



**Florida Alternate Assessment
Test Designs, Blueprints and Item Specifications for
Reading, Writing, Mathematics and Science**

2009-2010 Assessment



Prepared by Measured Progress for the
Florida Department of Education

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Overview

The alternate assessment design for Florida is based on the revised Sunshine State Standards with three levels of Access Points (independent, supported, and participatory), to provide a tiered entry to the assessment for students at the various levels. This is critical as educators seek to provide access to the general education curriculum and foster higher expectations for the wide diversity of students with significant cognitive disabilities.

These assessments will contain performance tasks made up of primarily selected response options and some open response options. The access points were used to develop an assessment blueprint that will serve as the foundation for structured student performance tasks. The design is an innovative approach that provides test administrators with structured tasks comprised of item sets that reflect typical classroom activities and embed items frequently containing three response options for students to select with the communication systems they normally use.

Items

Students who use communication supports are assessed more accurately when they are provided with structured response options within a performance task. Students who have greater access to verbal or written responses will be able to respond to open or constructed response items. For example, when a non-verbal student with mobility challenges is asked a question and presented with the choices for the answer, that student may use eye gaze to indicate the preferred choice, hit a switch from among several pre-programmed switches, point to one choice, etc.

Items that require a constructed response or multi-step performance, such as organizing pictures to show the order of events in a story, are often more challenging for this population of students. Therefore, we have incorporated an element of universal design in the development of alternate performance tasks to build a test on which all students, even those with the most significant communication challenges, have the opportunity to respond accurately: we present three options to students when multiple response options are required. This limits the cognitive load of the item and adheres to recommendations of Haladyna and Downing¹, who contend that more than three acceptably performing distracters are rarely found.

Within each item set, each of the three access points is addressed. Each student starts at the participatory level. A student completing the participatory level item accurately without assistance moves on to the supported level item. In this way, the student moves up through the access points as long as he or she is able to respond accurately and independently. At the participatory level item only, for a student who is unable to complete the participatory level item accurately and independently scaffolding will occur. The student will be presented the item again with one distracter removed, if the student is able to accurately respond he/she will be scored at two points. If the student is still unable to accurately respond the item is presented again with another distracter removed (leaving only the correct answer) and the student is asked to actively engage with the correct answer. At any point within the participatory level item, if the student will not engage or actively refuses the student will score a zero point.

The student receives the final score for the item set based on the level at which it was answered correctly. For example, if the student is unable to complete the item at the supported level, he or she retains the three-point score from the participatory level. However, if he or she is able to complete the supported item, the teacher will next administer the independent level item. If the student is unable to complete the independent item accurately, a score of six points is awarded. However, if the student completes the independent item accurately, the teacher will record a score of nine points.

¹ Educational and Psychological Measurement, Vol. 53, No. 4, 999-1010 (1993) DOI: 10.1177/0013164493053004013 © 1993 SAGE Publications

0	1	2	3	6	9
No response, student actively refuses or does not engage at any point during the Participatory Level	Student responds correctly after the removal of two distracters at the Participatory Level	Student responds correctly after the removal of one distracter at the Participatory Level	Student responds correctly at Participatory Level	Student responds correctly at Supported Level	Student responds correctly at Independent Level

Educators are provided with auxiliary materials, such as sentence strips, when they are specifically needed to complete an item. The auxiliary material is prepared in an 11 x 17 response booklet format for reading, mathematics and science. There are minimal cut outs in these content areas. Writing will consist of all auxiliary materials provided as cut outs. The test booklets include scripting for the educators to follow as they administer the assessment, increasing procedural reliability. Some items will include the use of teacher-gathered classroom materials that students are familiar with, giving students the best opportunity to demonstrate their knowledge and skills.

Test Booklet Components

Each subject area section of the test booklet begins with an overview of the strands and standards being assessed at that grade and a list of classroom materials that the educator should gather to augment the materials sent with the test booklet (i.e. for mathematics, counting blocks may be required.)

The test booklet itself includes item sets that describe the materials provided, materials needed from the classroom, teacher scripting at each Access Point, the expected student response, the access point being assessed, and a place to score the student on each item set.

The test booklets were designed with the educators in mind, understanding that teachers need to easily refer to the test booklets during administration and scoring.

Item Components

Each item set includes an overview, the access points to be assessed, and the materials needed. The components for each item set are:

Materials	Access Point	Teacher Will	Student Will	Scoring
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The *Materials* column outlines for the educator which materials will be needed for the item. Materials that are provided for the teacher and materials the educator may need to gather from the classroom are identified. Graphics will be named for teachers to use standardized terminology as needed. It is important that the graphic naming be done in a way that the substituted word(s) fit the graphic for use with students with visual impairments. For example a picture of a teddy bear will be named “teddy bear” and not “toy.”

