combined item types indicate that the items used could all be of one type or they may be used in any combination of the specified item types, so long as the following requirements are also met.

- The overall percentage of points from gridded-response items should be as follows:
    - 20 percent in grade 5
    - 25 percent in grades 6 and 7
    - 40 to 45 percent in grades 8 through 10

- In Grades 5, 8, and 10, SR and ER items comprise approximately 30 percent of the total number of points, with a maximum of 2 ER items and 4 SR items per form.
- Items are, in general, placed into groups of 2–5 per item type. Each session begins with MC items. Placement of items by item type should be guided by patterns found in grades 3–10 of the 2006 FCAT operational forms.
- Items should also be placed in an order that minimizes abrupt cognitive transitions for students. Whenever possible, students should not be asked to move back and forth from one mathematical strand to another, or from one mental construct to another (e.g., an item testing knowledge of area might be placed next to an item testing geometric shapes rather than next to an item testing order of operations).

Table 2.2.2.1 Benchmark Coverage for Grade 3 Mathematics

BENCHMARKS FOR GRADE 3	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 30 percent of the total points will come from this strand.***		
MA.A.1.2.2	1 MC	3 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	0 MC	2 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	1 MC	3 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	0MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 15 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 MC	4 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.2 Benchmark Coverage for Grade 4 Mathematics

BENCHMARKS FOR GRADE 4	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 28 percent of the total points will come from this strand.***		
MA.A.1.2.2	0 MC	2 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	1 MC	3 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	0MC	2 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	1 MC	3 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 17 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	2 MC	4 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	1 MC	3 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.3 Benchmark Coverage for Grade 5 Mathematics

BENCHMARKS FOR GRADE 5	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 20 percent of the total points will come from this strand.***		
MA.A.1.2.2 (A)*	1 MC/GR	3 MC/GR
MA.A.1.2.4	2 MC/GR	4 MC/GR
MA.A.2.2.1	0 MC/GR	2 MC/GR
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	0 MC	2 MC
MA.A.3.2.3	3 MC/GR	5 MC/GR
MA.A.4.2.1	0 SR	2 SR
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	5 MC/GR	7 MC/GR
MA.B.2.2.1	3 MC/GR	5 MC/GR
MA.B.2.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 20 percent of the total points will come from this strand.***		
MA.C.1.2.1	0 MC	2 MC
MA.C.2.2.1	1 MC/ER	3 MC/ER
MA.C.2.2.2	0 MC	2 MC
MA.C.3.2.1	2 MC/SR	4 MC/SR
MA.C.3.2.2	0 MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 20 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC/GR	3 MC/GR
MA.D.1.2.2	0 SR	2 SR
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	3 MC/GR	5 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 20 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 GR/MC/ER	4 GR/MC/ER
MA.E.1.2.2 (A)*	0 MC/GR	2 MC/GR
MA.E.2.2.1	0 SR	2 SR
MA.E.2.2.2	0 MC	2 MC
MA.E.3.2.1	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 20% points)*						
MA.A.1.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.A.1.3.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.2.3.1 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.1	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC
MA.A.3.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.3	1MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR
MA.A.4.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 20% points)*						
MA.B.1.3.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 GR/SR	4 GR/SR
MA.B.1.3.2	0 MC/GR	0 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.3 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.4 (A)*	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.2.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 20% points)*						
MA.C.1.3.1	3 MC	5 MC	2 MC	4 MC	1 MC	3 MC
MA.C.2.3.1	2 MC	4 MC	1 MC	3 MC	1 MC/ER	3 MC/ER
MA.C.3.3.1	0 MC	2 MC	0 MC/GR	2 MC/GR	1 MC/SR	3 MC/SR
MA.C.3.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics (continued)

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND D: ALGEBRAIC THINKING (*Approximately 20% points)*						
MA.D.1.3.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.D.1.3.2	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR/SR	4 MC/GR/SR
MA.D.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC/SR	2 MC/SR
MA.D.2.3.2	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY (*Approximately 20% points)*						
MA.E.1.3.1 (A)*	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	0 MC/GR/ER	2 MC/GR/ER
MA.E.1.3.2	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.E.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.E.2.3.2 (A)*	0 MC	2 MC	0 MC	2 MC	0 MC/GR	2 MC/GR
MA.E.3.3.1 (A)*	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics

BENCHMARKS FOR GRADES 9–10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 17% points)*				
MA.A.1.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.1.4.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.4.1	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.3	1 MC/GR	3 MC/GR	3 MC/GR	5 MC/GR
MA.A.4.4.1	1 MC	3 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 17% points)*				
MA.B.1.4.1 (S)**	1 MC/GR	3 MC/GR	2 MC/GR/SR	4 MC/GR/SR
MA.B.1.4.2	1 MC/GR	3 MC/GR	1 MC/SR	3 MC/GR
MA.B.1.4.3 (A)*	0 MC/GR	2 MC/GR	0	0
MA.B.2.4.1 (A)*	0 MC/GR	2 MC/GR	1 MC	3 MC
MA.B.2.4.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 25% points)*				
MA.C.1.4.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.C.2.4.1 (E)***	2 MC/GR	4 MC/GR	2 MC/GR/ER	4 MC/GR/ER
MA.C.2.4.2	0	0	0 MC	2 MC
MA.C.3.4.1	2 MC/GR	4 MC/GR	1 MC/GR	3 MC/GR
MA.C.3.4.2 (A)*/(S)**	2 MC/GR	4 MC/GR	1 MC/GR/SR	3 MC/GR/SR

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER item at Grade 10.

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics (continued)

BENCHMARKS FOR GRADES 9–10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND D: ALGEBRAIC THINKING ***(Approximately 25% points).***				
MA.D.1.4.1	3 MC/GR	5 MC/GR	4 MC/GR	6 MC/GR
MA.D.1.4.2	2 MC/GR	4 MC/GR	2 MC/GR/SR	5 MC/GR/SR
MA.D.2.4.2 (S)**	2 MC/GR	4 MC/GR	3 MC/GR/SR	6 MC/GR/SR
STRAND E: DATA ANALYSIS AND PROBABILITY ***(Approximately 17% points)***				
MA.E.1.4.1 (A)* (E)***	0 MC/GR	2 MC/GR	1 MC/GR/ER	3 MC/GR/ER
MA.E.1.4.2 (A)*	1 MC/GR	3 MC/GR	0 MC/GR	2 MC/GR
MA.E.2.4.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
MA.E.3.4.1	0 MC	2 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER at Grade 10.

2.2.3 Field Test Forms

Each field test form will consist of 8 items embedded among the set of scored items. Items approved at item review will be selected for field test forms according to the following criteria:

- First, select items that are needed for appropriate benchmark coverage in the item bank.
- Second, select items that are needed for appropriate format variety in the item bank.

Items selected should be assembled into sets of 8 for field testing, following the format guidelines shown in Table 2.2.3.1 below.

Table 2.2.3.1 Item Formats in Mathematics 2006 Field Test Forms

Grade	3	4	5	6	7	8	9	10
MC	8	8	5	5	5	5	5	4
GR			2	3	3	2	3	3
SR or ER			1			1		1

Items in the field test sets should reflect a range of difficulty levels (as predicted by the Mathematics item review committee) and cognitive levels (also as determined by the item review committee). However, the field test items also should be placed in sets that minimize abrupt transitions from one mathematical strand or mental construct to another.

2.2.4 Multicultural and Gender Representation

In the core items for Mathematics, the contexts and names of individuals within those contexts must contain a faithful representation of the various cultures and ethnicities of Florida. Stereotypical situations or activities for any ethnic group will not be used.

Similarly, Mathematics contexts and names used in each core should represent both genders equally. Items must avoid showing genders in stereotypical roles.

2.2.5 Cognitive Levels

In 2004, the Florida Department of Education adopted a three-level cognitive classification system called Cognitive Complexity to use when classifying FCAT test items. This system is based on the taxonomy for cognitive complexities developed by Norman Webb[2]. Using a modified version of Webb's taxonomy, each item will be classified as low, moderate, or high in its complexity during content committee review. At each grade level, the FCAT Mathematics core should follow the cognitive level guidelines found below in Table 2.2.5.1.

Table 2.2.5.1 Approximate Percentage of Points by Cognitive Level for FCAT Mathematics

Grades	Low Level	Moderate Level	High Level
3–4	25-35	50-70	5-15
5*	10-20	50-70	20-30
6–7	10-20	60-80	10-20
8*	10-20	50-70	20-30
9	10-20	60-80	10-20
10*	10-20	50-70	20-30

* Indicates grades that have a greater percentage of high complexity points due to the nature of performance tasks.

[2] Webb, N.L, 1999, *Alignment Between Standards and Assessment,* University of Wisconsin Center for Educational Research.

2. Content Guidelines

Construction of the 2008 operational FCAT forms will follow the content guidelines described in this section. Test construction will also follow the statistical and psychometric guidelines described in Section 3.

Each grade level in FCAT Reading, Mathematics, Science, and Writing+ will have a maximum of 50 core items per form. Grades 3 and 4 may have as few as 40 core items. Reading forms will have 45 core items in all grades, but the items may vary by item type. Science will have approximately 45 core items per form at each of the three grade levels. Writing+ will have 44 core items as outlined in the test design. To construct the core item sets for Reading, Mathematics, Science, and Writing+, Harcourt will follow the content guidelines used for previous FCAT operational forms.

The remainder of this document details guidelines and/or requirements for test construction, based on information provided by the following sources: *Mathematics Test Item and Performance Task Specifications (2005)*, *Reading Test Item and Performance Task Specifications (2000)*, *Science Test Item and Performance Task Specifications (2002)*, *1999–2000 Test Design: Additional FCAT Tests,* and *Writing+ Test Design and Construction Specifications (2005).* Content guidelines are broken down into the following sections:

- Reading
- Mathematics
- Science
- Writing+

The subscore is the strand, cluster, or reporting category. Coverage of the reporting categories for the 2008 FCAT test administration in grades 3 through 10 in Mathematics will be based on the guidelines established for the 1998–2007 operational forms. Coverage in grades 3 through 10 in Reading, and in Grades 5, 8, and 11 in Science will reflect the fact that reading and science benchmarks have been grouped into "clusters," and that student reading and science performance will be reported at the cluster level. This subscore coverage (strand information in the case of mathematics, cluster information in the case of reading and science) is best considered in terms of the number of points, rather than the number of items. MC and GR items receive 1 point each, while SR items receive a maximum of 2 points each and ER items receive a maximum of 4 points each.

2.1 Reading Content Guidelines

2.1.1 Subscore Coverage

As mentioned before, coverage of the reporting categories in grades 3 through 10 in Reading will reflect the fact that reading benchmarks are grouped into "clusters," and that student reading performance is reported at the cluster level.

The passages and questions used in the FCAT Reading test require students to construct meaning from both literary and informational text. As indicated in Table 2.1.1.1, the relative emphasis given to literary passages decreases gradually from grade 3 through grade 10, while the relative emphasis given to informational passages increases. The numbers of items of different types included in Reading assessments in grades 3 through 10 are presented in Table 2.1.1.2.

Table 2.1.1.1 FCAT 2008 Reading: Approximate Percentage of Points by Passage Type

Passage Type	Grade 3	Grades 4–6	Grades 7–8	Grades 9–10
Literary Text	60	50	40	30
Informational Text	40	50	60	70
TOTAL	**100**	**100**	**100**	**100**

Table 2.1.1.2 FCAT 2008 Reading: Number of Items by Item Type

Grade	Multiple-Choice	Short-Response	Extended-Response	Total Number of Items
3	45	0	0	45
4	41	3	1	45
5	45	0	0	45
6	45	0	0	45
7	45	0	0	45
8	41	3	1	45
9	45	0	0	45
10	41	3	1	45

At each grade level, four content clusters are reported (see Table 2.1.3.4 for reading benchmarks contained in each cluster):

- Words and Phrases in Context
- Main Idea, Plot, and Author's Purpose
- Comparison and Cause/Effect
- Reference and Research

The relative emphasis of each cluster in Reading assessments across grade levels is presented in Table 2.1.1.3. As mentioned before, this emphasis is given in percentage of points rather than percentage of items.

Table 2.1.1.3 FCAT 2008 Reading: Approximate Percentage of Points by Cluster

Cluster	**Grades 3–5**	**Grades 6–8**	**Grades 9–10**
1. Words and Phrases in Context	15–20	15–20	15–20
2. Main Idea, Plot, and Author's Purpose	30–55	30–55	20–50
3. Comparison and Cause/Effect	20–45	15–25	10–25
4. Reference and Research	5–15	10–30	20–40

The information in Table 2.1.1.4 indicates the maximum word-count totals for regular spring test administrations during the period from 2003 to 2007. Word-count totals may vary among forms in any single administration due to the variations in counts for field test passages.

Table 2.1.1.4 FCAT Reading: Maximum Total Word Count for Operational and Field Test Passages

Grade	2003 Test	2004 Test	2005 Test	2006 Test	2007
3	2954	3196	3108	3463	
4	3856	3716	3836	4460	
5	4623	4675	5099	4635	
6	5041	5307	5597	5436	
7	5175	5360	5665	5678	
8	6203	6112	6812	6111	
9	7004	6932	6870	7095	
10	7135	7265	8135	7395	

2.1.2 Passage Guidelines

Passage Length. At each grade level, the reading passages used for the core form should vary in length; however,, individually, they should fall within the guidelines in the specification document. When reading tests are divided into two sessions, a long passage should be balanced with one or more shorter passages within each section. Also, each test form should be constructed so that it does not end with a relatively long passage.

The total number of words that a student is required to read in each core form should represent a logical progression in length from grade 3 to grade 10. For example, the total word count for grade 5 should not exceed the total word count for grade 6, and the total word count for grade 6 should be less than the total word count for grade 7. Based on these length requirements, the 2008 operational forms for FCAT Reading will each contain between five and seven passages, with one additional passage for the embedded field test or anchor items.

Passage Types. A sufficient number of both informational and literary passages must be selected for each form to satisfy the desired percentages shown in Table 2.1.1.1. Consideration will also be given to the genres of the passages in each form. Ideally, a poem should be included in each test at all grade levels, with the exception of grade 3; however, this may not always be possible.

In addition, a mix of literary genres, such as stories and essays, is highly desirable, as is the inclusion of a variety of informational genres, such as editorials, reports, and magazine articles.

Since some reading benchmarks are more accurately assessed with either literary or informational passages, a balance of passage types will help ensure that every benchmark and cluster receives adequate coverage. The appropriate benchmark coverage for each grade level is described in Section 2.1.3.

In addition, the selected passages on each form will represent a balance of *Sunshine State Standard* topics (e.g., science, social studies, the arts), as well as a variety of sources (e.g., children's magazines, newspaper articles, book excerpts).

Passage Difficulty. Core reading passages at each grade should represent a range of difficulties. Difficulty levels are determined by Florida educators serving on passage review committees. The difficulty rating for a passage (Easy, Medium, or Difficult) reflects the vocabulary and sentence structure in the passage and the complexity and density of the ideas contained in the passage.

In general, a difficult passage in the core should be balanced by an easier passage either immediately before or after the difficult passage. It is preferable to neither begin nor end a session with a difficult passage. Whenever possible, the first passage on every core form should be an engaging literary passage. When this is not possible, an easy, engaging informational passage may be used.

Limitations. While every effort is made to adhere to these passage guidelines, it is not always possible, due to extenuating circumstances. For example, permission to use a passage on the FCAT may be denied by the publisher or there may be a general shortage of passages for a specific topic.

2.1.3 Item Types and Benchmark Coverage

On the following pages, Tables 2.1.3.1, 2.1.3.2, and 2.1.3.3 show the item types available for each Reading benchmark. For the grades that use reading performance tasks (i.e., grades 4, 8, and 10), SR and ER items should represent approximately 15–20 percent of the total number of points in each form, with a maximum of 1 ER item and 3 SR items (excluding field test items) per form. All other grades will have forms that contain only multiple-choice items.

An SR or ER item should not appear as the first or second item within the set of items for each reading passage. If a set of items for a passage contains two SR items, or an SR and an ER item, these two items should be separated with at least two MC items between them. In addition, an ER item should not be the last item within the set of items for a passage except in field test forms.

Table 2.1.3.1 Benchmark Coverage for Grades 3–5 Reading

Cluster	BENCHMARK	PERCENT OF POINTS					
		Grade 3		Grade 4		Grade 5	
		Min.	Max.	Min.	Max.	Min.	Max.
1	**LA.A.1.2.3**	15	20	15	20	15	20
	Item Format	MC		MC, SR		MC	
2	**LA.A.2.2.1**	20	30	20	30	20	30
	Item Formats	MC		MC, SR, ER		MC	
2	**LA.A.2.2.2**	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
2	**LA.E.1.2.2**	8	13	6	11	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.A.2.2.7**	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.E.1.2.3**	5	10	5	10	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.E.2.2.1**	10	20	10	20	10	20
	Item Formats	MC		MC, SR		MC	
4	**LA.A.2.2.8**	2	7	4	9	5	10
	Item Formats	MC		MC, SR, ER		MC	

Table 2.1.3.2 Benchmark Coverage for Grades 6–8 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grades 6 and 7		Grade 8	
		Min.	Max.	Min.	Max.
1	LA.A.1.3.2	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.3.1	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	LA.E.2.3.1	5	15	5	15
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.3.2	10	20	10	20
	Item Formats	MC		MC, SR, ER	
3	LA.E.2.2.1	10	15	10	15
	Item Formats	MC		MC, SR, ER	
3	LA.A.2.2.7	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.3.5	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.3.8	5	15	5	15
	Item Formats	MC		MC, SR, ER	

Table 2.1.3.3 Benchmark Coverage for Grades 9–10 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grade 9		Grade 10	
		Min.	Max.	Min.	Max.
1	**LA.A.1.4.2**	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.4.1**	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.4.2**	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	**LA.E.2.4.1**	5	10	5	10
	Item Formats	MC		MC, SR, ER	
3	**LA.E.2.2.1**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
3	**LA.A.2.2.7**	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.4**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.7**	10	15	10	15
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.8**	5	10	5	10
	Item Formats	MC		MC, SR, ER	

On the following page, Table 2.1.3.4 shows the desired reading benchmark coverage for 2008 FCAT Reading operational forms and the cluster associated with each benchmark. Coverage is given as a range of percentages of total raw score points in the core portion of the test (this excludes field test and anchor items).

Table 2.1.3.4 also indicates the relationship between the individual benchmarks assessed and the four reading benchmark clusters reported.

