

FLORIDA COMPREHENSIVE ASSESSMENT TEST[®] TEST DESIGN SUMMARY



I. Purpose of the FCAT

The Florida Comprehensive Assessment Test (FCAT)[®] is a component of Florida's effort to improve the teaching and learning of higher educational standards. The primary purpose of the FCAT, a criterion-referenced test, is to assess student achievement of the high-order thinking skills represented in the *Sunshine State Standards* (SSS) for Reading, Writing, Mathematics, and Science.

II. Tests Administered in Grades 3–11

Table 1: Types of Tests

This table provides an overview of the subjects assessed by the FCAT and a listing of the types of tests administered at each grade.

Grade	Subjects				Tests
	R	M	S	W	
3	✓	✓			<ul style="list-style-type: none"> ◆ Reading ◆ Mathematics
4	✓	✓		✓	<ul style="list-style-type: none"> ◆ Reading ❖ ◆ Mathematics ◆ Writing ❖
5	✓	✓	✓		<ul style="list-style-type: none"> ◆ Reading ◆ Mathematics ❖ ◆ Science ❖
6	✓	✓			<ul style="list-style-type: none"> ◆ Reading ◆ Mathematics
7	✓	✓			<ul style="list-style-type: none"> ◆ Reading ◆ Mathematics
8	✓	✓	✓	✓	<ul style="list-style-type: none"> ◆ Reading ❖ ◆ Mathematics ❖ ◆ Science ❖ ◆ Writing ❖
9	✓	✓			<ul style="list-style-type: none"> ◆ Reading ◆ Mathematics
10	✓	✓		✓	<ul style="list-style-type: none"> ◆ Reading ❖ ◆ Mathematics ❖ ◆ Writing ❖
11			✓		<ul style="list-style-type: none"> ◆ Science ❖
11 – Adult	✓	✓			<ul style="list-style-type: none"> ◆ Reading Retake ◆ Mathematics Retake
					❖ includes performance tasks

III. Content Categories

Tables 2–4 present the content categories for the FCAT Reading, Mathematics, and Science tests, along with the approximate percent of raw-score points derived from each content category. Table 5 presents the types of FCAT Writing prompts used at each assessed grade.

Table 2: FCAT Reading

Grade	Words & Phrases in Context	Main Idea, Plot, & Purpose	Comparisons & Cause/Effect	Reference & Research
3–5	15–20%	30–55%	20–45%	5–15%
6–8	15–20%	30–55%	15–25%	10–30%
9–10	15–20%	20–50%	10–25%	20–40%

Table 3: FCAT Mathematics

Grade	Number Sense, Concepts, and Operations	Measurement	Geometry and Spatial Sense	Algebraic Thinking	Data Analysis & Probability
3	30%	20%	17%	15%	18%
4	28%	20%	17%	17%	18%
5–8	20%	20%	20%	20%	20%
9–10	17%	17%	25%	25%	17%

Table 4: FCAT Science

Grade	Physical & Chemical Sciences	Earth & Space Sciences	Life & Environmental Sciences	Scientific Thinking
5	25%	25%	25%	25%
8	25%	25%	25%	25%
11	25%	25%	25%	25%

Table 5: FCAT Writing

*The writing test is administered to students in grades 4, 8, and 10. The test provides two prompts for each grade, and the two prompts are spiraled among students so that each student responds to only one prompt that may be for either mode of writing. The student response should integrate the writing elements of **focus**, **organization**, **support**, and **conventions**. The modes of writing used at each grade are presented in the table below.*

Grade	Narrative <i>Writing to tell a story</i>	Expository <i>Writing to explain</i>	Persuasive <i>Writing to convince</i>
4	✓	✓	
8		✓	✓
10		✓	✓

IV. Reading Passages

Proposed reading passages are reviewed by Florida educators for quality and grade-level appropriateness. Criteria for this review can be found in *FCAT Reading Test Item Specifications*. A review is also conducted by a committee of Florida citizens to ensure the passages are free of bias or cultural insensitivity.

Table 6: Lengths of Reading Passages

Grade	Number of Words per Passage	
	Range	Average
3	100–700	350
4	100–900	400
5	200–900	450
6	200–1000	500
7	300–1100	600
8	300–1100	700
9	300–1400	800
10	300–1700	900

Table 7: Reading Passage Types and Percentage of Test

Literary passages provide entertainment or inspiration and include fiction, non-fiction, poetry, and drama.