The *Access Point* column lists the access point that the item is targeting.

The *Teacher Will* column consists of a clear set of directions for setting up the item and scripting for what the teacher should ask the student.

The *Student Will* column indicates the response that the educator needs to look for from the student, taking into consideration the communication mode appropriate for each student.

The *Scoring* column provides a space for the educator to mark the score the student received on the item.

Depth of Knowledge

Item development includes specifications on the depth of knowledge (DOK) assessed by each item at each access level. The DOK table utilized is the extended Bloom's Taxonomy outlined by Browder in *"Links for Academic Learning: An Alignment Protocol for Alternate Assessments Based on Alternate Achievement Standards."* The Depth of Knowledge will be verified by the content review panelists.

Level	Depth of Knowledge Descriptor
1	Attention (touch, look, vocalize, respond, attend)
2	Memorize/recall (list, describe (facts), identify, state, define, label, recognize, record, match, recall, relate)
3	Performance (perform, demonstrate, follow, count, locate, read)
4	Comprehension (explain, conclude, group/categorize, restate, review, translate, describe (concepts), paraphrase, infer, summarize, illustrate)
5	Application (compute, organize, collect, apply, classify, construct, solve, use, order, develop, generate, interact with text, implement)
6	Analysis, Synthesis, Evaluation (pattern, analyze, compare, contrast, compose, predict, extend, plan, judge, evaluate, interpret, cause/effect, investigate, examine, distinguish, differentiate, generate)

Number of Items by Content and Grade Level

Each content/grade level operational test is made up of 16 common items with 4 embedded field test items. There are 2 forms of each grade level test for a total of 8 total embedded field test items in each content area at each grade level. The test design and blueprint vary by content area and are described in the content area sections that follow.

Grade	Reading	Mathematics	Writing	Science	Total # Test Booklet Items
3	16 common, 4 embedded	16 common, 4 embedded			40
4	16 common, 4 embedded	16 common, 4 embedded	16 common, 4 embedded		60
5	16 common, 4 embedded	16 common, 4 embedded		16 common, 4 embedded	60
6	16 common, 4 embedded	16 common, 4 embedded			40
7	16 common, 4 embedded	16 common, 4 embedded			40
8	16 common, 4 embedded	16 common, 4 embedded	16 common, 4 embedded	16 common, 4 embedded	80
9	16 common, 4 embedded	16 common, 4 embedded			40
10	16 common, 4 embedded	16 common, 4 embedded	16 common, 4 embedded		60
11				16 common, 4 embedded	20
Total Items	128 common, 64 embedded	128 common, 64 embedded	48 common, 24 embedded	48 common, 24 embedded	

Reading

Design

The reading design consists of two strands that are measured by the items in the test. In addition, two to three standards for each of the two strands are identified for assessment. Each standard consists of two to four items for a total of sixteen common reading items.

Blueprint

In developing the test blueprint for reading, Measured Progress staff examined several documents:

- FCAT Reading 2006 Grades 3-10 Test Focus
- FCAT Reading Test Item and Performance Task Specifications
- FCAT Summary of Tests and Design, September 2005
- Draft FCAT Writing + Test Item Specifications, Grades 3-12 © 2005 Florida Department of Education
- Florida's 2006 Sunshine State Standards for K-12 Reading and Language Arts. Language Arts Draft Crosswalk, Grades 3-10

We examined the FCAT Reading 2006 Test Focus and noted the benchmarks that were covered. We mapped these benchmarks on the old standards and then used the Language Arts Draft Crosswalk to map the standards to the 2006 Sunshine State Standards for K-12 Reading and Language Arts. This showed us the distribution of standard coverage against the 2006 Sunshine State Standards. We also noted the Access points for the particular benchmarks in the General Education Frameworks. These notations will confirm the alignment of the access points on which we test the students with significant cognitive disabilities to the indicators on which we test general education students. The items for the Florida Alternate Assessment will be written to the Sunshine State Standards, using the access points that have been submitted for State Board of Education approval.

Based on our analysis of coverage in the FCAT, the two Reading Strands that Measured Progress recommended for coverage are Reading Process and Literary Analysis. Each of these strands has multiple standards and varied grade level distribution in the FCAT.