Table 2.1.3.4 FCAT Reading Benchmark Content Clusters

GRADES 3–5			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.2.3 meaning of words in context; word analysis	**A.2.2.1** main idea; supporting details; chronological order	**A.2.2.7** use of comparison and contrast	**A.2.2.8** organization and interpretation of information
	A.2.2.2 author's purpose in a simple text	**E.1.2.3** similarities and differences among characters, settings, events	
	E.1.2.2 plot development and conflict resolution	**E.2.2.1** cause-and-effect relationships	
GRADES 6–8			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.3.2 words in context; drawing conclusions; organizational patterns	**A.2.3.1** main idea; relevant details; organizational patterns	**A.2.2.7** use of comparison and contrast	**A.2.3.5** organization, interpretation, and synthesis of information
	A.2.3.2 author's purpose or point of view	**E.2.2.1** cause-and-effect relationships	**A.2.3.8** validity and accuracy of information
	E.2.3.1 character and plot development; point of view; setting; conflict resolution; tone		
GRADES 9–10			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.4.2 words in context; inference; interpretation of data presentations	**A.2.4.1** main idea; supporting details; methods of development	**A.2.2.7** use of comparison and contrast	**A.2.4.4** identification and synthesis of information
	A.2.4.2 author's purpose; point of view	**E.2.2.1** cause-and-effect relationships	**A.2.4.7** validity and accuracy of information
	E.2.4.1 complex elements of plot, conflict resolution, setting, tone		**A.2.4.8** synthesis of information from multiple sources

2.1.4 Field Test Forms

Each Reading field test form for grades 3–10 will consist of one passage and a set of corresponding 8 items. For grades 3–9, there will be 30 forms. For grade 10, there will be 40 forms. Field test passages may appear on two or more field test forms so that a sufficient number of items will be available for operational use in future years. In grades 4, 8, and 10, the final field test item will be either a short-response or extended-response item. Passages and passage-based items approved at item review will be selected for placement in field test forms according to the following criteria:

- First, select passages associated with items that give needed benchmark coverage in the FCAT item bank at the specific grade.
- Second, select passages that provide needed coverage of the FCAT topics at the specific grade.
- Third, select passages with multicultural perspectives, subjects, and/or authors.
- Fourth, select informational or literary passages as needed within the item bank at the specific grade.

The items in the sets should reflect a range of difficulty levels (as predicted by the Reading item review committee) and cognitive levels (also as determined by the item review committee). If a selected passage has fewer than 12 items, some items will be repeated on both field test forms for that passage. When possible, repeated items should be those that require a general understanding of the passage (e.g., assessing understanding of the main idea or the author's purpose). Field test items should be arranged to match the flow of the passage as often as possible. Also, care should be taken to ensure the rotation of correct answers. The item formats for the FCAT Reading field test forms are shown in Table 2.1.4.1.

Table 2.1.4.1 Item Formats in 2008 Reading Field Test Forms

Grade	3	4	5	6	7	8	9	10
MC	8	7	8	8	8	7	8	9
SR or ER		1				1		1

2.1.5 Multicultural and Gender Representation

Reading core passages should represent a variety of cultural aspects. Multicultural characteristics of passages may include illustrations representing individuals of one or more cultures or ethnicities, passages written by authors from various cultures, and/or content depicting various cultures.

Reading passages in each form should also contain a balanced representation of both genders and avoid stereotypical roles.

2.1.6 Cognitive Levels

In 2004, the Florida Department of Education adopted a three-level cognitive classification system called Cognitive Complexity to use for classifying FCAT test items. This system is based on the taxonomy for cognitive complexities developed by Norman Webb[1]. Using a modified version of Webb's taxonomy, each item will be classified as low, moderate, or high in complexity during content committee review. At each grade level, the FCAT Reading core should follow the cognitive level guidelines found below in Table 2.1.6.1.

Table 2.1.6.1 Approximate Percentage of Points by Cognitive Level for FCAT Reading

Grade	Low Level	Moderate Level	High Level
3	25–35	50–70	5–15
4*	20–30	50–70	10–20
5–7	15–25	50–70	15–25
8*	10–20	50–70	20–30
9	10–20	50–70	20–30
10*	10–20	45–65	25–35

* Indicates grades that have a greater percentage of high complexity points due to the nature of performance tasks.

[1] Webb, N.L, 1999, *Alignment Between Standards and Assessment,* University of Wisconsin Center for Educational Research.

2.2 Mathematics Content Guidelines

2.2.1 Subscore Coverage

Table 2.2.1.1 shows the approximate percentages of points (±2%) by grade for the five Mathematics strands. In grades 3 and 4, each form should have the greatest percentage of points in Number Sense, Concepts, and Operations (Strand A). In grades 5 through 8, each form should have an equal percentage of points for each strand. In grades 9 and 10, each form should contain a greater percentage of points in two strands: Geometry and Spatial Sense (Strand C) and Algebraic Thinking (Strand D). Table 2.2.1.2 shows the number of items by item type to be included in mathematics tests in grades 3 through 10.

In addition to strand coverage, each Mathematics form should follow a content map for benchmark coverage, as discussed in Section 2.2.2.

Table 2.2.1.1 FCAT 2008 Mathematics: Approximate Percentage of Points by Strand

Strand	Grade 3	Grade 4	Grades 5–8	Grades 9–10
A: Number Sense, Concepts, and Operations	30	28	20	17
B: Measurement	20	20	20	17
C: Geometry and Spatial Sense	17	17	20	25
D: Algebraic Thinking	15	17	20	25
E: Data Analysis and Probability	18	18	20	17
TOTAL	**100**	**100**	**100**	**101**

Table 2.2.1.2 FCAT 2008 Mathematics: Number of Items by Item Type

Grade	Multiple-Choice	Gridded-Response	Short-Response	Extended-Response	Total Number of Items
3	40	0	0	0	40
4	40	0	0	0	40
5	33	11	4	2	50
6	33	11	0	0	44
7	32	12	0	0	44
8	30	14	4	2	50
9	29	15	0	0	44
10	28	16	4	2	50

2.2.2 Item Types and Benchmark Coverage

In Mathematics for grades 3 through 10, benchmark coverage and item formats for operational forms in the 2008 FCAT test administration will follow the guidelines established for the 1998–2007 operational forms.

On the pages that follow, Tables 2.2.2.1, 2.2.2.2, 2.2.2.3, 2.2.2.4, and 2.2.2.5 show the benchmark coverage for the FCAT Mathematics tests. Coverage is given as a range rather than as specific numbers because of the constraints of available items. For some benchmarks, the minimum number in the range is zero because not every benchmark is tested at every grade every year; the primary consideration is the percentage of items within each strand. These tables also indicate the item types (MC, GR, SR, and ER) to be used on each form. Sometimes a combination of item types (e.g., MC/GR, MC/SR) may be included for particular benchmarks. Those combined item types indicate that the items used could all be of one type or they may be used in any combination of the specified item types, so long as the following requirements are also met.

- The overall percentage of points from gridded-response items should be as follows:
    - 20 percent in grade 5
    - 25 to 30 percent in grades 6 and 7
    - 40 to 45 percent in grades 8 through 10

- In Grades 5, 8, and 10, SR and ER items comprise approximately 30 percent of the total number of points, with a maximum of 2 ER items and 4 SR items per form.
- Items are, in general, placed into groups of 2–5 per item type. Each session begins with MC items. Placement of items by item type should be guided by patterns found in grades 3–10 of the 2007 FCAT operational forms.
- Items should also be placed in an order that minimizes abrupt cognitive transitions for students. Whenever possible, students should not be asked to move back and forth from one mathematical strand to another, or from one mental construct to another (e.g., an item testing knowledge of area might be placed next to an item testing geometric shapes rather than next to an item testing order of operations).

Table 2.2.2.1 Benchmark Coverage for Grade 3 Mathematics

BENCHMARKS FOR GRADE 3	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 30 percent of the total points will come from this strand.***		
MA.A.1.2.2	1 MC	3 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	0 MC	2 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	1 MC	3 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	0MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 15 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 MC	4 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.2 Benchmark Coverage for Grade 4 Mathematics

BENCHMARKS FOR GRADE 4	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 28 percent of the total points will come from this strand.***		
MA.A.1.2.2	0 MC	2 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	1 MC	3 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	0MC	2 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	1 MC	3 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 17 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	2 MC	4 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	1 MC	3 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.3 Benchmark Coverage for Grade 5 Mathematics

BENCHMARKS FOR GRADE 5	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 20 percent of the total points will come from this strand.***		
MA.A.1.2.2 (A)*	1 MC/GR	3 MC/GR
MA.A.1.2.4	2 MC/GR	4 MC/GR
MA.A.2.2.1	0 MC/GR	2 MC/GR
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	0 MC	2 MC
MA.A.3.2.3	3 MC/GR	5 MC/GR
MA.A.4.2.1	0 SR	2 SR
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	5 MC/GR	7 MC/GR
MA.B.2.2.1	3 MC/GR	5 MC/GR
MA.B.2.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 20 percent of the total points will come from this strand.***		
MA.C.1.2.1	0 MC	2 MC
MA.C.2.2.1	1 MC/ER	3 MC/ER
MA.C.2.2.2	0 MC	2 MC
MA.C.3.2.1	2 MC/SR	4 MC/SR
MA.C.3.2.2	0 MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 20 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC/GR	3 MC/GR
MA.D.1.2.2	0 SR	2 SR
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	3 MC/GR	5 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 20 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 GR/MC/ER	4 GR/MC/ER
MA.E.1.2.2 (A)*	0 MC/GR	2 MC/GR
MA.E.2.2.1	0 SR	2 SR
MA.E.2.2.2	0 MC	2 MC
MA.E.3.2.1	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 20% points)*						
MA.A.1.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.A.1.3.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.2.3.1 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.1	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC
MA.A.3.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.3	1MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR
MA.A.4.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 20% points)*						
MA.B.1.3.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 GR/SR	4 GR/SR
MA.B.1.3.2	0 MC/GR	0 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.3 (A)*	0 MC/GR	3 MC/GR	0 MC/GR	2 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.4 (A)*	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.2.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 20% points)*						
MA.C.1.3.1	3 MC	5 MC	2 MC	4 MC	1 MC	3 MC
MA.C.2.3.1	2 MC	4 MC	1 MC	3 MC	1 MC/ER	3 MC/ER
MA.C.3.3.1	0 MC	2 MC	0 MC/GR	2 MC/GR	1 MC/SR	3 MC/SR
MA.C.3.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics (continued)

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND D: ALGEBRAIC THINKING (*Approximately 20% points)*						
MA.D.1.3.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.D.1.3.2	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR/SR	4 MC/GR/SR
MA.D.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC/SR	2 MC/SR
MA.D.2.3.2	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY (*Approximately 20% points)*						
MA.E.1.3.1 (A)*	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	0 MC/GR/ER	2 MC/GR/ER
MA.E.1.3.2	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.E.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.E.2.3.2 (A)*	0 MC	2 MC	0 MC	2 MC	0 MC/GR	2 MC/GR
MA.E.3.3.1 (A)*	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics

BENCHMARKS FOR GRADES 9–10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 17% points)*				
MA.A.1.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.1.4.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.4.1	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.3	1 MC/GR	3 MC/GR	3 MC/GR	5 MC/GR
MA.A.4.4.1	1 MC	3 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 17% points)*				
MA.B.1.4.1 (S)**	1 MC/GR	3 MC/GR	2 MC/GR/SR	4 MC/GR/SR
MA.B.1.4.2	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.4.3 (A)*	0 MC/GR	2 MC/GR	0	0
MA.B.2.4.1 (A)*	0 MC/GR	2 MC/GR	1 MC	3 MC
MA.B.2.4.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 25% points)*				
MA.C.1.4.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.C.2.4.1 (E)***	2 MC/GR	4 MC/GR	2 MC/GR/ER	4 MC/GR/ER
MA.C.2.4.2	0	0	0 MC	2 MC
MA.C.3.4.1	2 MC/GR	4 MC/GR	1 MC/GR	3 MC/GR
MA.C.3.4.2 (A)*/(S)**	2 MC/GR	4 MC/GR	1 MC/GR/SR	3 MC/GR/SR

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER item at Grade 10.

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics (continued)

BENCHMARKS FOR GRADES 9–10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND D: ALGEBRAIC THINKING ***(Approximately 25% points).***				
MA.D.1.4.1	3 MC/GR	5 MC/GR	4 MC/GR	6 MC/GR
MA.D.1.4.2	2 MC/GR	4 MC/GR	2 MC/GR/SR	5 MC/GR/SR
MA.D.2.4.2 (S)**	2 MC/GR	4 MC/GR	3 MC/GR/SR	6 MC/GR/SR
STRAND E: DATA ANALYSIS AND PROBABILITY ***(Approximately 17% points)***				
MA.E.1.4.1 (A)* (E)***	0 MC/GR	2 MC/GR	1 MC/GR/ER	3 MC/GR/ER
MA.E.1.4.2 (A)*	1 MC/GR	3 MC/GR	0 MC/GR	2 MC/GR
MA.E.2.4.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
MA.E.3.4.1	0 MC	2 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER at Grade 10.

2.2.3 Field Test Forms

For grades 3–9 FCAT Mathematics, there will be a total of 30 forms, including 26 field test forms and four anchor forms. For grade 10 Mathematics, there will be a total of 40 forms, including 36 field test forms and four anchor forms. Each field test form will consist of 8 items embedded among the set of scored items. Items approved at item review will be selected for field test forms according to the following criteria:

- First, select items that are needed for appropriate benchmark coverage in the item bank.
- Second, select items that are needed for appropriate format variety in the item bank.

Items selected should be assembled into sets of 8 for field testing, following the format guidelines shown in Table 2.2.3.1.

Table 2.2.3.1 Item Formats in Mathematics 2008 Field Test Forms

Grade	3	4	5	6	7	8	9	10
MC	8	8	5	5	5	5	5	4
GR			2	3	3	2	3	3
SR or ER			1			1		1

Items in the field test sets should reflect a range of difficulty levels (as predicted by the Mathematics item review committee) and cognitive levels (also as determined by the item review committee). However, the field test items also should be placed in sets that minimize abrupt transitions from one mathematical strand or mental construct to another.

2.2.4 Multicultural and Gender Representation

In the core items for Mathematics, the contexts and names of individuals within those contexts must contain a faithful representation of the various cultures and ethnicities of Florida. Stereotypical situations or activities for any ethnic group will not be used.

Similarly, Mathematics contexts and names used in each core should represent both genders equally. Items must avoid showing genders in stereotypical roles.

2.2.5 Cognitive Levels

In 2004, the Florida Department of Education adopted a three-level cognitive classification system called Cognitive Complexity to use when classifying FCAT test items. This system is based on the taxonomy for cognitive complexities developed by Norman Webb[2]. Using a modified version of Webb's taxonomy, each item will be classified as low, moderate, or high in its complexity during content committee review. At each grade level, the FCAT Mathematics core should follow the cognitive level guidelines found below in Table 2.2.5.1.

Table 2.2.5.1 Approximate Percentage of Points by Cognitive Level for FCAT Mathematics

Grades	Low Level	Moderate Level	High Level
3–4	25-35	50-70	5-15
5*	10-20	50-70	20-30
6–7	10-20	60-80	10-20
8*	10-20	50-70	20-30
9	10-20	60-80	10-20
10*	10-20	50-70	20-30

* Indicates grades that have a greater percentage of high complexity points due to the nature of performance tasks.

[2] Webb, N.L, 1999, *Alignment Between Standards and Assessment,* University of Wisconsin Center for Educational Research.

2. Content Guidelines

Construction of the 2009 operational FCAT forms will follow the content guidelines described in this section. Test construction will also follow the statistical and psychometric guidelines described in Section 3.

Each grade level in FCAT Reading, Mathematics, Science, and Writing+ will have a maximum of 50 core items per form. Grades 3 and 4 may have as few as 40 core items. Reading forms will have 45 core items in all grades, but the items may vary by item type. Science will have approximately 45 core items per form at each of the three grade levels. Writing+ will have 44 core items as outlined in the test design. To construct the core item sets for Reading, Mathematics, Science, and Writing+, Pearson will follow the content guidelines used for previous FCAT operational forms.

The remainder of this document details guidelines and/or requirements for test construction, based on information provided by the following sources: *Mathematics Test Item and Performance Task Specifications (2005)*, *Reading Test Item and Performance Task Specifications (2000)*, *Science Test Item and Performance Task Specifications (2002)*, *1999–2000 Test Design: Additional FCAT Tests,* and *Writing+ Test Design and Construction Specifications (2005).* Content guidelines are broken down into the following sections:

- Reading
- Mathematics
- Science
- Writing+

The subscore is the strand, cluster, or reporting category. Coverage of the reporting categories for the 2009 FCAT test administration in grades 3 through 10 in Mathematics will be based on the guidelines established for the 1998–2007 operational forms. Coverage in grades 3 through 10 in Reading, and in grades 5, 8, and 11 in Science will reflect the fact that reading and science benchmarks have been grouped into "clusters," and that student reading and science performance will be reported at the cluster level. This subscore coverage (strand information in the case of mathematics, cluster information in the case of reading and science) is best considered in terms of the number of points, rather than the number of items. MC and GR items receive 1 point each, while SR items receive a maximum of 2 points each and ER items receive a maximum of 4 points each. All Writing+ MC items contribute 1 point each to one of the 4 reporting categories for Writing.

2.1 Reading Content Guidelines

2.1.1 FCAT Reading Subscore Coverage

As mentioned before, coverage of the reporting categories in grades 3 through 10 in Reading will reflect the fact that reading benchmarks are grouped into reporting categories, and that student reading performance is reported at the cluster level.

The passages and questions used in the FCAT Reading test require students to construct meaning from both literary and informational text. As indicated in Table 2.1.1.1, the relative emphasis given to literary passages decreases gradually from grade 3 through grade 10, while the relative emphasis given to informational passages increases. The numbers of items of different types included in Reading assessments in grades 3 through 10 are presented in Table 2.1.1.2.

Table 2.1.1.1 FCAT Reading: Approximate Percentage of Points by Passage Type

Passage Type	Grade 3	Grades 4–6	Grades 7–8	Grades 9–10
Literary Text	60	50	40	30
Informational Text	40	50	60	70
TOTAL	**100**	**100**	**100**	**100**

Table 2.1.1.2 FCAT Reading: Number of Items by Item Type

Grade	Multiple-Choice	Short-Response	Extended-Response	Total Number of Items
3	45	0	0	45
4	41	3	1	45
5	45	0	0	45
6	45	0	0	45
7	45	0	0	45
8	41	3	1	45
9	45	0	0	45
10	41	3	1	45

At each grade level, four content clusters are reported (see Table 2.1.3.4 for reading benchmarks contained in each cluster):

- Words and Phrases in Context
- Main Idea, Plot, and Author's Purpose
- Comparison and Cause/Effect
- Reference and Research

The relative emphasis of each cluster in Reading assessments across grade levels is presented in Table 2.1.1.3. As mentioned before, this emphasis is given in percentage of points rather than percentage of items.