Informational passages are subject-matter centered and the language may be used to solve problems, raise questions, provide information, or present new ideas. The context of these passages includes everyday life outside of the classroom.

Grade	Literary Text	Informational Text
3	60%	40%
4	50%	50%
5	50%	50%
6	50%	50%
7	40%	60%
8	40%	60%
9	30%	70%
10	30%	70%

V. Cognitive Complexity

Prior to 2004, the cognitive-level classification system of FCAT items was based upon Bloom's Taxonomy. This model required assumptions about students' instructional backgrounds and their individual approaches to a problem. FCAT items are now classified using a model with origins in the works of Dr. Norman Webb¹ on depth of knowledge and the cognitive classification system used for the National Assessment of Educational Progress (NAEP). With the revised classification system, items

¹ Webb, Norman L. and others. "Webb Alignment Tool" 24 July 2005. Wisconsin Center of Educational Research. University of Wisconsin-Madison. 2 Feb. 2006. <http://www.wcer.wisc.edu/WAT/index.aspx>.

are classified on the cognitive demand inherent in the test item, not on assumptions about the student's approach to the item. This is a change in how items are classified; there has been no change in the items or in the tests.

Low complexity items rely heavily on recall and recognition. Moderate complexity items require more flexible thinking and may require informal reasoning or problem solving. High complexity items are written to elicit analysis and abstract reasoning. The tables below present the range for the percentage of raw-score points by cognitive complexity level on each FCAT test.

Table 8: Percentage of Points by Cognitive Complexity Level for FCAT Reading

Grades	Low	Moderate	High
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

*These tests include performance tasks, typically moderate to high complexity items.

Table 9: Percentage of Points by Cognitive Complexity Level for FCAT Mathematics

Grades	Low	Moderate	High
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

*These tests include performance tasks, typically moderate to high complexity items.

Table 10: Percentage of Points by Cognitive Complexity Level for FCAT Science

Grades	Low	Moderate	High
5*	15-25	40-60	25-35
8*	15-25	40-60	25-35
11*	15-25	40-60	25-35

*These tests include performance tasks, typically moderate to high complexity items.

Note: The **FCAT Writing** prompt is a high cognitive complexity performance task administered at Grades 4, 8, and 10.

VI. Test Length and Item/Prompt Types

Table 11: Duration of Test

The table below displays the number of minutes allowed for the 2009 regular test takers. With the exception of Writing, Reading Retake, and Mathematics Retake, which must be taken in one day, all tests are administered in two sessions.

Grade	Reading	Mathematics	Science	Writing
3	120	120		
4	160	120		45
5	120	160	120	
6	120	120		
7	120	120		
8	160	160	120	45
9	120	120		
10	160	180		45
11			150	

Table 12: Lengths of Tests

This table provides an approximate range for the number of items on each test.

Grade	Reading	Mathematics	Science	Writing
3	50–55	45–50		
4	50–55	45–50		1 prompt
5	50–55	55–60	55–60	
6	50–55	50–55		
7	50–55	50–55		
8	50–55	55–60	55–60	1 prompt
9	50–55	50–55		
10	50–55	55–60		1 prompt
11			55–60	
Retake	55–60*	55–60*		

*All items in the Grade 10 Retake tests contribute to students' scores. Some items, approximately 6–10, in all other tests are experimental (field test) and are included in the ranges above but not included in students' scores.

Table 13: Item Types and Numbers

This table gives ranges for the approximate number of items by item type. These ranges include both operational and field-test items.

Grade	Reading	Mathematics	Science	Writing
3	50–55 MC	45–50 MC		
4	45–50 MC 5–7 SR & ER	45–50 MC		1 prompt
5	50–55 MC	35–40 MC 10–15 GR 5–8 SR & ER	45–55 MC 5–7 SR & ER	
6	50–55 MC	35–40 MC 10–15 GR		
7	50–55 MC	35–40 MC 10–15 GR		
8	45–50 MC 5–7 SR & ER	30–35 MC 15–20 GR 5–8 SR & ER	40–45 MC 3–6 GR 5–7 SR & ER	1 prompt
9	50–55 MC	30–35 MC 15–20 GR		
10	45–50 MC 5–7 SR & ER	30–35 MC 15–20 GR 5–8 SR & ER		1 prompt
11			40–45 MC 3–6 GR 5–7 SR & ER	
Retake	55–60 MC	25–35 MC 25–30 GR		

Key

ER – Extended Response
 GR – Gridded Response
 MC – Multiple Choice
 SR – Short Response