In Reading Process, the three standards covered most across grade levels are Fluency, Vocabulary and Reading Comprehension. Reading Comprehension is the purpose of reading; therefore, it is sensible to test all students on this standard. Learning vocabulary skills at the lower grades allows students to become adept in growing their reading vocabulary. Fluency looks at students' abilities to decode text. At grades 9-10, however, the Crosswalk pointed to concepts not applicable in the Old Standards: Strand 3: Information and Media Literacy. Therefore, this new strand was selected, that synthesizes many of the benchmark skills tested in earlier grades, to be tested at grade 10. For the Literary Analysis we follow the FCAT balance of fiction and nonfiction with the particular grade level emphases.

The distribution for each benchmark will be consistent with the distribution on the FCAT.
Note: not every standard and benchmark is tested in the FCAT.

2009-2010 Common Item Blueprint and Embedded Field Test Item Development

Strand 1 Reading Process:	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8		Grade 9		Grade 10	
	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT
Reading Fluency: The student demonstrates the ability to read grade level text orally with accuracy, appropriate rate, and expression.	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3
LA.3.1.5.1 –apply letter-sound knowledge to decode unknown words quickly and accurately in context	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3
Standard 1: Vocabulary Development - The student uses multiple strategies to develop grade appropriate vocabulary.	3	3	3	2	3	3	3	2	3	1	3	1	3	1		
LA.7.1.6.1 - use new vocabulary that is introduced and taught directly										1				1		
LA.7.1.6.3 - use context clues to determine meanings of unfamiliar words												1				
LA.6.1.6.4 - categorize key vocabulary and identify salient features								2								
LA.4.1.6.5 - relate new vocabulary to familiar words....				1		1										
LA.4.1.6.6 - identify “shades of meaning” in related words (e.g., blaring, loud)....				1												
LA.3.1.6.7 – The student will use meaning of familiar base words and affixes (prefixes and suffixes) to determine meanings of unfamiliar complex words, ...		1				1										
LA.3.1.6.8 - The student will use knowledge of antonyms, synonyms, homophones, and homographs to determine meanings of words		1														
LA.3.1.6.10 - The student will determine meanings of unfamiliar words by using a dictionary, thesaurus, and digital tools....		1				1										
Standard 2: Reading Comprehension - The student uses a variety of strategies to comprehend grade level text.	3	1	3	2	3	1	3	0	3	2	3	0	3	2	4	2
LA.3.1.7.2 - The student will identify the author’s purpose (e.g., to inform, entertain, or explain) in text and how an author’s perspective influences text				1						1				2		1

	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8		Grade 9		Grade 10	
	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT
LA.3.1.7.3 - determine explicit ideas and information in grade-level text, including but not limited to main idea, relevant supporting details, strongly implied message and inference, and chronological order of events		1				1										
LA.3.1.7.5 - The student will identify the text structure an author uses (e.g., comparison/contrast, cause/effect, and sequence of events) and explain how it impacts meaning in text....				1						1						
LA.3.1.7.7 - The student will compare and contrast topics, settings, characters, and problems in two texts																1
Strand 2 Literary Analysis:																
Standard 1: Fiction – The student identifies, analyzes, and applies knowledge of the elements of a variety of fiction and literary texts to develop a thoughtful response to a literary selection.	3	1	3	0	3	1	3	2	3	0	3	2	3	0	3	2
LA.4.2.1.2 - identify and explain the elements of plot structure, including exposition, setting, character development, problem/resolution, and theme in a variety of fiction;								2				2				
LA.910.2.1.5- describe, discuss, and analyze an author’s use of literary elements (i.e., theme, point of view, characterization, setting, plot), and explain and analyze different elements of figurative language (i.e., simile, metaphor, personification, hyperbole, symbolism, allusion, imagery) in multiple literary selections...																2
LA.3.2.1.6 - The student will write a book report or review that identifies the main idea, character(s), setting, sequence of events, and problem/solution;		1				1										

	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8		Grade 9		Grade 10	
	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT
Standard 2: Non-Fiction- The student identifies, analyzes, and applies knowledge of the elements of a variety of non-fiction, informational, and expository texts to demonstrate an understanding of the information presented.	3	0	3	1	3	0	3	1	3	2	3	2	3	2	3	0
LA.3.2.2.2 - The student will use information from the text to answer questions related to explicitly stated main ideas or relevant details												1		2		
LA.3.2.2.3 - The student will organize information to show an understanding of main ideas within a text through charting, mapping, or summarizing				1			1		2		1					
Strand 3 Grades 9–10: Information and Media Literacy																
Standard: 910.6 The student uses a systematic process for the collection, processing and presentation of information.															2	1
LA.910.6.2.2 - organize, synthesize analyze and evaluate the validity and reliability of information from multiple sources (including primary and secondary sources) to draw conclusions using a variety of techniques, and correctly use standardized citations;																1
LA.910.6.2.3 - write an informational report that integrates information and makes distinctions between the relative value and significance of specific data, facts, and ideas;																