Table 2.1.1.3 FCAT Reading: Approximate Percentage of Points by Cluster

Cluster	Grades 3–5	Grades 6–8	Grades 9–10
1. Words and Phrases in Context	15–20	15–20	15–20
2. Main Idea, Plot, and Author's Purpose	30–55	30–55	20–50
3. Comparison and Cause/Effect	20–45	15–25	10–25
4. Reference and Research	5–15	10–30	20–40

The information in Table 2.1.1.4 indicates the maximum word-count totals for regular spring test administrations during the period from 2003 to 2008. Word-count totals may vary among forms in any single administration due to the variations in counts for field test passages.

Table 2.1.1.4 FCAT Reading: Maximum Total Word Count for Operational and Field Test Passages

Grade	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test
3	2954	3196	3108	3463	3418	3250
4	3856	3716	3836	4460	4423	3594
5	4623	4675	5099	4635	4877	4894
6	5041	5307	5597	5436	5108	5228
7	5175	5360	5665	5678	4830	5432
8	6203	6112	6812	6111	6396	5928
9	7004	6932	6870	7095	6922	7016
10	7135	7265	8135	7395	7626	7388

2.1.2 FCAT Reading Passage Guidelines

Passage Length. At each grade level, the reading passages used for the core form should vary in length; however, individually, they should fall within the guidelines in the specification document. When reading tests are divided into two sessions, a long passage should be balanced with one or more shorter passages within each section. Also, each test form should be constructed so that it does not end with a relatively long passage.

The total number of words that a student is required to read in each core form should represent a logical progression in length from grade 3 to grade 10. For example, the total word count for grade 5 should not exceed the total word count for grade 6, and the total word count for grade 6 should be less than the total word count for grade 7. Based on these length requirements, the 2009 operational forms for FCAT Reading will each contain between five and seven passages, with one additional passage for the embedded field test or anchor items.

Passage Types. A sufficient number of both informational and literary passages must be selected for each form to satisfy the desired percentages shown in Table 2.1.1.1. Consideration will also be given to the genres of the passages in each form. Ideally, a poem should be included in each

test at all grade levels, with the exception of grade 3; however, this may not always be possible. A mix of literary genres, such as stories and essays, is highly desirable, as is the inclusion of a variety of informational genres, such as editorials, reports, and magazine articles.

Since some reading benchmarks are more accurately assessed with either literary or informational passages, a balance of passage types will help ensure that every benchmark and cluster receives adequate coverage. The appropriate benchmark coverage for each grade level is described in Section 2.1.3.

The selected passages on each form will represent a variety of Sunshine State Standard topics (e.g., science, social studies, the arts), as well as a variety of sources (e.g., children's magazines, newspaper articles, book excerpts).

Passage Difficulty. Core reading passages at each grade should represent a range of difficulties. Difficulty levels are determined by Florida educators serving on passage review committees. The difficulty rating for a passage (Easy, Medium, or Difficult) reflects the vocabulary and sentence structure in the passage and the complexity and density of the ideas contained in the passage.

In general, a difficult passage in the core should be balanced by an easier passage either immediately before or after the difficult passage. It is preferable to neither begin nor end a session with a difficult passage. Whenever possible, the first passage on every core form should be an engaging literary passage. When this is not possible, an easy, engaging informational passage may be used.

Limitations. While every effort is made to adhere to these passage guidelines, it is not always possible, due to extenuating circumstances. For example, permission to use a passage on the FCAT may be denied by the publisher or there may be a general shortage of passages for a specific topic.

2.1.3 FCAT Reading Item Types and Benchmark Coverage

On the following pages, Tables 2.1.3.1, 2.1.3.2, and 2.1.3.3 show the item types available for each reading benchmark. For the grades that use reading performance tasks (i.e., grades 4, 8, and 10), SR and ER items should represent approximately 15–20 percent of the total number of points in each form, with a maximum of 1 ER item and 3 SR items (excluding field test items) per form. All other grades will have forms that contain only multiple-choice items.

An SR or ER item should not appear as the first or second item within the set of items for each reading passage. If a set of items for a passage contains two SR items, or an SR and an ER item, these two items should be separated with at least two MC items between them. An ER item should not be the last item within the set of items for a passage except in field test forms.

Table 2.1.3.1 Benchmark Coverage for Grades 3–5 Reading

Cluster	BENCHMARK	PERCENT OF POINTS					
		Grade 3		Grade 4		Grade 5	
		Min.	Max.	Min.	Max.	Min.	Max.
1	**LA.A.1.2.3**	15	20	15	20	15	20
	Item Format	MC		MC, SR		MC	
2	**LA.A.2.2.1**	20	30	20	30	20	30
	Item Formats	MC		MC, SR, ER		MC	
2	**LA.A.2.2.2**	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
2	**LA.E.1.2.2**	8	13	6	11	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.A.2.2.7**	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.E.1.2.3**	5	10	5	10	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.E.2.2.1**	10	20	10	20	10	20
	Item Formats	MC		MC, SR		MC	
4	**LA.A.2.2.8**	2	7	4	9	5	10
	Item Formats	MC		MC, SR, ER		MC	

Table 2.1.3.2 Benchmark Coverage for Grades 6–8 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grades 6 and 7		Grade 8	
		Min.	Max.	Min.	Max.
1	LA.A.1.3.2	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.3.1	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	LA.E.2.3.1	5	15	5	15
	Item Formats	MC		MC, SR, ER	
2	LA.A.2.3.2	10	20	10	20
	Item Formats	MC		MC, SR, ER	
3	LA.E.2.2.1	10	15	10	15
	Item Formats	MC		MC, SR, ER	
3	LA.A.2.2.7	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.3.5	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	LA.A.2.3.8	5	15	5	15
	Item Formats	MC		MC, SR, ER	

Table 2.1.3.3 Benchmark Coverage for Grades 9–10 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grade 9		Grade 10	
		Min.	Max.	Min.	Max.
1	**LA.A.1.4.2**	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.4.1**	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.4.2**	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	**LA.E.2.4.1**	5	10	5	10
	Item Formats	MC		MC, SR, ER	
3	**LA.E.2.2.1**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
3	**LA.A.2.2.7**	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.4**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.7**	10	15	10	15
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.8**	5	10	5	10
	Item Formats	MC		MC, SR, ER	

On the following page, Table 2.1.3.4 shows the desired reading benchmark coverage for 2009 FCAT Reading operational forms and the cluster associated with each benchmark. Coverage is given as a range of percentages of total raw score points in the core portion of the test (this excludes field test and anchor items).

Table 2.1.3.4 also indicates the relationship between the individual benchmarks assessed and the four reading benchmark clusters reported.

Table 2.1.3.4 FCAT Reading Benchmark Content Clusters

GRADES 3–5			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.2.3 meaning of words in context; word analysis	**A.2.2.1** main idea; supporting details; chronological order	**A.2.2.7** use of comparison and contrast	**A.2.2.8** organization and interpretation of information
	A.2.2.2 author's purpose in a simple text	**E.1.2.3** similarities and differences among characters, settings, events	
	E.1.2.2 plot development and conflict resolution	**E.2.2.1** cause-and-effect relationships	
GRADES 6–8			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.3.2 words in context; drawing conclusions; organizational patterns	**A.2.3.1** main idea; relevant details; organizational patterns	**A.2.2.7** use of comparison and contrast	**A.2.3.5** organization, interpretation, and synthesis of information
	A.2.3.2 author's purpose or point of view	**E.2.2.1** cause-and-effect relationships	**A.2.3.8** validity and accuracy of information
	E.2.3.1 character and plot development; point of view; setting; conflict resolution; tone		
GRADES 9–10			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.4.2 words in context; inference; interpretation of data presentations	**A.2.4.1** main idea; supporting details; methods of development	**A.2.2.7** use of comparison and contrast	**A.2.4.4** identification and synthesis of information
	A.2.4.2 author's purpose; point of view	**E.2.2.1** cause-and-effect relationships	**A.2.4.7** validity and accuracy of information
	E.2.4.1 complex elements of plot, conflict resolution, setting, tone		**A.2.4.8** synthesis of information from multiple sources

2.1.4 FCAT Reading Field Test Forms

Each Reading field test form for grades 3–10 will consist of one passage and a set of corresponding 8 items. For grades 3–9, there will be 20 forms. For grade 10, there will be 30 forms. Field test passages may appear on two or more field test forms so that a sufficient number of items will be available for operational use in future years. In grades 4, 8, and 10, the final field test item will be either a short-response or extended-response item. Passages and passage-based items approved at item review will be selected for placement in field test forms according to the following criteria:

- First, select passages associated with items that give needed benchmark coverage in the FCAT item bank at the specific grade.
- Second, select passages that provide needed coverage of the FCAT topics at the specific grade.
- Third, select passages with multicultural perspectives, subjects, and/or authors.
- Fourth, select informational or literary passages as needed within the item bank at the specific grade.

The items in the sets should reflect a range of difficulty levels (as predicted by the Reading item review committee) and cognitive levels (also as determined by the item review committee). If a selected passage has fewer than 12 items, some items will be repeated on both field test forms for that passage. When possible, repeated items should be those that require a general understanding of the passage (e.g., assessing understanding of the main idea or the author's purpose). Field test items should be arranged to match the flow of the passage as often as possible. Also, care should be taken to ensure the rotation of correct answers. The item formats for the FCAT Reading field test forms are shown in Table 2.1.4.1.

Table 2.1.4.1 Item Formats in Reading Field Test Forms

Grade	3	4	5	6	7	8	9	10
MC	8	7	8	8	8	7	8	9
SR or ER	0	1	0	0	0	1	0	1

2.1.5 FCAT Reading Multicultural and Gender Representation

Reading core passages should represent a variety of cultural aspects. Multicultural characteristics of passages may include illustrations representing individuals of one or more cultures or ethnicities, passages written by authors from various cultures, and/or content depicting various cultures.

Reading passages in each form should also contain a balanced representation of both genders and avoid stereotypical roles.

2.1.6 FCAT Reading Cognitive Levels

In 2004, the Florida Department of Education adopted a three-level cognitive classification system called Cognitive Complexity to use for classifying FCAT test items. This system is based on the taxonomy for cognitive complexities developed by Norman Webb[1]. Using a modified version of Webb's taxonomy, each item will be classified as low, moderate, or high in complexity during content committee review. At each grade level, the FCAT Reading core should follow the cognitive level guidelines found below in Table 2.1.6.1.

Table 2.1.6.1 Approximate Percentage of Points by Cognitive Level for FCAT Reading

Grade	Low Level	Moderate Level	High Level
3	25–35	50–70	5–15
4*	20–30	50–70	10–20
5–7	15–25	50–70	15–25
8*	10–20	50–70	20–30
9	10–20	50–70	20–30
10*	10–20	45–65	25–35

* Indicates grades that have a greater percentage of high complexity points due to the nature of performance tasks.

[1] Webb, N.L, 1999, *Alignment Between Standards and Assessment,* University of Wisconsin Center for Educational Research.

2.2 Mathematics Content Guidelines

2.2.1 FCAT Mathematics Subscore Coverage

Table 2.2.1.1 shows the approximate percentages of points (±2%) by grade for the five Mathematics strands. In grades 3 and 4, each form should have the greatest percentage of points in Number Sense, Concepts, and Operations (Strand A). In grades 5 through 8, each form should have an equal percentage of points for each strand. In grades 9 and 10, each form should contain a greater percentage of points in two strands: Geometry and Spatial Sense (Strand C) and Algebraic Thinking (Strand D). Table 2.2.1.2 shows the number of items by item type to be included in mathematics tests in grades 3 through 10.

In addition to strand coverage, each Mathematics form should follow a content map for benchmark coverage, as discussed in Section 2.2.2.

Table 2.2.1.1 FCAT Mathematics: Approximate Percentage of Points by Strand

Strand	Grade 3	Grade 4	Grades 5–8	Grades 9–10
A: Number Sense, Concepts, and Operations	30	28	20	17
B: Measurement	20	20	20	17
C: Geometry and Spatial Sense	17	17	20	25
D: Algebraic Thinking	15	17	20	25
E: Data Analysis and Probability	18	18	20	18
TOTAL	**100**	**100**	**100**	**100**

Table 2.2.1.2 FCAT Mathematics: Number of Items by Item Type

Grade	Multiple-Choice	Gridded-Response	Short-Response	Extended-Response	Total Number of Items
3	40	0	0	0	40
4	40	0	0	0	40
5	33	11	4	2	50
6	33	11	0	0	44
7	32	12	0	0	44
8	30	14	4	2	50
9	29	15	0	0	44
10	28	16	4	2	50

2.2.2 FCAT Mathematics Item Types and Benchmark Coverage

In Mathematics for grades 3 through 10, benchmark coverage and item formats for operational forms in the 2009 FCAT test administration will follow the guidelines established for the 1998–2008 operational forms.

On the pages that follow, Tables 2.2.2.1, 2.2.2.2, 2.2.2.3, 2.2.2.4, and 2.2.2.5 show the benchmark coverage for the FCAT Mathematics tests. Coverage is given as a range rather than as specific numbers because of the constraints of available items. However, it must be noted that a relatively strong pool of available mathematics items has resulted in a stable coverage of any given benchmark in each grade over the past several years. For some benchmarks, the minimum number in the range is zero because not every benchmark is tested at every grade every year; the primary consideration is the percentage of items within each strand. These tables also indicate the item types (MC, GR, SR, and ER) to be used on each form. Sometimes a combination of item types (e.g., MC/GR, MC/SR) may be included for particular benchmarks. Those combined item types indicate that the items used could all be of one type or they may be used in any combination of the specified item types, so long as the following requirements are also met.

- The overall percentage of points from gridded-response items should be as follows:
    - 20 percent in grade 5
    - 25 to 30 percent in grades 6 and 7
    - 40 to 45 percent in grades 8 through 10

- In Grades 5, 8, and 10, SR and ER items comprise approximately 30 percent of the total number of points, with 2 operational ER items and 4 operational SR items per form.
- Items are, in general, placed into groups of 2–5 per item type. Each session begins with MC items. Placement of items by item type should be guided by patterns found in grades 3–10 of the 2008 FCAT operational forms.
- Items should also be placed in an order that minimizes abrupt cognitive transitions for students. Whenever possible, students should not be asked to move back and forth from one mathematical strand to another, or from one mental construct to another (e.g., an item testing knowledge of area might be placed next to an item testing geometric shapes rather than next to an item testing order of operations). Statistical considerations, such the sequence in which the item last appeared, may outweigh the consideration of cognitive transitions.

Table 2.2.2.1 Benchmark Coverage for Grade 3 Mathematics

BENCHMARKS FOR GRADE 3	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 30 percent of the total points will come from this strand.***		
MA.A.1.2.2	1 MC	3 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	0 MC	2 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	1 MC	3 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	0MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 15 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 MC	4 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.2 Benchmark Coverage for Grade 4 Mathematics

BENCHMARKS FOR GRADE 4	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 28 percent of the total points will come from this strand.***		
MA.A.1.2.2	0 MC	2 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	1 MC	3 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	0MC	2 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	1 MC	3 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 17 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	2 MC	4 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	1 MC	3 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.3 Benchmark Coverage for Grade 5 Mathematics

BENCHMARKS FOR GRADE 5	NUMBER OF ITEMS	
	Min.	**Max.**
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 20 percent of the total points will come from this strand.***		
MA.A.1.2.2 (A)*	1 MC/GR	3 MC/GR
MA.A.1.2.4	2 MC/GR	4 MC/GR
MA.A.2.2.1	0 MC/GR	2 MC/GR
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	0 MC	2 MC
MA.A.3.2.3	3 MC/GR	5 MC/GR
MA.A.4.2.1	0 SR	2 SR
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	5 MC/GR	7 MC/GR
MA.B.2.2.1	3 MC/GR	5 MC/GR
MA.B.2.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 20 percent of the total points will come from this strand.***		
MA.C.1.2.1	0 MC	2 MC
MA.C.2.2.1	1 MC/ER	3 MC/ER
MA.C.2.2.2	0 MC	2 MC
MA.C.3.2.1	2 MC/SR	4 MC/SR
MA.C.3.2.2	0 MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 20 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC/GR	3 MC/GR
MA.D.1.2.2	0 SR	2 SR
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	3 MC/GR	5 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 20 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 GR/MC/ER	4 GR/MC/ER
MA.E.1.2.2 (A)*	0 MC/GR	2 MC/GR
MA.E.2.2.1	0 SR	2 SR
MA.E.2.2.2	0 MC	2 MC
MA.E.3.2.1	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 20% points)*						
MA.A.1.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.A.1.3.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.2.3.1 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.1	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC
MA.A.3.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.3	1MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR
MA.A.4.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 20% points)*						
MA.B.1.3.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 GR/SR	4 GR/SR
MA.B.1.3.2	0 MC/GR	0 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.3 (A)*	0 MC/GR	3 MC/GR	0 MC/GR	2 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.4 (A)*	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.2.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 20% points)*						
MA.C.1.3.1	3 MC	5 MC	2 MC	4 MC	1 MC	3 MC
MA.C.2.3.1	2 MC	4 MC	1 MC	3 MC	1 MC/ER	3 MC/ER
MA.C.3.3.1	0 MC	2 MC	0 MC/GR	2 MC/GR	1 MC/SR	3 MC/SR
MA.C.3.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics (continued)

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND D: ALGEBRAIC THINKING (*Approximately 20% points)*						
MA.D.1.3.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.D.1.3.2	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR/ SR	4 MC/GR/ SR
MA.D.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC/SR	2 MC/SR
MA.D.2.3.2	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY (*Approximately 20% points)*						
MA.E.1.3.1 (A)*	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	0 MC/GR/ ER	2 MC/GR/ ER
MA.E.1.3.2	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.E.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.E.2.3.2 (A)*	0 MC	2 MC	0 MC	2 MC	0 MC/GR	2 MC/GR
MA.E.3.3.1 (A)*	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics

BENCHMARKS FOR GRADES 9–10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 17% points)*				
MA.A.1.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.1.4.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.4.1	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.3	1 MC/GR	3 MC/GR	3 MC/GR	5 MC/GR
MA.A.4.4.1	1 MC	3 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 17% points)*				
MA.B.1.4.1 (S)**	1 MC/GR	3 MC/GR	2 MC/GR/SR	4 MC/GR/SR
MA.B.1.4.2	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.4.3 (A)*	0 MC/GR	2 MC/GR	0	0
MA.B.2.4.1 (A)*	0 MC/GR	2 MC/GR	1 MC	3 MC
MA.B.2.4.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 25% points)*				
MA.C.1.4.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.C.2.4.1 (E)***	2 MC/GR	4 MC/GR	2 MC/GR/ER	4 MC/GR/ER
MA.C.2.4.2	0	0	0 MC	2 MC
MA.C.3.4.1	2 MC/GR	4 MC/GR	1 MC/GR	3 MC/GR
MA.C.3.4.2 (A)*/(S)**	2 MC/GR	4 MC/GR	1 MC/GR/SR	3 MC/GR/SR

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER item at Grade 10.