Passage Specifications

Passage Topics follow the general specifications provided in the FCAT Reading Test Item and Performance Task Specifications. All passages are written specifically for this test. They are engaging and high quality, free from bias and stereotyping, age-appropriate for the students, present different points of view, and I include universal themes. The passages also bring a range of diversity to the test, reflecting the variety of interests and backgrounds that make up Florida’s student population. For example, characters have names that reflect the diverse populations of Haitian-Creoles and Hispanics. Informational passages provide accurate, fact-checked information. And, importantly, the passages meet the needs of the Sunshine State Standards.

“Familiar stories” is a phrase used in the Access Points. Since the passages are being written for the test, the passages are about topics that are familiar to students at specific grade levels. For students in the elementary grades, the topics relate to family or school life and opportunities students generally have in school. For students at the middle school grades, topics are also familiar but expand to more school-wide opportunities, outside the classroom. Students at the high school grades see passages related to family, school and work transitions. Passages are age-appropriate.

The balance of Literary to Informational Texts varies from grade to grade following this chart from page 3 of the FCAT Reading Test Item and Performance Task Specifications.

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

Passage forms follow the specifications from page 4 of the FCAT Reading Test Item and Performance Task Specifications.

Forms of Informational Text	Forms of Literary Text
Subject-area text (e.g., science, history) Magazine and newspaper articles Diaries Editorials Informational essays Biographies and autobiographies Primary Sources (e.g., Bill of Rights) Consumer Materials How-to articles Advertisements Tables and graphical presentations of text (e.g., illustrations, photographs, and captions)	Short stories Literary essays (e.g., critiques, personal narratives) Excerpts Poems Historical fiction Fables and folk tales Plays

Graphics, both for passages and item responses, are black and white line drawings, with grayscale limited to use only as needed by an item. For example, a student has on a cast, the cast is shaded to stand out.

Passages include one graphic that sets the scene/event of the story. The graphic is the main idea/essence of the passage. The graphic leaves out all extraneous information.

Passage length varies from the specifications for general education tests. Because of the needs of this particular population, the number of words in the passages is about 50% less than the lowest range at a particular grade level. For example, at grade 3 the range of number of words is 100 -700 for the general education population. For this test, the range is 50 -75 for grade 3.

Grade	Range of Number of Words
3	50-75
4	50-75
5	100-150
6	100-150
7	150-200
8	150-200
9	150-200
10	150-200

Passage Readabilities vary by grade level. The readability for each grade level test does not exceed 3 grade levels below the tested grade, with the exception that grade 10 does not exceed a grade 6 readability. For grades 3, 4, and 5, the readabilities are determined using the Spache Scale. For grades 6 through high school, the readabilities are determined by using Powers. Because we recognize that no

readability formula is perfect, we rely on the Review Committee of Practitioners to help make the passages appropriate for the student population and yet to make the test an experience that measures what a student knows and is able to do.

Grade	Readability Not to Exceed/Range
3	0.5
4	1
5	1-2
6	2-3
7	3-4
8	4 - 4.5
9	4.6 - 4.8
10	5 - 6

Passages are written so that the first paragraph can stand on its own. Participatory items are developed from this first paragraph. It is important that items at this level can be answered directly from the information in the paragraph read to the student.

Fluency Strand items have the following specifications:

- letter and word recognition at grades 3-5,
- the student reading 1 to 2 sentences at the supported level in grades 6 – 10,
- the student reading a short (3 to 4 sentence) paragraph at the independent level in grades 6-8, and
- the student reading one long or two short paragraphs at the independent level in grades 9 and 10.

Writing

Design

The writing design consists of two strands that are measured by the items in the test. In addition, at grades 8 and 10 two standards for each of the two strands are identified for assessment. At grade 4 three standards are assessed for the first strand and one standard for the second strand. Each standard consists of one to five items for a total of sixteen common writing items.

Blueprint

In developing the test blueprint for Writing, Measured Progress examined the same documents listed for reading and tried to follow the same methodology. We found the LA.3.5 standard (The student will write a final product for the intended audience) identified as an alternate in the Crosswalk documents at all grade levels. We know that students taking this test widely use application to learn, so writing applications would be consistent with their learning styles. Table 5a in the FCAT Summary of Tests and Design (September 2005) lists the modes for prompts for the writing portion of the test: narrative, expository, and persuasive. Finally, we found that the Philosophy for FCAT Writing + Assessment (2005) states, “The Best way to test student writing is to have students write.”