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics (continued)

BENCHMARKS FOR GRADES 9–10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND D: ALGEBRAIC THINKING ***(Approximately 25% points).***				
MA.D.1.4.1	3 MC/GR	5 MC/GR	4 MC/GR	6 MC/GR
MA.D.1.4.2	2 MC/GR	4 MC/GR	2 MC/GR/SR	5 MC/GR/SR
MA.D.2.4.2 (S)**	2 MC/GR	4 MC/GR	3 MC/GR/SR	6 MC/GR/SR
STRAND E: DATA ANALYSIS AND PROBABILITY ***(Approximately 17% points)***				
MA.E.1.4.1 (A)* (E)***	0 MC/GR	2 MC/GR	1 MC/GR/ER	3 MC/GR/ER
MA.E.1.4.2 (A)*	1 MC/GR	3 MC/GR	0 MC/GR	2 MC/GR
MA.E.2.4.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
MA.E.3.4.1	0 MC	2 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER at Grade 10.

2.2.3 FCAT Mathematics Field Test Forms

For grades 3–10 FCAT Mathematics, there will be a total of 20 forms, including 16 field test forms and four anchor forms. Each field test form will consist of 8 items embedded among the set of scored items. Items approved at item review will be selected for field test forms according to the following criteria:

- First, select items that are needed for appropriate benchmark coverage in the item bank.
- Second, select items that are needed for appropriate format variety in the item bank.

Items selected should be assembled into sets of 8 for field testing, following the format guidelines shown in Table 2.2.3.1.

Table 2.2.3.1 Item Formats in Mathematics 2008 Field Test Forms

Grade	3	4	5	6	7	8	9	10
MC	8	8	5	5	5	5	5	4
GR	0	0	2	3	3	2	3	3
SR or ER	0	0	1	0	0	1	0	1

Items in the field test sets should reflect a range of difficulty levels (as predicted by the Mathematics item review committee) and cognitive levels (also as determined by the item review committee). However, the field test items also should be placed in sets that minimize abrupt transitions from one mathematical strand or mental construct to another.

2.2.4 FCAT Mathematics Multicultural and Gender Representation

In the core items for Mathematics, the contexts and names of individuals within those contexts must contain a faithful representation of the various cultures and ethnicities of Florida. Stereotypical situations or activities for any ethnic group will not be used.

Similarly, Mathematics contexts and names used in each core should represent both genders equally. Items must avoid showing genders in stereotypical roles.

2.2.5 FCAT Mathematics Cognitive Levels

In 2004, the Florida Department of Education adopted a three-level cognitive classification system called Cognitive Complexity to use when classifying FCAT test items. This system is based on the taxonomy for cognitive complexities developed by Norman Webb[2]. Using a modified version of Webb's taxonomy, each item will be classified as low, moderate, or high in its complexity during content committee review. At each grade level, the FCAT Mathematics core should follow the cognitive level guidelines found below in Table 2.2.5.1.

Table 2.2.5.1 Approximate Percentage of Points by Cognitive Level for FCAT Mathematics

Grades	Low Level	Moderate Level	High Level
3–4	25-35	50-70	5-15
5*	10-20	50-70	20-30
6–7	10-20	60-80	10-20
8*	10-20	50-70	20-30
9	10-20	60-80	10-20
10*	10-20	50-70	20-30

* Indicates grades that have a greater percentage of high complexity points due to the nature of performance tasks.

[2] Webb, N.L, 1999, *Alignment Between Standards and Assessment,* University of Wisconsin Center for Educational Research.

- The tool used to compare test target curves (i.e., the Test Characteristic Curve (TCC) and the Test Information Curve (TIC)) will be replaced with an Excel tool (the workbook).
- The test construction targets for 2009 tests were the 2008 post-equated TCC, TIC, etc. In 2010 the test construction targets will be redefined to include multiple post-equated TCCs and TICs.
- The Pearson content team will pull anchor items first and core items second.

1.1 Introduction of FCAT2 and Field Test

Beginning in 2011, test items written to the Reading and Mathematics Sunshine State Standards (SSS) adopted in 2007 will be used to measure comprehensive student progress in Reading and Mathematics and End of Course Algebra 1, followed by comprehensive Science and End of Course Biology in 2012, and Writing in 2013. New test blueprints will be created for the updated SSS. Field testing of the reading and mathematics items written for the new standards will be done within the 2010 regular FCAT test administration via the matrix sampling design traditionally used in Florida, with the exception of End of Course Algebra 1, which will be a stand-alone field test. Mathematics field test items will be spread throughout the test (at the predefined locations). Reading field test passage sets will be placed at the end of the first session one year and at the beginning of the second session the following year.

The most significant change to the test design is that constructed-response items for FCAT2 reading and mathematics will not be included (i.e., in grades 5, 8, and 10 Mathematics and grades 4, 8, and 10 Reading). Furthermore, FDOE has decided to remove CR items from all future FCAT Science administrations. Only MC items will be field tested for Reading during the 2010 test administration. For Mathematics grades 4-10 and Science grades 8 and 11, gridded response and MC items will be field tested in the 2010 test administration.

Another important differentiation between FCAT and FCAT2 is that the Grade 9 Reading test will continue to be developed; however, at this time, there is no comprehensive Grade 9 Math test planned for FCAT2. Current plans are to introduce end of course tests for Algebra (2011), Biology (2012), and an additional end of course test at a later date. The field testing of end of course assessments will start with Algebra, which will be field tested during spring of 2010. The guidelines for constructing those tests are not included in this document.

2. Content Guidelines

Construction of the 2010 operational FCAT forms will follow the content guidelines described in this section. Test construction will also follow the statistical and psychometric guidelines described in Section 3.

Each grade level in FCAT Reading, Mathematics, and Science will have a maximum of 50 core items per form. Grades 3 and 4 may have as few as 40 core items. Reading forms will have 45 core items in all grades, but the items may vary by item type. In previous years Science had approximately 45 core items per form per grade. With the removal of CR items beginning with the 2010 assessment, the number of core items will increase. A determination of the number of

core items for science will be made prior to test construction. To construct the core item sets for Reading and Mathematics, Pearson will follow the content guidelines used for previous FCAT operational forms. FCAT Science content guidelines would have revisions since both short response (SR) and extended response (ER) items will be eliminated from the 2010 and 2011 test construction. These revisions will be added to the Specifications prior to test construction.

The remainder of this document details guidelines and/or requirements for test construction, based on information provided by the following sources: *Mathematics Test Item and Performance Task Specifications (2005)*, *Reading Test Item and Performance Task Specifications (2000)*, and *Science Test Item and Performance Task Specifications (2002)*, *1999–2000 Test Design*.

Content guidelines are broken down into the following sections:

- Reading
- Mathematics
- Science

The subscore is the strand, cluster, or reporting category. Coverage of the reporting categories for the 2010 FCAT test administration in grades 3 through 10 Mathematics will be based on the guidelines established for the 1998–2009operational forms. Coverage in grades 3 through 10 Reading and in grades 5, 8, and 11 Science will reflect the fact that reading and science benchmarks have been grouped into "clusters," and student reading and science performance will be reported at the cluster level. This subscore coverage (strand information in the case of mathematics; cluster information in the case of reading and science) is best considered in terms of the number of points, rather than the number of items. MC and GR items receive 1 point each, SR items receive a maximum of 2 points each, and ER items receive a maximum of 4 points each.

2.1 Reading Content Guidelines

2.1.1 FCAT Reading Subscore Coverage

As mentioned before, coverage of the reporting categories in grades 3 through 10 Reading will reflect the fact that reading benchmarks are grouped into reporting categories and that student reading performance is reported at the cluster level.

The passages and questions used in the FCAT Reading test require students to construct meaning from both literary and informational text. As indicated in Table 2.1.1.1, the relative emphasis given to literary passages decreases gradually from grade 3 through grade 10, while the relative emphasis given to informational passages increases. The numbers of items of different types included in Reading assessments in grades 3 through 10 are presented in Table 2.1.1.2. Passages should represent a variety of SSS topics and should be balanced in gender and cultural representation.

Table 2.1.1.1 FCAT Reading: Approximate Percentage of Points by Passage Type

Passage Type	Grade 3	Grades 4–6	Grades 7 & 8	Grades 9 & 10
Literary Text	60	50	40	30
Informational Text	40	50	60	70
TOTAL	**100**	**100**	**100**	**100**

Table 2.1.1.2 FCAT Reading: Number of Items by Item Type

Grade	Multiple Choice	Short Response	Extended Response	Total Number of Items
3	45	0	0	45
4	41	3	1	45
5	45	0	0	45
6	45	0	0	45
7	45	0	0	45
8	41	3	1	45
9	45	0	0	45
10	41	3	1	45

At each grade level, four content clusters are reported (see Table 2.1.3.4 for reading benchmarks contained in each cluster):

- Words and Phrases in Context
- Main Idea, Plot, and Author's Purpose
- Comparison and Cause/Effect
- Reference and Research

The relative emphasis of each cluster in Reading assessments across grade levels is presented in Table 2.1.1.3. As mentioned before, this emphasis is given in percentage of points rather than percentage of items.

Table 2.1.1.3 FCAT Reading: Approximate Percentage of Points by Cluster

Cluster	Grades 3–5	Grades 6–8	Grades 9 & 10
1. Words and Phrases in Context	15–20	15–20	15–20
2. Main Idea, Plot, and Author's Purpose	30–55	30–55	20–50
3. Comparison and Cause/Effect	20–45	15–25	10–25
4. Reference and Research	5–15	10–30	20–40

The information in Table 2.1.1.4 indicates the maximum word-count totals for regular spring test administrations during the period from 2003 to 2009. Word-count totals may vary among forms in any single administration due to the variations in word counts for field test passages.

Table 2.1.1.4 FCAT Reading: Maximum Total Word Count for Operational and Field Test Passages

Grade	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test	2009 Test
3	2954	3196	3108	3463	3418	3250	3534
4	3856	3716	3836	4460	4423	3594	4129
5	4623	4675	5099	4635	4877	4894	4710
6	5041	5307	5597	5436	5108	5228	5550
7	5175	5360	5665	5678	4830	5432	5540
8	6203	6112	6812	6111	6396	5928	6270
9	7004	6932	6870	7095	6922	7016	7275
10	7135	7265	8135	7395	7626	7388	7782

2.1.2 FCAT Reading Passage Guidelines

Passage Length At each grade level, the reading passages used for the core form should vary in length; however, individually, each should fall within the guidelines in the specification document (see Table 2.1.2.1 for more information). When reading tests are divided into two sessions, a long passage should be balanced with one or more shorter passages within each session. Also, each test form should be constructed so that it does not end with a relatively long passage.

Table 2.1.2.1 FCAT Reading Passage Development Word Count Specification

Grade	Range of Number of Words per Text	Average Number of Words per Text
3	100–700	500
4	100–900	500
5	200–1000	600
6	200–1100	700
7	300–1100	700
8	300–1200	700
9	300–1400	900
10	300–1700	1000

The total number of words that a student is required to read in each core form should represent a logical progression in length from grade 3 to grade 10. For example, the total word count for grade 5 should not exceed the total word count for grade 6, and the total word count for grade 6 should be less than the total word count for grade 7. Based on these length requirements, the 2010 operational forms for FCAT Reading will each contain between five and seven passages, with one additional passage for the embedded field test or anchor items.

Passage Types A sufficient number of both informational and literary passages must be selected for each form to satisfy the desired percentages shown in Table 2.1.1.1. Consideration will also

be given to the genres of the passages in each form. Ideally, a poem should be included in each test at all grade levels, with the exception of grade 3; however, this may not always be possible. A mix of literary genres, such as stories and essays, is highly desirable, as is the inclusion of a variety of informational genres, such as editorials, reports, and magazine articles.

Since some reading benchmarks are more accurately assessed with either literary or informational passages, a balance of passage types will help ensure that every benchmark and cluster receives adequate coverage. The appropriate benchmark coverage for each grade level is described in Section 2.1.3.

The selected passages on each form will represent a variety of Sunshine State Standard topics (e.g., science, social studies, the arts), as well as a variety of sources (e.g., children's magazines, newspaper articles, book excerpts). It is advised that at least one of the passages be related to Science and one passage be related to Social studies subjects.

Passage Difficulty Core reading passages at each grade should represent a range of difficulties. Difficulty levels are determined by specific reading indices and Florida educators serving on passage review committees. The difficulty rating for a passage (Easy, Medium, or Difficult) reflects the vocabulary and sentence structure in the passage and the complexity and density of the ideas contained in the passage.

In general, a difficult passage in the core should be balanced by an easier passage either immediately before or after the difficult passage. It is preferable to neither begin nor end a session with a difficult passage. Whenever possible, the first passage on every core form should be an engaging literary passage. When this is not possible, an easy, engaging informational passage may be used.

Limitations While every effort is made to adhere to these passage guidelines, it is not always possible, due to extenuating circumstances. For example, permission to use a passage on the FCAT may be denied by the publisher or there may be a general shortage of passages for a specific topic.

Other limitations are the number pages for a passage and the number of items that meet statistical requirements. For example, a good passage that has too many pages when compared to the overall test may have to be replaced with another passage. In the same token, if eight items from a passage set do not satisfy statistical requirements, then that passage set may never be considered for the core or anchor selection.

For 2010, one passage from the core passages in session 1 of the 2009 tests will appear intact in the same location. That passage will be used as a back-up anchor passage if the reading anchor forms fail during equating because of an unpredicted reason.

2.1.3 FCAT Reading Item Types and Benchmark Coverage

On the following pages, Tables 2.1.3.1, 2.1.3.2, and 2.1.3.3 show the item types available for each reading benchmark. For the grades that use reading performance tasks (i.e., grades 4, 8, and 10), SR and ER items should represent approximately 15–20 percent of the total number of points in each form, with a maximum of 1 ER item and 3 SR items (excluding field test items) per form. All other grades will have forms that contain only multiple-choice items.

An SR or ER item should not appear as the first or second item within the set of items for each reading passage. Generally, FCAT Reading test construction team should try to use only one performance task item per passage if the other passages have enough high quality SR or ER items to satisfy the test blueprint. If a set of items for a passage contains two SR items, or an SR and an ER item, these two items should be separated with at least two MC items between them. An ER item should not be the last item within the set of items for a passage except in field test forms.

Table 2.1.3.1 Benchmark Coverage for Grades 3–5 Reading

Cluster	BENCHMARK	PERCENT OF POINTS					
		Grade 3		Grade 4		Grade 5	
		Min.	Max.	Min.	Max.	Min.	Max.
1	**LA.A.1.2.3**	15	20	15	20	15	20
	Item Formats	MC		MC, SR		MC	
2	**LA.A.2.2.1**	20	30	20	30	20	30
	Item Formats	MC		MC, SR, ER		MC	
2	**LA.A.2.2.2**	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
2	**LA.E.1.2.2**	8	13	6	11	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.A.2.2.7**	5	15	5	15	5	15
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.E.1.2.3**	5	10	5	10	5	10
	Item Formats	MC		MC, SR, ER		MC	
3	**LA.E.2.2.1**	10	20	10	20	10	20
	Item Formats	MC		MC, SR		MC	
4	**LA.A.2.2.8**	2	7	4	9	5	10
	Item Formats	MC		MC, SR, ER		MC	

Table 2.1.3.2 Benchmark Coverage for Grades 6–8 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grades 6 and 7		Grade 8	
		Min.	Max.	Min.	Max.
1	**LA.A.1.3.2**	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.3.1**	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	**LA.E.2.3.1**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.3.2**	10	20	10	20
	Item Formats	MC		MC, SR, ER	
3	**LA.E.2.2.1**	10	15	10	15
	Item Formats	MC		MC, SR, ER	
3	**LA.A.2.2.7**	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.3.5**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.3.8**	5	15	5	15
	Item Formats	MC		MC, SR, ER	

Table 2.1.3.3 Benchmark Coverage for Grades 9 & 10 Reading

Cluster	BENCHMARK	PERCENT OF POINTS			
		Grade 9		Grade 10	
		Min.	Max.	Min.	Max.
1	**LA.A.1.4.2**	15	20	15	20
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.4.1**	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	**LA.A.2.4.2**	10	20	10	20
	Item Formats	MC		MC, SR, ER	
2	**LA.E.2.4.1**	5	10	5	10
	Item Formats	MC		MC, SR, ER	
3	**LA.E.2.2.1**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
3	**LA.A.2.2.7**	5	10	5	10
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.4**	5	15	5	15
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.7**	10	15	10	15
	Item Formats	MC		MC, SR, ER	
4	**LA.A.2.4.8**	5	10	5	10
	Item Formats	MC		MC, SR, ER	

On the following page, Table 2.1.3.4 shows the desired reading benchmark coverage for 2010 FCAT Reading operational forms and the cluster associated with each benchmark. Coverage is given as a range of percentages of total raw score points in the core portion of the test (this excludes field test and anchor items).

Table 2.1.3.4 also indicates the relationship between the individual benchmarks assessed and the four reading benchmark clusters reported.

Table 2.1.3.4 FCAT Reading Benchmark Content Clusters

GRADES 3–5			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.2.3 meaning of words in context; word analysis	**A.2.2.1** main idea; supporting details; chronological order	**A.2.2.7** use of comparison and contrast	**A.2.2.8** organization and interpretation of information
	A.2.2.2 author's purpose in a simple text	**E.1.2.3** similarities and differences among characters, settings, events	
	E.1.2.2 plot development and conflict resolution	**E.2.2.1** cause-and-effect relationships	
GRADES 6–8			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.3.2 words in context; drawing conclusions; organizational patterns	**A.2.3.1** main idea; relevant details; organizational patterns	**A.2.2.7** use of comparison and contrast	**A.2.3.5** organization, interpretation, and synthesis of information
	A.2.3.2 author's purpose or point of view	**E.2.2.1** cause-and-effect relationships	**A.2.3.8** validity and accuracy of information
	E.2.3.1 character and plot development; point of view; setting; conflict resolution; tone		
GRADES 9 & 10			
1 Words and Phrases in Context	**2 Main Idea, Plot, and Purpose**	**3 Comparison and Cause/Effect**	**4 Reference and Research**
A.1.4.2 words in context; inference; interpretation of data presentations	**A.2.4.1** main idea; supporting details; methods of development	**A.2.2.7** use of comparison and contrast	**A.2.4.4** identification and synthesis of information
	A.2.4.2 author's purpose; point of view	**E.2.2.1** cause-and-effect relationships	**A.2.4.7** validity and accuracy of information
	E.2.4.1 complex elements of plot, conflict resolution, setting, tone		**A.2.4.8** synthesis of information from multiple sources

2.2 Mathematics Content Guidelines

2.2.1 FCAT Mathematics Subscore Coverage

Table 2.2.1.1 shows the approximate percentages of points (±2%) by grade for the five Mathematics strands. In grades 3 and 4, each form should have the greatest percentage of points in Number Sense, Concepts, and Operations (Strand A). In grades 5 through 8, each form should have an equal percentage of points for each strand. In grades 9 and 10, each form should contain a greater percentage of points in two strands: Geometry and Spatial Sense (Strand C) and Algebraic Thinking (Strand D). Table 2.2.1.2 shows the number of items by item type to be included in mathematics tests in grades 3 through 10.

In addition to strand coverage, each Mathematics form should follow a content map for benchmark coverage, as discussed in Section 2.2.2.

Table 2.2.1.1 FCAT Mathematics: Approximate Percentage of Points by Strand

Strand	Grade 3	Grade 4	Grades 5–8	Grades 9 & 10
A: Number Sense, Concepts, and Operations	30	28	20	17
B: Measurement	20	20	20	17
C: Geometry and Spatial Sense	17	17	20	25
D: Algebraic Thinking	15	17	20	23
E: Data Analysis and Probability	18	18	20	18
TOTAL	**100**	**100**	**100**	**100**

Table 2.2.1.2 FCAT Mathematics: Number of Items by Item Type

Grade	Multiple Choice	Gridded Response	Short Response	Extended Response	Total Number of Items
3	40	0	0	0	40
4	40	0	0	0	40
5	33	11	4	2	50
6	33	11	0	0	44
7	32	12	0	0	44
8	30	14	4	2	50
9	29	15	0	0	44
10	28	16	4	2	50

2.2.2 FCAT Mathematics Item Types and Benchmark Coverage

In Mathematics for grades 3 through 10, benchmark coverage and item formats for operational forms in the 2010 FCAT test administration will follow the guidelines established for the 1998–2009 operational forms.

On the pages that follow, Tables 2.2.2.1, 2.2.2.2, 2.2.2.3, 2.2.2.4, and 2.2.2.5 show the benchmark coverage for the FCAT Mathematics tests. Coverage is given as a range rather than as specific numbers because of the constraints of available items. However, it must be noted that a relatively strong pool of available mathematics items has resulted in a stable coverage of any given benchmark in each grade over the past several years. For some benchmarks, the minimum number in the range is zero because not every benchmark is tested at every grade every year; the primary consideration is the percentage of items within each strand. These tables also indicate the item types (MC, GR, SR, and ER) to be used on each form. Sometimes a combination of item types (e.g., MC/GR, MC/SR) may be included for particular benchmarks. Those combined item types indicate that the items used could all be of one type or they may be used in any combination of the specified item types, so long as the following requirements are also met.

- The overall percentage of points from gridded-response items should be approximately as follows:
    - 20 percent in grade 5
    - 25 to 30 percent in grades 6 and 7
    - 40 to 45 percent in grades 8 through 10

- In Grades 5, 8, and 10, SR and ER items comprise approximately 30 percent of the total number of points, with 2 operational ER items and 4 operational SR items per form.
- Items are, in general, placed into groups of 2–5 per item type. Each session begins with MC items. Placement of items by item type should be guided by patterns found in grades 3–10 of the 2009 FCAT operational forms.
- Items should also be placed in an order that minimizes abrupt cognitive transitions for students. Whenever possible, students should not be asked to move back and forth from one mathematical strand to another, or from one mental construct to another (e.g., an item testing knowledge of area might be placed next to an item testing geometric shapes rather than next to an item testing order of operations). Statistical considerations, such the sequence in which the item last appeared, may outweigh the consideration of cognitive transitions.
- Whenever possible, the Reporting Categories and individual Benchmarks should be evenly distributed across the sessions.

Table 2.2.2.1 Benchmark Coverage for Grade 3 Mathematics

BENCHMARKS FOR GRADE 3	NUMBER OF ITEMS	
	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 30 percent of the total points will come from this strand.***		
MA.A.1.2.2	1 MC	3 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	0 MC	2 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	1 MC	3 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	0MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 15 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 MC	4 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.2 Benchmark Coverage for Grade 4 Mathematics

BENCHMARKS FOR GRADE 4	NUMBER OF ITEMS	
	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 28 percent of the total points will come from this strand.***		
MA.A.1.2.2	0 MC	2 MC
MA.A.1.2.4	0 MC	2 MC
MA.A.2.2.1	1 MC	3 MC
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	1 MC	3 MC
MA.A.3.2.3	1 MC	3 MC
MA.A.4.2.1	0 MC	2 MC
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	2 MC	4 MC
MA.B.2.2.1	1 MC	3 MC
MA.B.2.2.2	1 MC	3 MC
MA.B.4.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 17 percent of the total points will come from this strand.***		
MA.C.1.2.1	0MC	2 MC
MA.C.2.2.1	0MC	2 MC
MA.C.2.2.2	0MC	2 MC
MA.C.3.2.1	1 MC	3 MC
MA.C.3.2.2	1 MC	3 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 17 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC	3 MC
MA.D.2.2.1	2 MC	4 MC
MA.D.2.2.2	1 MC	3 MC
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 18 percent of the total points will come from this strand.***		
MA.E.1.2.1	1 MC	3 MC
MA.E.1.2.2	2 MC	4 MC
MA.E.2.2.1	0 MC	2 MC
MA.E.2.2.2	0 MC	2 MC

Table 2.2.2.3 Benchmark Coverage for Grade 5 Mathematics

BENCHMARKS FOR GRADE 5	NUMBER OF ITEMS	
	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS ***Approximately 20 percent of the total points will come from this strand.***		
MA.A.1.2.2 (A)*	1 MC/GR	3 MC/GR
MA.A.1.2.4	2 MC/GR	4 MC/GR
MA.A.2.2.1	0 MC/GR	2 MC/GR
MA.A.3.2.1	0 MC	2 MC
MA.A.3.2.2	0 MC	2 MC
MA.A.3.2.3	3 MC/GR	5 MC/GR
MA.A.4.2.1	0 SR	2 SR
MA.A.5.2.1	0 MC	2 MC
STRAND B: MEASUREMENT ***Approximately 20 percent of the total points will come from this strand.***		
MA.B.1.2.2	5 MC/GR	7 MC/GR
MA.B.2.2.1	3 MC/GR	5 MC/GR
MA.B.2.2.2	0 MC	2 MC
STRAND C: GEOMETRY AND SPATIAL SENSE ***Approximately 20 percent of the total points will come from this strand.***		
MA.C.1.2.1	0 MC	2 MC
MA.C.2.2.1	1 MC/ER	3 MC/ER
MA.C.2.2.2	0 MC	2 MC
MA.C.3.2.1	2 MC/SR	4 MC/SR
MA.C.3.2.2	0 MC	2 MC
STRAND D: ALGEBRAIC THINKING ***Approximately 20 percent of the total points will come from this strand.***		
MA.D.1.2.1	1 MC/GR	3 MC/GR
MA.D.1.2.2	0 SR	2 SR
MA.D.2.2.1	1 MC	3 MC
MA.D.2.2.2	3 MC/GR	5 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY ***Approximately 20 percent of the total points will come from this strand.***		
MA.E.1.2.1	2 GR/MC/ER	4 GR/MC/ER
MA.E.1.2.2 (A)*	0 MC/GR	2 MC/GR
MA.E.2.2.1	0 SR	2 SR
MA.E.2.2.2	0 MC	2 MC
MA.E.3.2.1	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 20% points)*						
MA.A.1.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.A.1.3.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.2.3.1 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.1	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC
MA.A.3.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.3.3	1MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR
MA.A.4.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 20% points)*						
MA.B.1.3.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 GR/SR	4 GR/SR
MA.B.1.3.2	0 MC/GR	0 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.3 (A)*	0 MC/GR	3 MC/GR	0 MC/GR	2 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.3.4 (A)*	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.2.3.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 20% points)*						
MA.C.1.3.1	3 MC	5 MC	2 MC	4 MC	1 MC	3 MC
MA.C.2.3.1	2 MC	4 MC	1 MC	3 MC	1 MC/ER	3 MC/ER
MA.C.3.3.1	0 MC	2 MC	0 MC/GR	2 MC/GR	1 MC/SR	3 MC/SR
MA.C.3.3.2	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.4 Benchmark Coverage for Grades 6–8 Mathematics (continued)

BENCHMARKS FOR GRADES 6–8	NUMBER OF ITEMS					
	Grade 6		Grade 7		Grade 8	
	Min.	Max.	Max.	Min.	Min.	Max.
STRAND D: ALGEBRAIC THINKING (*Approximately 20% points)*						
MA.D.1.3.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.D.1.3.2	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR/ SR	4 MC/GR/ SR
MA.D.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC/SR	2 MC/SR
MA.D.2.3.2	1 MC/GR	3 MC/GR	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
STRAND E: DATA ANALYSIS AND PROBABILITY (*Approximately 20% points)*						
MA.E.1.3.1 (A)*	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR	0 MC/GR/ ER	2 MC/GR/ ER
MA.E.1.3.2	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.E.2.3.1	0 MC	2 MC	0 MC	2 MC	0 MC	2 MC
MA.E.2.3.2 (A)*	0 MC	2 MC	0 MC	2 MC	0 MC/GR	2 MC/GR
MA.E.3.3.1 (A)*	1 MC	3 MC	1 MC	3 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics

BENCHMARKS FOR GRADES 9 & 10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS (*Approximately 17% points)*				
MA.A.1.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.1.4.4 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
MA.A.3.4.1	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.2	0 MC	2 MC	0 MC	2 MC
MA.A.3.4.3	1 MC/GR	3 MC/GR	3 MC/GR	5 MC/GR
MA.A.4.4.1	1 MC	3 MC	0 MC	2 MC
STRAND B: MEASUREMENT (*Approximately 17% points)*				
MA.B.1.4.1 (S)**	1 MC/GR	3 MC/GR	2 MC/GR/SR	4 MC/GR/SR
MA.B.1.4.2	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.B.1.4.3 (A)*	0 MC/GR	2 MC/GR	0	0
MA.B.2.4.1 (A)*	0 MC/GR	2 MC/GR	1 MC	3 MC
MA.B.2.4.2 (A)*	0 MC/GR	2 MC/GR	0 MC/GR	2 MC/GR
STRAND C: GEOMETRY AND SPATIAL SENSE (*Approximately 25% points)*				
MA.C.1.4.1	1 MC/GR	3 MC/GR	1 MC/GR	3 MC/GR
MA.C.2.4.1 (E)***	2 MC/GR	4 MC/GR	2 MC/GR/ER	4 MC/GR/ER
MA.C.2.4.2	0	0	0 MC	2 MC
MA.C.3.4.1	2 MC/GR	4 MC/GR	1 MC/GR	3 MC/GR
MA.C.3.4.2 (A)*/(S)**	2 MC/GR	4 MC/GR	1 MC/GR/SR	3 MC/GR/SR

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER item at Grade 10.

Table 2.2.2.5 Benchmark Coverage for Grades 9 and 10 Mathematics (continued)

BENCHMARKS FOR GRADES 9 & 10	NUMBER OF ITEMS			
	Grade 9		Grade 10	
	Min.	Max.	Min.	Max.
STRAND D: ALGEBRAIC THINKING ***(Approximately 23% points).***				
MA.D.1.4.1	3 MC/GR	5 MC/GR	4 MC/GR	6 MC/GR
MA.D.1.4.2	2 MC/GR	4 MC/GR	2 MC/GR/SR	5 MC/GR/SR
MA.D.2.4.2 (S)**	2 MC/GR	4 MC/GR	3 MC/GR/SR	6 MC/GR/SR
STRAND E: DATA ANALYSIS AND PROBABILITY ***(Approximately 18% points)***				
MA.E.1.4.1 (A)* (E)***	0 MC/GR	2 MC/GR	1 MC/GR/ER	3 MC/GR/ER
MA.E.1.4.2 (A)*	1 MC/GR	3 MC/GR	0 MC/GR	2 MC/GR
MA.E.2.4.1	2 MC/GR	4 MC/GR	2 MC/GR	4 MC/GR
MA.E.3.4.1	0 MC	2 MC	1 MC	3 MC

*A = Alternate MC and GR formats in different years (where applicable).
**S = Must have at least 1 SR item at Grade 10.
***E = Must have at least 1 ER at Grade 10.

2.2.3 FCAT Mathematics Multicultural and Gender Representation

In the core items for Mathematics, the contexts and names of individuals within those contexts must contain a faithful representation of the various cultures and ethnicities of Florida. Stereotypical situations or activities for any ethnic group will not be used.

Similarly, Mathematics contexts and names used in each core should represent both genders. Items must avoid showing genders in stereotypical roles.

2.2.4 FCAT Mathematics Cognitive Levels

In 2004, the Florida Department of Education adopted a three-level cognitive classification system called Cognitive Complexity to use when classifying FCAT test items. This system is based on the taxonomy for cognitive complexities developed by Norman Webb[2]. Using a modified version of Webb's taxonomy, each item will be classified as low, moderate, or high in its complexity during content committee review. At each grade level, the FCAT Mathematics core should follow the cognitive level guidelines found below in Table 2.2.4.1.

[2] Webb, N.L, 1999, *Alignment between Standards and Assessment,* University of Wisconsin Center for Educational Research.

Table 2.2.4.1 Approximate Percentage of Points by Cognitive Level for FCAT Mathematics

Grades	Low Level	Moderate Level	High Level
3 & 4	25–35	50–70	5–15
5*	10–20	50–70	20–30
6 & 7	10–20	60–80	10–20
8*	10–20	50–70	20–30
9	10–20	60–80	10–20
10*	10–20	50–70	20–30

* Indicates grades that have a greater percentage of high complexity points due to the nature of performance tasks.

2.2.5 FCAT2 Mathematics Field Test Forms

For grades 3–8 and grade 10 of FCAT2 Mathematics, there will be up to 40 forms, including 36 field test forms and four anchor forms. Grade 9 will have only four anchor forms that would be administered to all 9th grade students, and no field test forms. Each field test form will consist of eight items embedded among the set of scored items; however, grade 4 will have 10 field test items because FCAT2 will have gridded response items in 5 different grid configurations at grade 4 and 4 of the these configurations will be field tested during 2010 administration. Items approved at item review will be selected for field test forms according to the following criteria:

- Select items that are needed for appropriate benchmark coverage in the item bank.
- Select items that are needed for appropriate format variety in the item bank.

Items selected should be assembled into sets of eight for field testing, following the format guidelines shown in Table 2.2.5.1.

Table 2.2.5.1 Item Formats in Mathematics 2010 Field Test Forms

Grade	3	4	5	6	7	8	~~9~~	10
MC	8	6	5	5	5	5	0	5
GR	0	4	3	3	3	3	0	3

Items in the field test sets should reflect a range of difficulty levels and cognitive levels. However, the field test items also should be placed in sets that minimize abrupt transitions from one mathematical strand or mental construct to another. Items requiring the use of a ruler will be placed in the second session at grades 3 and 4 to avoid an impact on core items in the first session.

FCAT Grade 4 Reading Content Focus By Benchmark
2007 - 2010

1996 SSS Benchmark	Content Focus	Number of Points Possible			
		2007	2008	2009	2010
Cluster 1: Words and Phrases in Context					
A123	Analysis/inferences			2	3
A123	Analyze words/text	1	2		
A123	Antonyms				1
A123	Context	1			
A123	Context clues				1
A123	Inferences	1			
A123	Multiple meanings		1	3	1
A123	Prefixes/suffixes		2		
A123	Synonyms	1	2	2	
A123	Word relationships	1			1
Reporting Cluster Point Total		**5**	**7**	**7**	**7**
Cluster 2: Main Idea, Plot, and Purpose					
A221	Chronological order	1	3	2	3
A221	Conclusions/inferences				1
A221	Details/facts	14	2	10	16
A221	Main idea/essential message		7	2	
A221	Supporting details/facts				1
A222	Author's purpose	7	10	2	5
E122	Conflict/conflict resolution	1		4	2
E122	Plot development	2	6	3	
Reporting Cluster Point Total		**25**	**28**	**23**	**28**
Cluster 3: Comparisons and Cause/Effect					
A227	Comparison	8			5
A227	Contrast	1			
A227	Comparison/Contrast		3	5	
E123	Similarities/differences (within or among characters)	4		5	
E123	Similarities/differences (events)		4		1
E221	Conclusions/inferences			1	
E221	Cause/effect	4	5	6	7
Reporting Cluster Point Total		**17**	**12**	**17**	**13**
Cluster 4: Reference and Research					
A228	Reference information (within text)	2	1	1	1
A228	Interpret graphical information			1	
A228	Reference information (synthesize multiple sources)	2	3	2	2
Reporting Cluster Point Total		**4**	**4**	**4**	**3**
Total Test Raw Points		**51**	**51**	**51**	**51**
		Includes Performance Task Item(s)			

FCAT Grade 5 Reading Content Focus by Benchmark
2007 - 2010

1996 SSS Benchmark	Content Focus	Number of Points Possible			
		2007	2008	2009	2010
Cluster 1: Words and Phrases in Context					
A123	Inferences	3			
A123	Analysis/inferences			3	2
A123	Analyze words/text	2	3		
A123	Antonyms	1		2	
A123	Context	1			
A123	Synonyms	2	5	1	4
Reporting Cluster Point Total		**9**	**8**	**6**	**6**
Cluster 2: Main Idea, Plot, and Purpose					
A221	Chronological order	4	1	3	1
A221	Details/facts	4	3	8	3
A221	Main idea/essential message	4	4	2	4
A221	Relevant details				2
A222	Author's point of view	3	1	3	1
A222	Author's purpose	5	6	3	3
E122	Character development				3
E122	Conflict/conflict resolution		2	1	1
E122	Plot development	3	1	1	4
Reporting Cluster Point Total		**23**	**18**	**21**	**22**
Cluster 3: Comparisons and Cause/Effect					
A227	Comparison	2			
A227	Comparison/contrast		5	4	5
E123	Similarities/differences (events)	1		3	
E123	Similarities/differences (with or among settings)			2	
E123	Similarities/differences (with or among characters)	1	2	1	2
E221	Cause/effect	5	7	5	7
Reporting Cluster Point Total		**9**	**14**	**15**	**14**
Cluster 4: Reference and Research					
A228	Interpret graphical information	2	1	1	
A228	Organizes information				1
A228	Synthesize information				1
A228	Reference information (within text)		2	1	1
A228	Reference information (synthesize multiple sources)	2	2	1	
Reporting Cluster Point Total		**4**	**5**	**3**	**3**
Total Test Raw Points		**45**	**45**	**45**	**45**

FCAT Grade 4 Mathematics Content Focus By Benchmark
2007- 2010

1996 SSS Benchmark	Content Focus	Number of Points Possible			
		2007	2008	2009	2010
Cluster 1: Number Sense, Concepts and Operations					
A122	Order of numbers	1	1	1	
A122	Decimal size				1
A124	Equivalent fractions	1	1	1	
A124	Fractions/decimals				1
A221	Rounding numbers		1	1	1
A221	Place-value whole numbers	2	1	1	
A221	Place-value decimals				1
A321	Effects of operations		1	1	
A321	Identifying operations	1			
A321	Commutative property				1
A322	Mixed operation expression		1	1	1
A322	Subtraction expression			1	1
A322	Multiplication expression	1			
A322	Division expression	1	1		
A323	Whole number division	1	1	1	1
A323	Whole number subtraction		1	1	1
A323	Fraction combination of operations	1			
A421	Number estimate			1	1
A421	Length estimate	1	1		
A521	Identifying multiples		1		1
A521	Identifying factors	1		1	
Reporting Cluster Point Total		**11**	**11**	**11**	**11**
Cluster 2: Measurement					
B122	Angle measures			1	1
B122	Area	1	1		
B122	Length	1	1		1
B122	Temperature	1	1	1	
B122	Time			1	1
B221	Converting length			1	1
B221	Converting weight			1	
B221	Comparison length	1	1		
B221	Comparison weight	1	1		1
B222	Customary length		1		
B222	Customary weight				1
B222	Metric capacity	1		1	1
B222	Metric length	1	1	1	

B422	Time		1		
B422	Capacity	1		1	1
Reporting Cluster Point Total		**8**	**8**	**8**	**8**
Cluster 3: Geometry and Spatial Sense					
C121	Irregular polygons	1		1	1
C121	Angles		1		
C221	Congruency	1	1	1	1
C222	Rotations	1	1	1	
C222	Reflections				1
C321	Perimeter	1	1	2	2
C321	Area	1	1		
C322	Plotting points	1	1	1	
C322	Identifying coordinates	1	1	1	2
Reporting Cluster Point Total		**7**	**7**	**7**	**7**
Cluster 4: Algebraic Thinking					
D121	Graphic patterns	1	1	1	1
D121	Relations/functions		1		
D121	Numerical patterns	1		1	1
D221	Equations	1	1	1	1
D221	Inequalities		1		
D221	Expressions			1	1
D221	One-variable expressions	2	1	1	1
D222	Solving inequalities	1	1	1	1
D222	Solving equations	1	1	1	1
Reporting Cluster Point Total		**7**	**7**	**7**	**7**
Cluster 5: Data Analysis and Probability					
E121	Bar graphs	1	1	1	1
E121	Pictographs	1	1	1	1
E121	Tables	1		1	1
E121	Line graphs		1		
E122	Mean	1			1
E122	Median	1	1	1	
E122	Mode			1	
E122	Range		1		1
E221	Combinations	1	1	1	1
E222	Probability				1
E222	Likelihood of outcome	1	1	1	
Reporting Cluster Point Total		**7**	**7**	**7**	**7**
Total Test Raw Points		**40**	**40**	**40**	**40**

FCAT Grade 5 Mathematics Content focus By Benchmark 2007- 2010

1996 SSS Benchmark	Content Focus	Number of Points Possible			
		2007	2008	2009	2010
Cluster 1: Number Sense, Concepts, and Operations					
A122	Fraction size	1		1	
A122	Decimal size		1		1
A124	Fractions/decimals	1	1		1
A124	Equivalent fractions	1	1	1	1
A124	Fractions/percents	1	1	2	1
A221	Place-value decimals		1	1	
A221	Place-value whole numbers	1			
A221	Rounding numbers				1
A321	Distributive property	1	1	1	
A321	Effects of operations				1
A322	Mixed operation expression	1	1	1	1
A323	Fraction multiplication	1			
A323	Whole number combination of operations	2	1	1	1
A323	Whole number subtraction		1		
A323	Fraction combination of operations			1	1
A323	Decimal combination of operations		1		
A323	Whole number division			1	1
A421	Number estimate	2	2	2	2
A521	Identifying multiples		1		
A521	Identifying prime numbers	1		1	1
Reporting Cluster Point Total		**13**	**13**	**13**	**13**
Cluster 2: Measurement					
B122	Perimeter	1	1	1	1
B122	Temperature			1	1
B122	Weight		1	1	1
B122	Length				1
B122	Time	2	1		
B122	Area	1	1	1	
B122	Volume	1	1	1	1
B122	Elapsed time	1		1	1
B122	Angle measures		1		
B221	Calculating time		1	1	1
B221	Comparison weight	1		1	1
B221	Calculating length	1	1	1	1
B221	Converting weight		1		

B221	Calculating capacity	1			
B222	Metric length		1	1	1
B222	Metric mass		1		1
B222	Customary capacity	1			
B222	Metric capacity	1			
B222	Customary weight			1	
Reporting Cluster Point Total		**11**	**11**	**11**	**11**
Cluster 3: Geometry and Spatial Sense					
C121	Regular polygons			1	
C121	Angles		1		
C121	Perpendicular lines	1			
C121	Diagonals				1
C221	Congruency		1	1	1
C221	Similarity	1			
C221	Symmetry	4	4	4	
C221	Two-dimensional figures				4
C222	Transformations	2		1	1
C222	Rotations		1	1	
C222	Reflections		1		1
C321	Geometric construction			2	1
C321	Perimeter	2	2	1	2
C321	Area	1	1		
C322	Identifying coordinates	1		1	1
C322	Plotting points	1	2	1	1
Reporting Cluster Point Total		**13**	**13**	**13**	**13**
Cluster 4: Algebraic Thinking					
D121	Graphic patterns	1	1	1	1
D121	Relations/functions			1	1
D121	Numerical patterns	2	2	1	1
D122	Patterns	2	2	2	2
D221	Equations	1		1	1
D221	One-variable expressions				1
D221	Two-variable expressions		1	1	
D222	Solving equations	2	3	1	1
D222	One-variable expressions	1	1	1	1
D222	Solving inequalities	1	1	1	1
D222	Translating inequalities	1		1	1
Reporting Cluster Point Total		**11**	**11**	**11**	**11**
Cluster 5: Data Analysis and Probability					
E121	Bar graphs	4	4	4	5
E121	Line graphs			1	
E121	Circle graphs	1	1		

E121	Pictographs	1			
E121	Venn diagrams		1	1	1
E122	Mean	1	1	1	1
E122	Median		1		
E122	Range	1		1	1
E221	Combinations	2	2	2	2
E222	Probability	1		1	
E222	Likelihood of outcome		1		1
E321	Collection of data	1			
E321	Interpretation of data		1	1	1
Reporting Cluster Point Total		**12**	**12**	**12**	**12**
Total Test Raw Points		**60**	**60**	**60**	**60**
		Includes Performance Task Item(s)			

FCAT
GRADE 4 Ver 17
Item Selection for 2007 FCAT Reading

Literary: **48.9% Items** **Total # Items:** **45**

Informational: **51.1% Items** **Total Passages:** **Info. 3**

Overall p-value: **0.69** **Lit. 3**

Last yrs. .65

Session 1

PDB	Lit
# of words	552
# of items	7
EFT (range 491-1036 words)	
# of words	1036
# of items	8
CPE	Info
# of words	234
# of items	7
BEE	Lit
# of words	424
# of items	7
Ttl Wd Ct	2246
Ttl Items	29

Session 2

KIF	Info
# of words	592
# of items	11
ARG	Lit
# of words	825
# of items	8
CHP	Info
# of words	760
# of items	5
# of words	
# of items	
Ttl Wd Ct	2177
Ttl Items	24

PASSAGE CHECKLIST

Session 1 2246 words

Session 2 2177 words

Total 4423 words

TDC Approval:

Date:

Initials:

WORD COUNT of Passages on the 2002 - 2006 Reading Tests*

	2002 Test	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test
Grade 3	3187	2954	3196	3108	3463	
Grade 4	3515	3856	3716	3836	4460	4423
Grade 5	4409	4623	4675	5099	4635	
Grade 6	4894	5041	5307	5597	5436	
Grade 7	5004	5175	5360	5665	5678	
Grade 8	6207	6203	6112	6812	6111	
Grade 9	6739	7004	6932	6870	7095	
Grade 10	7418	7135	7265	8135	7395	

*Word count includes core passages and the field test passage.

Grade 4 ver 17
FCAT 2007 Reading Test Design

Benchmark Coverage Overall Test

Benchmark	MC (1pt)	SR (2pts)	ER (4pts)	# Items	#Points	% of Test
LAA123	5			**5**	**5**	**9.80%**
LAA221	9	1	1	**11**	**15**	**29.41%**
LAA222	7			**7**	**7**	**13.73%**
LAE122	3			**3**	**3**	**5.88%**
LAA227	7	1		**8**	**9**	**17.65%**
LAE221	4			**4**	**4**	**7.84%**
LAE123	2	1		**3**	**4**	**7.84%**
LAA228	4			**4**	**4**	**7.84%**
Totals	**41**	**3**	**1**	**45**	**51**	**100.00%**

Cluster Coverage Overall Test

	MC's	SR's	ER's	# of pts.	% of Test
Cluster 1	5	0	0	5	**9.80%**
Cluster 2	19	1	1	25	**49.02%**
Cluster 3	13	2	0	17	**33.33%**
Cluster 4	4	0	0	4	**7.84%**
Total number of items	**41**	**3**	**1**	**51**	**100.00%**

FCAT
GRADE 5 Ver 11
Item Selection for 2007 FCAT Reading

Literary: **48.9% Items** **Total # Items:** **45**

Informational: **51.1% Items** **Total Passages: Info.** **3**

Overall p-value: **0.67** **Lit.** **3**

(last yr .64)

Session 1

BBM	Lit
# of words	744
# of items	6
EFT (range 437-994 words)	
# of words	994
# of items	8
WIE	Info
# of words	632
# of items	10
# of words	
# of items	
Ttl Wd Ct	2370
Ttl Items	24

Session 2

EAP	Lit
# of words	898
# of items	8
SUM	Info
# of words	333
# of items	6
WAF	Lit
# of words	960
# of items	8
BRK	Info
# of words	316
# of items	7
Ttl Wd Ct	2507
Ttl Items	29

PASSAGE CHECKLIST

Session 1 2370 words

Session 2 2507 words

Total 4877 words

TDC Approval:

Date:

Initials:

WORD COUNT of Passages on the 2002 - 2006 Reading Tests*

	2002 Test	**2003 Test**	**2004 Test**	**2005 Test**	**2006 Test**	**2007 Test**
Grade 3	3187	2954	3196	3108	3463	
Grade 4	3515	3856	3716	3836	4460	
Grade 5	4409	4623	4675	5099	4635	4877
Grade 6	4894	5041	5307	5597	5436	
Grade 7	5004	5175	5360	5665	5678	
Grade 8	6207	6203	6112	6812	6111	
Grade 9	6739	7004	6932	6870	7095	
Grade 10	7418	7135	7265	8135	7395	

*Word count includes core passages and the field test passage.

Grade 5
FCAT 2007 Reading Test Design

Benchmark Coverage Overall Test

Benchmark	MC (1pt)	SR (2pts)	ER (4pts)	# Items	#Points	% of Test
LAA123	9			**9**	**9**	**20.00%**
LAA221	12			**12**	**12**	**26.67%**
LAA222	8			**8**	**8**	**17.78%**
LAE122	3			**3**	**3**	**6.67%**
LAA227	2			**2**	**2**	**4.44%**
LAE221	5			**5**	**5**	**11.11%**
LAE123	2			**2**	**2**	**4.44%**
LAA228	4			**4**	**4**	**8.89%**
Totals	**45**	**0**	**0**	**45**	**45**	**100.00%**

Cluster Coverage Overall Test

	MC's	SR's	ER's	# of pts.	% of Test
Cluster 1	9	0	0	9	**20.00%**
Cluster 2	23	0	0	23	**51.11%**
Cluster 3	9	0	0	9	**20.00%**
Cluster 4	4	0	0	4	**8.89%**
Total number of items	**45**	**0**	**0**	**45**	**100.00%**

Grade 4

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	12	26.67%	12	23.53%	5	11.1%	5	9.8%	17	37.78%	17	33.33%	10	22.22%	10	19.61%
Moderate	28	62.22%	34	66.67%	36	80.0%	39	76.5%	23	51.11%	28	54.90%	30	66.67%	35	68.63%
High	5	11.11%	5	9.80%	4	8.9%	7	13.7%	5	11.11%	6	11.76%	5	11.11%	6	11.76%

Grade 5

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	8	17.78%	8	17.78%	3	6.67%	3	6.67%	3	6.67%	3	6.67%	9	20%	9	20%
Moderate	32	71.11%	32	71.11%	38	84.44%	38	84.44%	32	71.11%	32	71.11%	31	68.89%	31	68.89%
High	5	11.11%	5	11.11%	4	8.89%	4	8.89%	10	22.22%	10	22.22%	5	11.11%	5	11.11%

FCAT
GRADE 4, Version 13
Item Selection for 2008 FCAT Reading

Literary: 48.9% Items **Total # Items:** 45

Informational: 51.1% Items **Total Passages: Info.** 3

Overall p-value: 0.68 **Lit.** 3

Prev Year (proposed): 0.69

Session 1

ZOO04	Info
# of words	608
# of items	6
PTM04	Lit
# of words	485
# of items	8
TBA04	Info
# of words	544
# of items	8
Ttl Wd Ct	1637
Ttl Items	22

Session 2

OHE04	Lit
# of words	591
# of items	6
eft	
# of words	899
# of items	8
LOT04	Lit
# of words	107
# of items	8
RIS	Info
# of words	360
# of items	9
Ttl Wd Ct	1957
Ttl Items	31

29-36

PASSAGE CHECKLIST

Session 1 1637 words

Session 2 1957 words

Total 3594 words

TDC Approval:

Date:

Initials:

WORD COUNT of Passages on the 2002 - 2007 Reading Tests*

	2002 Test	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test
Grade 3	3187	2954	3196	3108	3463	3418	
Grade 4	3515	3856	3716	3836	4460	4423	3594
Grade 5	4409	4623	4675	5099	4635	4877	
Grade 6	4894	5041	5307	5597	5436	5108	
Grade 7	5004	5175	5360	5665	5678	4830	
Grade 8	6207	6203	6112	6812	6111	6396	
Grade 9	6739	7004	6932	6870	7095	6922	
Grade 10	7418	7135	7265	8135	7395	7626	

*Word count includes core passages and the field test passage.

Grade 4
FCAT 2008 Reading Test Design

Benchmark Coverage Overall Test

Benchmark	MC (1pt)	SR (2pts)	ER (4pts)	# Items	#Points	% of Test
LAA123	7			**7**	**7**	**13.73%**
LAA221	9		1	**10**	**13**	**25.49%**
LAA222	10			**10**	**10**	**19.61%**
LAE122	4	1		**5**	**6**	**11.76%**
LAA227	3			**3**	**3**	**5.88%**
LAE221	5			**5**	**5**	**9.80%**
LAE123	0	2		**2**	**4**	**7.84%**
LAA228	3			**3**	**3**	**5.88%**
Totals	**41**	**3**	**1**	**45**	**51**	**100.00%**

Cluster Coverage Overall Test

	MC's	SR's	ER's	# of pts.	% of Test
Cluster 1	7	0	0	7	**13.73%**
Cluster 2	23	1	1	29	**56.86%**
Cluster 3	8	2	0	12	**23.53%**
Cluster 4	3	0	0	3	**5.88%**
Total number of items	**41**	**3**	**1**	**51**	**100.00%**

FCAT
GRADE 5, Version 8
Item Selection for 2008 FCAT Reading

Literary:	**51.1% Items**	**Total # Items:**	**45**
Informational:	**48.9% Items**	**Total Passages: Info.**	**3**
Overall p-value:	**0.67**	**Lit.**	**3**
Prev. Year (proposed):	**0.67**		

Session 1

OLL05	Lit
# of words	741
# of items	9
CLD	Info
# of words	473
# of items	5
TEE05	Lit
# of words	564
# of items	6
HIS05	Info
# of words	734
# of items	7
Ttl Wd Ct	2512
Ttl Items	27

Session 2

ZAC05	Lit
# of words	888
# of items	8
eft	
# of words	900
# of items	8
EYE	Info
# of words	594
# of items	10
# of words	
# of items	
Ttl Wd Ct	2382
Ttl Items	26

PASSAGE CHECKLIST

Session 1 2512 words
Session 2 2382 words
Total 4894 words

TDC Approval:
Date:
Initials:

WORD COUNT of Passages on the 2002 - 2007 Reading Tests*

	2002 Test	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test
Grade 3	3187	2954	3196	3108	3463	3418	
Grade 4	3515	3856	3716	3836	4460	4423	
Grade 5	4409	4623	4675	5099	4635	4877	4894
Grade 6	4894	5041	5307	5597	5436	5108	
Grade 7	5004	5175	5360	5665	5678	4830	
Grade 8	6207	6203	6112	6812	6111	6396	
Grade 9	6739	7004	6932	6870	7095	6922	
Grade 10	7418	7135	7265	8135	7395	7626	

*Word count includes core passages and the field test passage.

Grade 5
FCAT 2008 Reading Test Design

Benchmark Coverage Overall Test

Benchmark	MC (1pt)	SR (2pts)	ER (4pts)	# Items	#Points	% of Test
LAA123	8			**8**	**8**	**17.78%**
LAA221	8			**8**	**8**	**17.78%**
LAA222	7			**7**	**7**	**15.56%**
LAE122	3			**3**	**3**	**6.67%**
LAA227	7			**7**	**7**	**15.56%**
LAE221	6			**6**	**6**	**13.33%**
LAE123	3			**3**	**3**	**6.67%**
LAA228	3			**3**	**3**	**6.67%**
Totals	**45**	**0**	**0**	**45**	**45**	**100.00%**

Cluster Coverage Overall Test

	MC's	SR's	ER's	# of pts.	% of Test
Cluster 1	8	0	0	8	**17.78%**
Cluster 2	18	0	0	18	**40.00%**
Cluster 3	16	0	0	16	**35.56%**
Cluster 4	3	0	0	3	**6.67%**
Total number of items	**45**	**0**	**0**	**45**	**100.00%**

Grade 4

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	12	26.67%	12	23.53%	5	11.1%	5	9.8%	17	37.78%	17	33.33%	10	22.22%	10	19.61%
Moderate	28	62.22%	34	66.67%	36	80.0%	39	76.5%	23	51.11%	28	54.90%	30	66.67%	35	68.63%
High	5	11.11%	5	9.80%	4	8.9%	7	13.7%	5	11.11%	6	11.76%	5	11.11%	6	11.76%

Grade 5

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	8	17.78%	8	17.78%	3	6.67%	3	6.67%	3	6.67%	3	6.67%	9	20%	9	20%
Moderate	32	71.11%	32	71.11%	38	84.44%	38	84.44%	32	71.11%	32	71.11%	31	68.89%	31	68.89%
High	5	11.11%	5	11.11%	4	8.89%	4	8.89%	10	22.22%	10	22.22%	5	11.11%	5	11.11%

FCAT
GRADE 4, Version 3
Item Selection for 2009 FCAT Reading

Literary: 41.5% Items **Total # Items:** 53

Informational: 43.4% Items **Total Passages:** Info. 3

Overall p-value: 0.67 Lit. 3

Session 1

PDB	Lit
# of words	547
# of items	9
eft	
# of words	823
# of items	8
OPM	Lit
# of words	287
# of items	6
LDW	Info
# of words	303
# of items	5
Ttl Wd Ct	1960
Ttl Items	28

Session 2

ZAK	Lit
# of words	889
# of items	7
PAF	Info
# of words	687
# of items	10
KIF	Info
# of words	593
# of items	8
# of words	
# of items	
Ttl Wd Ct	2169
Ttl Items	25

PASSAGE CHECKLIST

Session 1 1960 words

Session 2 2169 words

Total 4129 words

TDC Approval:

Date:

Initials:

WORD COUNT of Passages on the 2002 - 2007 Reading Tests*

	2002 Test	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test
Grade 3	3187	2954	3196	3108	3463	3418	3250
Grade 4	3515	3856	3716	3836	4460	4423	3594
Grade 5	4409	4623	4675	5099	4635	4877	4894
Grade 6	4894	5041	5307	5597	5436	5108	5228
Grade 7	5004	5175	5360	5665	5678	4830	5432
Grade 8	6207	6203	6112	6812	6111	6396	5928
Grade 9	6739	7004	6932	6870	7095	6922	7016
Grade 10	7418	7135	7265	8135	7395	7626	7388

*Word count includes core passages and the field test passage.

Grade 4
FCAT 2009 Reading Test Design

Benchmark Coverage Overall Test

Benchmark	MC (1pt)	SR (2pts)	ER (4pts)	# Items	#Points	% of Test
LAA123	7			**7**	**7**	**13.73%**
LAA221	12	1	1	**14**	**18**	**35.29%**
LAA222	2			**2**	**2**	**3.92%**
LAE122	5	1		**6**	**7**	**13.73%**
LAA227	3	1		**4**	**5**	**9.80%**
LAE221	7			**7**	**7**	**13.73%**
LAE123	1			**1**	**1**	**1.96%**
LAA228	4			**4**	**4**	**7.84%**
Totals	**41**	**3**	**1**	**45**	**51**	**100.00%**

Cluster Coverage Overall Test

	MC's	SR's	ER's	# of pts.	% of Test
Cluster 1	7	0	0	7	**13.73%**
Cluster 2	19	2	1	27	**52.94%**
Cluster 3	11	1	0	13	**25.49%**
Cluster 4	4	0	0	4	**7.84%**
Total number of items	**41**	**3**	**1**	**51**	**100.00%**

FCAT
GRADE 5, Version 3
Item Selection for 2009 FCAT Reading

Literary: 37.8% Items

Informational: 62.2% Items

Overall p-value: 0.69

Total # Core Items: 45

Total Passages: Info. 3

Lit. 2

Session 1

AND05	Lit
# of words	699
# of items	10
eft	
# of words	900
# of items	8
DNB05	Info
# of words	812
# of items	10
# of words	
# of items	
Ttl Wd Ct	2411
Ttl Items	28

Session 2

MOL05	Lit
# of words	914
# of items	7
FYN05	Info
# of words	651
# of items	9
HIS05	Info
# of words	734
# of items	9
# of words	
# of items	
Ttl Wd Ct	2299
Ttl Items	25

PASSAGE CHECKLIST

Session 1 2411 words

Session 2 2299 words

Total 4710 words

TDC Approval:

Date:

Initials:

WORD COUNT of Passages on the 2002 - 2007 Reading Tests*

	2002 Test	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test
Grade 3	3187	2954	3196	3108	3463	3418	3250
Grade 4	3515	3856	3716	3836	4460	4423	3594
Grade 5	4409	4623	4675	5099	4635	4877	4894
Grade 6	4894	5041	5307	5597	5436	5108	5228
Grade 7	5004	5175	5360	5665	5678	4830	5432
Grade 8	6207	6203	6112	6812	6111	6396	5928
Grade 9	6739	7004	6932	6870	7095	6922	7016
Grade 10	7418	7135	7265	8135	7395	7626	7388

*Word count includes core passages and the field test passage.

Grade 5
FCAT 2009 Reading Test Design

Benchmark Coverage Overall Test

Benchmark	MC (1pt)	SR (2pts)	ER (4pts)	# Items	#Points	% of Test	% of Points per Specs
LAA123	7			**7**	**7**	**15.56%**	**15-20%**
LAA221	13			**13**	**13**	**28.89%**	**20-30%**
LAA222	5			**5**	**5**	**11.11%**	**5-15%**
LAE122	2			**2**	**2**	**4.44%**	**5-10%**
LAA227	4			**4**	**4**	**8.89%**	**5-15%**
LAE221	5			**5**	**5**	**11.11%**	**5-10%**
LAE123	6			**6**	**6**	**13.33%**	**10-20%**
LAA228	3			**3**	**3**	**6.67%**	**5-10%**
Totals	**45**	**0**	**0**	**45**	**45**	**100.00%**	

Cluster Coverage Overall Test

	MC's	SR's	ER's	# of pts.	% of Test	% of Points per Specs
Cluster 1	7	0	0	7	**15.56%**	**15-20%**
Cluster 2	20	0	0	20	**44.44%**	**30-55%**
Cluster 3	15	0	0	15	**33.33%**	**20-45%**
Cluster 4	3	0	0	3	**6.67%**	**5-15%**
Total number of items	**45**	**0**	**0**	**45**	**100.00%**	

Grade 4

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	12	26.67%	12	23.53%	5	11.1%	5	9.8%	17	37.78%	17	33.33%	10	22.22%	10	19.61%
Moderate	28	62.22%	34	66.67%	36	80.0%	39	76.5%	23	51.11%	28	54.90%	30	66.67%	35	68.63%
High	5	11.11%	5	9.80%	4	8.9%	7	13.7%	5	11.11%	6	11.76%	5	11.11%	6	11.76%

Grade 5

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	8	17.78%	8	17.78%	3	6.67%	3	6.67%	3	6.67%	3	6.67%	9	20%	9	20%
Moderate	32	71.11%	32	71.11%	38	84.44%	38	84.44%	32	71.11%	32	71.11%	31	68.89%	31	68.89%
High	5	11.11%	5	11.11%	4	8.89%	4	8.89%	10	22.22%	10	22.22%	5	11.11%	5	11.11%

FCAT
GRADE 4 Version D
Item Selection for 2010 FCAT Reading

Literary: 56.0% Items
Informational: 44.0% Items
Overall p-value: 0.72

Total # Items: 53
Total Passages: Info. 3
Lit. 3

Session 1

Psg code	Type (Lit/Info)
LDW	1-5
# of words	303
# of items	5
ABH	6-13
# of words	1056
# of items	9
ASW	14-20
# of words	204
# of items	7
CPE	21-28
# of words	238
# of items	7
Ttl Wd Ct	1801
Ttl Items	28

Session 2

Psg code	Type (Lit/Info)
BGN	29-37
# of words	552
# of items	9
EFT	38-45
# of words	900
# of items	8
# of words	
# of items	
KIF	46-53
# of words	593
# of items	8
Ttl Wd Ct	2045
Ttl Items	25

PASSAGE CHECKLIST

Session 1 1801 words
Session 2 2045 words
Total 3846 words

TDC Approval:
Date: 7/9/09
Initials: ls

WORD COUNT of Passages on the 2002 - 2009 Reading Tests*

	2002 Test	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test	2009 Test
Grade 3	3187	2954	3196	3108	3463	3418	3250	3534
Grade 4	3515	3856	3716	3836	4460	4423	3594	4129
Grade 5	4409	4623	4675	5099	4635	4877	4894	4710
Grade 6	4894	5041	5307	5597	5436	5108	5228	5550
Grade 7	5004	5175	5360	5665	5678	4830	5432	5540
Grade 8	6207	6203	6112	6812	6111	6396	5928	6270
Grade 9	6739	7004	6932	6870	7095	6922	7016	7275
Grade 10	7418	7135	7265	8135	7395	7626	7388	7782

*Word count includes core passages and the field test passage.

FCAT Reading Grade 4 Alignment to Test Specification for Core Ver D

2010

	Words (15-20%)	Main Idea (30-55%)	Comparisons (20-45%)	Reference (5-15%)	Total
Number of items	7	23	12	3	45
Percent of items	16	51	27	7	100
Total Points	7	28	13	3	51
Target MC items	**13%**	**37%**	**27%**	**10%**	**87%**
Number of MC items	7	20	11	3	41
Points of MC items	7	20	11	3	41
Target SR items	**0%**	**6%**	**4%**	**0%**	**10%**
Number of SR items	0	2	1	0	3
Points of SR items	0	4	2	0	6
Target ER items	**0%**	**3%**	**0%**	**0%**	**3%**
Number of ER items	0	1	0	0	1
Points of ER items	0	4	0	0	4

	Total Items	Total Points
Target	**45**	**51**
Build	45	51

FCAT Reading Grade 4 Reporting Category by Benchmarks for Core Ver D

TYPE	ReadingCluster_Code	Benchmark	Max	Percent of Points	Count of Core
ER					
	2				
		A221	4	7.84%	1
	2 Total		**4**	**7.84%**	**1**
ER Total			**4**	**7.84%**	**1**
MC					
	1				
		A123	7	13.73%	7
	1 Total		**7**	**13.73%**	**7**
	2				
		A221	15	29.41%	15
		A222	5	9.80%	5
	2 Total		**20**	**39.22%**	**20**
	3				
		A227	3	5.88%	3
		E123	1	1.96%	1
		E221	7	13.73%	7
	3 Total		**11**	**21.57%**	**11**
	4				
		A228	3	5.88%	3
	4 Total		**3**	**5.88%**	**3**
MC Total			**41**	**80.39%**	**41**
SR					
	2				
		A221	2	3.92%	1
		E122	2	3.92%	1
	2 Total		**4**	**7.84%**	**2**
	3				
		A227	2	3.92%	1
	3 Total		**2**	**3.92%**	**1**
SR Total			**6**	**11.76%**	**3**
Grand Total			**51**	**100.00%**	**45**

FCAT
GRADE 5
Item Selection for 2010 FCAT Reading

Literary: **51.1% Items** **Total # Items:** **53**

Informational: **48.9% Items** **Total Passages:** **Info. 3**

Overall p-value: _____ **Lit. 3**

Session 1

Psg code	Type (Lit/Info)
OLL05	LIT
# of words	741
# of items	6
CLD05	INFO
# of words	473
# of items	7
OWN05	INFO
# of words	591
# of items	7
BBR05	LIT
# of words	508
# of items	8
Ttl Wd Ct	2313
Ttl Items	28

Session 2

Psg code	Type (Lit/Info)
MON05	LIT
# of words	850
# of items	9
EFT	EFT
# of words	998
# of items	8
HIS05	INFO
# of words	734
# of items	8
# of words	
# of items	
Ttl Wd Ct	2582
Ttl Items	25

PASSAGE CHECKLIST

Session 1 2313 words
Session 2 2582 words
Total 4895 words

TDC Approval:
Date: 7/8/09
Initials: ls

WORD COUNT of Passages on the 2002 - 2009 Reading Tests*

	2002 Test	2003 Test	2004 Test	2005 Test	2006 Test	2007 Test	2008 Test	2009 Test
Grade 3	3187	2954	3196	3108	3463	3418	3250	3534
Grade 4	3515	3856	3716	3836	4460	4423	3594	4129
Grade 5	4409	4623	4675	5099	4635	4877	4894	4710
Grade 6	4894	5041	5307	5597	5436	5108	5228	5550
Grade 7	5004	5175	5360	5665	5678	4830	5432	5540
Grade 8	6207	6203	6112	6812	6111	6396	5928	6270
Grade 9	6739	7004	6932	6870	7095	6922	7016	7275
Grade 10	7418	7135	7265	8135	7395	7626	7388	7782

*Word count includes core passages and the field test passage.

FCAT Reading Grade 5 Alignment to Test Specification for Core VerD

2010

	Words (15-20%)	Main Idea (30-55%)	Comparisons (20-45%)	Reference (5-15%)	Total
Number of items	6	22	14	3	45
Percent of items	13	49	31	7	100
Total Points	6	22	14	3	45
Target MC items	**14%**	**45%**	**33%**	**8%**	**100%**
Number of MC items	6	22	14	3	45
Points of MC items	6	22	14	3	45

	Total Items	Total Points
Target	**45**	**45**
Build	45	45

FCAT Reading Grade 5 Reporting Category by Benchmarks for Core VerD

TYPE	ReadingCluster_Code	Benchmark	Max	Percent of Points	Count of Core
MC					
	1				
		A123	6	13.33%	6
	1 Total		**6**	**13.33%**	**6**
	2				
		A221	10	22.22%	10
		A222	4	8.89%	4
		E122	8	17.78%	8
	2 Total		**22**	**48.89%**	**22**
	3				
		A227	5	11.11%	5
		E123	2	4.44%	2
		E221	7	15.56%	7
	3 Total		**14**	**31.11%**	**14**
	4				
		A228	3	6.67%	3
	4 Total		**3**	**6.67%**	**3**
MC Total			**45**	**100.00%**	**45**
Grand Total			**45**	**100.00%**	**45**

Clusters	Grades 3-4	Grades 6-8	Grades 9-10
1. Words	15-20	15-20	15-20
2. Main Idea	30-55	30-55	20-50
3. Comparison	20-45	15-25	10-25
4. Reference	5-15	10-30	20-40

Grade 4

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	12	26.67%	12	23.53%	5	11.1%	5	9.8%	17	37.78%	17	33.33%	10	22.22%	10	19.61%
Moderate	28	62.22%	34	66.67%	36	80.0%	39	76.5%	23	51.11%	28	54.90%	30	66.67%	35	68.63%
High	5	11.11%	5	9.80%	4	8.9%	7	13.7%	5	11.11%	6	11.76%	5	11.11%	6	11.76%

Grade 5

Cognitive Complexity	2007				2008				2009				2010			
	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points	No. of Items	% of Items	No. of Points	% of Points
Low	8	17.78%	8	17.78%	3	6.67%	3	6.67%	3	6.67%	3	6.67%	9	20%	9	20%
Moderate	32	71.11%	32	71.11%	38	84.44%	38	84.44%	32	71.11%	32	71.11%	31	68.89%	31	68.89%
High	5	11.11%	5	11.11%	4	8.89%	4	8.89%	10	22.22%	10	22.22%	5	11.11%	5	11.11%

GRADE 4			2007 - Test Design							
Benchmark	MC (1 pt)	GR (1 pt)	SR (1 pt)	ER (1 pt)	No. of Items	No. of Points	% of Test			
A122	1				1	1		1225		
A124	1				1	1		2964		
A221 +	2				2	2		D485	D486	
A321	1				1	1		1105		
A322 +	2				2	2		B437	F074	
A323 +	2				2	2		H037	J379	
A421	1				1	1		H437		
A521	1				1	1		H660		
Strand A	**11**	**0**	**0**	**0**	**11**	**11**	**28%**			
B122 +	3				3	3		K098	F744	I939
B221	2				2	2		4032	7294	
B222	2				2	2		F592	I934	
B422	1				1	1		1159		
Strand B	**8**	**0**	**0**	**0**	**8**	**8**	**20%**			
C121	1				1	1		H573		
C221	1				1	1		I917		
C222	1				1	1		D422		
C321 +	2				2	2		H445	J681	
C322 +	2				2	2		4656	H051	
Strand C	**7**	**0**	**0**	**0**	**7**	**7**	**18%**			
D121	2				2	2		H040	I504	
D221 +	3				3	3		1167	B264	F305
D222	2				2	2		1172	H763	
Strand D	**7**	**0**	**0**	**0**	**7**	**7**	**18%**			
E121 +	3				3	3		1098	3911	H285
E122 +	2				2	2		4822	F854	
E221	1				1	1		F889		
E222	1				1	1		H172		
Strand E	**7**	**0**	**0**	**0**	**7**	**7**	**18%**			
Totals	**40**	**0**	**0**	**0**	40	40				

+=Emphasis should be placed on these benchmarks.

FCAT 2007

Mathematics Reporting Category and Item Type Worksheet
Grades 3 4 (circle one)

Mathematics

Table 1 – Content Proportionality 2007

Reporting Category	core test points (fraction)	anchor test points (fraction)	core test points (percent)	anchor test points (percent)
Number Sense, Concepts, Operations	11/40	7/25	28%	28%
Measurement	8/40	5/25	20%	20%
Geometry and Spatial Sense	7/40	4/25	18%	16%
Algebraic Thinking	7/40	4/25	18%	16%
Data Analysis and Probability	7/40	5/25	18%	20%

Table 2 – Item Type Proportionality in Baseline and Current Years

Item Type	core test points (fraction)		anchor test points (fraction)		core test points (percent)		anchor test points (percent)	
	Baseline year	2007	Baseline year	2007	Baseline year	2007	Baseline year	2007
Multiple-Choice	40/40	40/40	25/25	25/25	100%	100%	100%	100%
Gridded-Response	0/40	0/40	0/24	0/25	0%	0%	0%	0%
Short- or Extended-Response	0/40	0/40	0/24	0/25	0%	0%	0%	0%

FCAT Mathematics **Core Blueprint--2007** **Grade 5 ver4**

GRADE 5			2007 Operational Test Design					
Benchmark	MC (1 pt)	GR (1 pt)	SR (1 pt)	ER (1 pt)	No. of Items	No. of Points	% of Test	
A122 (A)	1	0			1	1		0014
A124 +	2	1			3	3		3388 2312 B853
A221 (A)	0	1			1	1		6994
A321	1				1	1		D560
A322	1				1	1		2316
A323 +	2	1			3	3		3013 I345 I418
A421			1		1	2		D679
A521	1				1	1		1002
Strand A	**8**	**3**	**1**	**0**	**12**	**13**	**22%**	
B122 +	4	2			6	6		H055 J022 I391 0039 I390 J021
B221	2	1			3	3		0004 B751 0008
B222	2				2	2		0018 3327
B422								
Strand B	**8**	**3**	**0**	**0**	**11**	**11**	**18%**	
C121	1				1	1		H843
C221 +	1			1	2	5		H240 0056
C222	2				2	2		4318 B684
C321 +	1		1		2	3		0060 H844
C322	2				2	2		H253 F634
Strand C	**7**	**0**	**1**	**1**	**9**	**13**	**22%**	
D121 +	2	1			3	3		D270 I367 B112
D122 +			1		1	2		I496
D221	2				2	2		0007 H342
D222 +	2	2			4	4		J536 D544 D964 6309
Strand D	**6**	**3**	**1**	**0**	**10**	**11**	**18%**	
E121 +	1	1		1	3	6		D602 H136 4468
E122 +	1	1			2	2		2283 D442
E221			1		1	2		F284
E222	1				1	1		B679
E321	1				1	1		0003
Strand E	**4**	**2**	**1**	**1**	**8**	**12**	**20%**	
Totals	**33**	**11**	**4**	**2**	**50**	**60**		

+=Emphasis should be placed on these benchmarks.
0=Items will be sampled from these benchmarks/formats in later years.
Blank=No items will be developed for these benchmarks/formats.
A=Alternate MC and GR formats in different years.

FCAT 2007

Mathematics Reporting Category and Item Type Worksheet
Grades 5 8 10 (circle one)

Mathematics

Table 1 – Content Proportionality 2007

Reporting Category	core test points (fraction)	anchor test points (fraction)	core test points (percent)	anchor test points (percent)
Number Sense, Concepts, Operations	13/60	6/25	22%	24%
Measurement	11/60	4/25	18%	16%
Geometry and Spatial Sense	13/60	5/25	22%	20%
Algebraic Thinking	11/60	5/25	18%	20%
Data Analysis and Probability	12/60	5/25	20%	20%

Table 2 – Item Type Proportionality in Baseline and Current Years

Item Type	core test points (fraction)		anchor test points (fraction)		core test points (percent)		anchor test points (percent)	
	Baseline year	2007	Baseline year	2007	Baseline year	2007	Baseline year	2007
Multiple-Choice	33/60	33/60	15/23	15/23	55%	55%	65%	65%
Gridded-Response	11/60	11/60	8/23	8/23	18%	18%	35%	35%
Short- or Extended-Response	16/60	16/60	0/23	0/23	27%	27%	0%	0%

FCAT Mathematics **Test Design - 2008** **Grade 4 ver7**

GRADE 4			2008 Test Design					
Benchmark	MC (1 pt)	GR (1 pt)	SR (1 pt)	ER (1 pt)	No. of Items	No. of Points	% of Test	MC Items
A122	1				1	1		1225
A124	1				1	1		2964
A221 +	2				2	2		D486, L412
A321	1				1	1		B099
A322 +	2				2	2		J666, L165
A323 +	2				2	2		H037, L357
A421	1				1	1		L075
A521	1				1	1		I366
Strand A	**11**	**0**	**0**	**0**	**11**	**11**	**28%**	
B122 +	3				3	3		I449, I939, K098
B221	2				2	2		7294, B085
B222	2				2	2		F592, J316
B422	1				1	1		4742
Strand B	**8**	**0**	**0**	**0**	**8**	**8**	**20%**	
C121	1				1	1		1090
C221	1				1	1		N526
C222	1				1	1		D521
C321 +	2				2	2		J291, J681
C322 +	2				2	2		N484, F120
Strand C	**7**	**0**	**0**	**0**	**7**	**7**	**18%**	
D121	2				2	2		L290, I504
D221 +	3				3	3		B264, L334, L615
D222	2				2	2		1172, H763
Strand D	**7**	**0**	**0**	**0**	**7**	**7**	**18%**	
E121 +	3				3	3		2818, H285, L246
E122 +	2				2	2		F854, 6052
E221	1				1	1		F889
E222	1				1	1		J709
Strand E	**7**	**0**	**0**	**0**	**7**	**7**	**18%**	
Totals	**40**	**0**	**0**	**0**	**40**	**40**	**100%**	

+=Emphasis should be placed on these benchmarks.

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prepared by Tracy Halka and delivered to HAI via ftp site on 5

FCAT 2008

Mathematics Reporting Category and Item Type Worksheet
Grades 3 (4) (circle one)

Mathematics

Table 1 – Content Proportionality 2008

Reporting Category	core test points (fraction)	anchor test points (fraction)	core test points (percent)	anchor test points (percent)	Range
Number Sense, Concepts, Operations	11/40	7/31	28%	22.5%	26% to 30%
Measurement	8/40	5/31	20%	16.25%	18% to 22%
Geometry and Spatial Sense	7/40	7/31	18%	22.5%	15% to 19%
Algebraic Thinking	7/40	5/31	18%	16.25%	15% to 19%
Data Analysis and Probability	7/40	7/31	18%	22.5%	16% to 20%

Table 2 – Item Type Proportionality in Baseline and Current Years

Item Type	Test Design Summary	core test points (fraction)		anchor test points (fraction)		core test points (percent)		anchor test points (percent)	
	Number of points	Baseline year	2008	Baseline year	2008	Baseline year	2008	Baseline year	2008
Multiple-Choice	40	40/40	40/40	25/25	31/31	100%	100%	100%	100%
Gridded-Response		0/40	0/40	0/25	0/31	0%	0%	0%	0%
Short- or Extended-Response		0/40	0/40	0/25	0/31	0%	0%	0%	0%

GRADE 5			2008 Operational Test Design					
Benchmark	MC (1 pt)	GR (1 pt)	SR (1 pt)	ER (1 pt)	No. of Items	No. of Points	% of Test	Items
A122 (A)	0	1			1	1		GK500
A124 +	2	1			3	3		GF611, M0026, MD557
A221 (A)	1	0			1	1		MK642
A321	1				1	1		MN455
A322	1				1	1		M2705
A323 +	2	1			3	3		GB860, M2599, ML131
A421			1		1	2		SN525
A521	1				1	1		M4415
Strand A	**8**	**3**	**1**	**0**	12	13	**22%**	
B122 +	4	2			6	6		G0064, GH579, M0001, M1016, M2740, MF846
B221	2	1			3	3		GK087, M0018, MH039
B222	2				2	2		M2732, M3913
B422								
Strand B	**8**	**3**	**0**	**0**	11	11	**18%**	
C121	1				1	1		ML452
C221 +	1			1	2	5		EH211, M4605
C222	2				2	2		MD333, MN454
C321 +	1		1		2	3		MI628, S7633
C322	2				2	2		M0005, MN138
Strand C	**7**	**0**	**1**	**1**	9	13	**22%**	
D121 +	2	1			3	3		G4553, MB299, MD383
D122 +			1		1	2		SB529
D221	2				2	2		M0041, M2203
D222 +	2	2			4	4		G7001, GK067, M6701, MF521
Strand D	**6**	**3**	**1**	**0**	10	11	**18%**	
E121 +	1	1		1	3	6		EK485, GH052, MH408
E122 +	1	1			2	2		G6724, M6708
E221			1		1	2		SF596
E222	1				1	1		M3433
E321	1				1	1		M0005
Strand E	**4**	**2**	**1**	**1**	8	12	**20%**	
Totals	**33**	**11**	**4**	**2**	50	60		

+=Emphasis should be placed on these benchmarks.

0=Items will be sampled from these benchmarks/formats in later years.

Blank=No items will be developed for these benchmarks/formats.

A=Alternate MC and GR formats in different years.

FCAT 2008

Mathematics Reporting Category and Item Type Worksheet
Grades 5 8 10 (circle one)

Mathematics

Table 1 – Content Proportionality 2008

Reporting Category	core test points (fraction)	anchor test points (fraction)	core test points (percent)	anchor test points (percent)	Range
Number Sense, Concepts, Operations	13/60	6/28	21.4%	20%	18% to 22%
Measurement	11/60	6/28	21.4%	20%	18% to 22%
Geometry and Spatial Sense	13/60	5/28	17.9%	20%	18% to 22%
Algebraic Thinking	11/60	6/28	21.4%	20%	18% to 22%
Data Analysis and Probability	12/60	5/28	17.9%	20%	18% to 22%

Table 2 – Item Type Proportionality in Baseline and Current Years

Item Type	Test Design Summary	core test points (fraction)		anchor test points (fraction)		core test points (percent)		anchor test points (percent)	
	Number of points	Baseline year	2008	Baseline year	2008	Baseline year	2008	Baseline year	2008
Multiple-Choice	33	33/60	33/60	16/24	20/28	55%	55%	66.7%	71.4%
Gridded-Response	11	11/60	11/60	8/24	8/28	18.3%	18.3%	33.3%	28.6%
Short- or Extended-Response	16	16/60	16/60	0/24	0/28	26.7%	26.7%	0%	0%

GRADE 4			2009 Test Design							
Benchmark	MC (1 pt)	GR (1 pt)	SR (1 pt)	ER (1 pt)	No. of Items	No. of Points	% of Test			
A122	1				1	1		1225		
A124	1				1	1		2964		
A221 +	2				2	2		L412	P602	
A321	1				1	1		B003		
A322 +	2				2	2		J843	O414	
A323 +	2				2	2		K080	L357	
A421	1				1	1		L107		
A521	1				1	1		H459		
Strand A	**11**	**0**	**0**	**0**	**11**	**11**	**28%**			
B122 +	3				3	3		F744	L121	P568
B221	2				2	2		B085	J391	
B222	2				2	2		I934	L239	
B422	1				1	1		D568		
Strand B	**8**	**0**	**0**	**0**	**8**	**8**	**20%**			
C121	1				1	1		N441		
C221	1				1	1		N526		
C222	1				1	1		L347		
C321 +	2				2	2		3059	N487	
C322 +	2				2	2		L677	N484	
Strand C	**7**	**0**	**0**	**0**	**7**	**7**	**18%**			
D121	2				2	2		I504	L290	
D221 +	3				3	3		I333	P394	P449
D222	2				2	2		2955	O413	
Strand D	**7**	**0**	**0**	**0**	**7**	**7**	**18%**			
E121 +	3				3	3		3911	D525	I351
E122 +	2				2	2		F770	F854	
E221	1				1	1		L764		
E222	1				1	1		H172		
Strand E	**7**	**0**	**0**	**0**	**7**	**7**	**18%**			
Totals	**40**	**0**	**0**	**0**	**40**	**40**				

+=Emphasis should be placed on these benchmarks.

FCAT Math Grade 4 Alignment to Test Specification for Core VerB

2010

	Number	Measurement	Geometry	Algebra	Data Analysis	Total
Number of items	11	8	7	7	7	40
Percent of items	28	20	18	18	18	100
Total Points	11	8	7	7	7	40
Target MC items	**27%**	**20%**	**18%**	**18%**	**17%**	**100%**
Number of MC items	11	8	7	7	7	40
Points of MC items	11	8	7	7	7	40

	Total Items	Total Points
Target	**40**	**40**
Build	40	40

FCAT Math Grade 4 Reporting Category by Benchmarks for Core VerB

TYPE	Reporting_cat	Benchmark	Max	Percent of Points	Count of Core
MC					
	MA.A				
		A122	1	2.50%	1
		A124	1	2.50%	1
		A221	2	5.00%	2
		A321	1	2.50%	1
		A322	2	5.00%	2
		A323	2	5.00%	2
		A421	1	2.50%	1
		A521	1	2.50%	1
	MA.A Total		**11**	**27.50%**	**11**
	MA.B				
		B122	3	7.50%	3
		B221	2	5.00%	2
		B222	2	5.00%	2
		B422	1	2.50%	1
	MA.B Total		**8**	**20.00%**	**8**
	MA.C				
		C121	1	2.50%	1
		C221	1	2.50%	1
		C222	1	2.50%	1
		C321	2	5.00%	2
		C322	2	5.00%	2
	MA.C Total		**7**	**17.50%**	**7**
	MA.D				
		D121	2	5.00%	2
		D221	3	7.50%	3
		D222	2	5.00%	2
	MA.D Total		**7**	**17.50%**	**7**
	MA.E				
		E121	3	7.50%	3
		E122	2	5.00%	2
		E221	1	2.50%	1
		E222	1	2.50%	1
	MA.E Total		**7**	**17.50%**	**7**
MC Total			**40**	**100.00%**	**40**
Grand Total			**40**	**100.00%**	**40**

FCAT Math Grade 4Descriptive Statistics for Core VerB

2010

Overall	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.691	0.408	0.019	307.343	0.200
Median	0.746	0.404	0.018	298.507	0.187
SD	0.166	0.065	0.005	36.901	0.093
Minimum	0.260	0.279	0.010	237.262	0.055
Maximum	0.877	0.527	0.030	386.529	0.369
N	40	40	40	40	40

Number	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.647	0.435	0.021	319.017	0.200
Median	0.719	0.409	0.019	310.280	0.180
SD	0.198	0.068	0.005	37.489	0.093
Minimum	0.260	0.333	0.012	270.307	0.060
Maximum	0.835	0.527	0.030	383.931	0.343
N	11	11	11	11	11

Measurement	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.817	0.390	0.017	278.576	0.239
Median	0.790	0.376	0.016	270.761	0.247
SD	0.050	0.063	0.004	20.599	0.091
Minimum	0.753	0.280	0.013	251.629	0.055
Maximum	0.877	0.496	0.025	310.510	0.332
N	8	8	8	8	8

Geometry	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.713	0.388	0.017	307.500	0.252
Median	0.691	0.364	0.017	301.500	0.205
SD	0.045	0.065	0.004	10.335	0.082
Minimum	0.646	0.279	0.010	294.129	0.165
Maximum	0.769	0.462	0.022	321.556	0.369
N	7	7	7	7	7

Algebra	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.690	0.395	0.019	304.391	0.181
Median	0.635	0.353	0.016	279.184	0.112
SD	0.165	0.070	0.006	45.829	0.092
Minimum	0.394	0.320	0.012	237.262	0.080
Maximum	0.856	0.520	0.029	364.383	0.341
N	7	7	7	7	7

Data Analysis	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.592	0.418	0.018	324.672	0.123
Median	0.441	0.405	0.017	293.556	0.099
SD	0.213	0.059	0.003	45.746	0.071
Minimum	0.321	0.307	0.013	278.654	0.061
Maximum	0.806	0.475	0.021	386.529	0.274
N	7	7	7	7	7

FCAT Math Grade 5 Alignment to Test Specification for Core Version C

2010

	Number	Measurement	Geometry	Algebra	Data Analysis	Total
Number of Items	12	11	9	10	6	50
Percent of Items	24	22	18	20	16	100
Total Points	13	11	13	11	12	60
Target MC Items	**13%**	**13%**	**12%**	**10%**	**7%**	**55%**
Number of MC Items	8	8	7	8	4	33
Points of MC Items	8	8	7	8	4	33
Target GR Items	**5%**	**5%**	**0%**	**5%**	**3%**	**18%**
Number of GR Items	3	3	0	3	2	11
Points of GR Items	3	3	0	3	2	11
Target SR Items	**3%**	**0%**	**3%**	**3%**	**3%**	**13%**
Number of SR Items	1	0	1	1	1	4
Points of SR Items	2	0	2	2	2	8
Target ER Items	**0%**	**0%**	**7%**	**0%**	**7%**	**13%**
Number of ER Items	0	0	1	0	1	2
Points of ER Items	0	0	4	0	4	8

	Total Items	Total Points
Target	50	60
Build	50	60

FCAT Math Grade 5 Reporting Category by Benchmarks for Core Version C

TYPE	Reporting_cat	Benchmark	Max	Percent of Points	Count of Core
ER					
	MA.C				
		C221	4	6.67%	1
	MA.C Total		4	6.67%	1
	MA.E				
		E121	4	6.67%	1
	MA.E Total		4	6.67%	1
ER Total			8	13.33%	2
GR					
	MA.A				
		A122	1	1.67%	1
		A124	1	1.67%	1
		A323	1	1.67%	1
	MA.A Total		3	5.00%	3
	MA.B				
		B122	2	3.33%	2
		B221	1	1.67%	1
	MA.B Total		3	5.00%	3
	MA.D				
		D121	1	1.67%	1
		D222	2	3.33%	2
	MA.D Total		3	5.00%	3
	MA.E				
		E121	1	1.67%	1
		E122	1	1.67%	1
	MA.E Total		2	3.33%	2
GR Total			11	18.33%	11
MC					
	MA.A				
		A124	2	3.33%	2
		A221	1	1.67%	1
		A321	1	1.67%	1
		A322	1	1.67%	1
		A323	2	3.33%	2
		A521	1	1.67%	1
	MA.A Total		8	13.33%	8
	MA.B				
		B122	4	6.67%	4
		B221	2	3.33%	2
		B222	2	3.33%	2
	MA.B Total		8	13.33%	8
	MA.C				
		C121	1	1.67%	1
		C221	1	1.67%	1
		C222	2	3.33%	2
		C321	1	1.67%	1
		C322	2	3.33%	2
	MA.C Total		7	11.67%	7
	MA.D				
		D121	2	3.33%	2
		D221	2	3.33%	2
		D222	2	3.33%	2
	MA.D Total		6	10.00%	6
	MA.E				
		E121	1	1.67%	1
		E122	1	1.67%	1
		E222	1	1.67%	1
		E321	1	1.67%	1
	MA.E Total		4	6.67%	4
MC Total			33	55.00%	33
SR					
	MA.A				
		A421	2	3.33%	1
	MA.A Total		2	3.33%	1
	MA.C				
		C321	2	3.33%	1
	MA.C Total		2	3.33%	1
	MA.D				
		D122	2	3.33%	1
	MA.D Total		2	3.33%	1
	MA.E				
		E221	2	3.33%	1
	MA.E Total		2	3.33%	1
SR Total			8	13.33%	4
Grand Total			60	100.00%	50

FCAT Math Grade 5Descriptive Statistics for Core Version C 2010

Overall	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.594	0.450	0.026	331.005	0.203
Median	0.587	0.449	0.024	331.712	0.205
SD	0.171	0.086	0.008	28.517	0.085
Minimum	0.160	0.276	0.013	250.086	0.048
Maximum	0.898	0.668	0.053	382.228	0.368
N	50	50	50	50	50

Number	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.611	0.457	0.027	341.630	0.174
Median	0.569	0.431	0.026	336.453	0.160
SD	0.161	0.077	0.003	25.955	0.078
Minimum	0.344	0.302	0.021	288.180	0.054
Maximum	0.898	0.585	0.032	375.863	0.306
N	12	12	12	12	12

Measurement	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.586	0.455	0.028	325.525	0.190
Median	0.598	0.407	0.020	320.903	0.174
SD	0.198	0.075	0.014	15.105	0.092
Minimum	0.160	0.330	0.013	303.382	0.048
Maximum	0.803	0.565	0.053	348.875	0.295
N	11	11	11	11	11

Geometry	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.580	0.409	0.019	335.933	0.205
Median	0.529	0.368	0.018	325.490	0.155
SD	0.166	0.099	0.003	43.550	0.107
Minimum	0.307	0.276	0.015	250.086	0.053
Maximum	0.887	0.559	0.022	382.228	0.346
N	9	9	9	9	9

Algebra	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.595	0.465	0.029	322.685	0.256
Median	0.535	0.439	0.025	305.695	0.228
SD	0.204	0.072	0.007	26.343	0.076
Minimum	0.338	0.385	0.022	294.994	0.145
Maximum	0.842	0.603	0.045	363.097	0.368
N	10	10	10	10	10

Data Analysis	P_Value	PTBS	A_Par	B_Par	C_Par
Mean	0.597	0.461	0.023	324.569	0.201
Median	0.527	0.422	0.020	299.948	0.161
SD	0.150	0.116	0.007	31.442	0.046
Minimum	0.413	0.320	0.014	287.052	0.160
Maximum	0.814	0.668	0.035	359.397	0.242
N	8	8	8	8	8