Therefore, we have included the Writing Application Strand for this test. A final product is specified in the Strand, Writing Applications. Therefore, in addition to the Writing Process Strand, we are including Writing Applications and focusing on narrative writing at grade 4 because this corresponds with general education student instructional learning at that grade level. In grade 8 we turn the focus to expository/ informational writing. For grade 10, the focus is on expository/persuasive writing.

Grade	Narrative Writing to tell a story	Expository Writing to explain	Persuasive Writing to convince
4	x		
8	x	x	x
10	x	x	x

This means that for writing, overall, there are two strands assessed, Writing Process and Writing Applications, each with two standards. All grade levels are tested in Standard 4, Editing for Language Conventions. Writing Process Standards are tested at all levels, but the specific standard varies. Standard 1, Pre-Writing is not tested. It could be, but the FCAT emphasizes Drafting at grade 4 and Revising at grade 8. It makes sense to test Revising at Grade 10 also, rather than Prewriting. Writing Applications is tested at all levels, but the specific standard varies.

Grades 8 and 10 include open response items, where the student is not supplied with response cards. The focus of these writing items is on real-life application contexts, such as filling out a job application.

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Strand 1 Writing Process:	Grade 4		Grade 8		Grade 10	
	Com	FT	Com	FT	Com	FT
Standard 2: 4.3.2 Drafting – The student will write a draft appropriate to the topic, audience, and purpose.	5	3				
LA.4.3.2.1 - using a pre-writing plan to focus on the main idea with ample development of supporting details that shows an understanding of facts and/or opinions						
LA.910.3.2.2 - establishing a logical organizational pattern with supporting details that are substantial, specific, and relevant	2					
LA.4.3.2.3 - creating interesting leads through the use of quotations, questions, or descriptions						
Standard 3: 8.3.3 Revising -The student will revise and refine the draft for clarity and effectiveness.			4	1	5	2
LA.8.3.3.1 - evaluating the draft for development of ideas and content, logical organization, voice, point of view, word choice, and sentence variation	1					2
LA.8.3.3.2 - creating clarity and logic by maintaining central theme, idea, or unifying point and developing relationships among ideas				1		
LA.910.3.3.4 - applying appropriate tools or strategies to evaluate and refine the draft (e.g., peer review, checklists, rubrics).						

Strand 1 Writing Process:	Grade 4		Grade 8		Grade 10	
	Com	FT	Com	FT	Com	FT
Standard 4: 4.3.4 Editing for Language Conventions - The student will edit and correct the draft for the standard language conventions.	5	3	4	3	4	2
LA.4.3.4.1 - spelling, using spelling rules, orthographic patterns, and generalizations (e.g., r-controlled, diphthong, consonant digraphs, vowel digraphs, silent e, plural for words ending in -y, doubling final consonant, i before e, irregular plurals, CVC words, CCVC words, CVCC words, affixes) and using a dictionary, thesaurus, or other resources as necessary; words used as names (e.g., Uncle Jim, Mom, Dad, Jr.)	1				1	
LA.4.3.4.2 - capitalization for proper nouns, including titles used with someone's name, initials....				1		
LA.4.3.4.3 - punctuation, including end punctuation, apostrophes, commas, colons, quotation marks in dialogue, and apostrophes in singular possessives						1
LA.4.3.4.4 - present and past verb tense, noun-pronoun agreement, noun-verb agreement, subjective and objective pronouns, demonstrative pronouns and conjunctions;	2			2		
LA.4.3.4.5 - subject/verb and noun/pronoun agreement in simple and compound sentences						
Standard: 4.3.5 Publishing - The student will write a final product for the intended audience.	1	0				
LA.4.3.5.1 - prepare writing using technology in a format appropriate to audience and purpose (e.g., manuscript, multimedia)....						

Strand 2 Writing Applications:	Grade 4		Grade 8		Grade 10	
	Com	FT	Com	FT	Com	FT
Standard: 4.4.1 Creative - The student develops and demonstrates creative writing.	5	3	4	2	3	2
L.A. 4.4.1.1 - write narratives based on real or imagined ideas, events, or observations that include characters, setting, plot, sensory details, a logical sequence of events, and a context to enable the reader to imagine the world of the event or experience						
Standard: 4.4.2 Informational -The student develops and demonstrates technical writing that provides information related to real-world tasks.	2		2	2	2	2
LA.4.4.2.1 - write in a variety of informational/expository forms (e.g., summaries, procedures, recipes, instructions, graphs/tables, experiments, rubrics, how-to manuals)....						
LA.4.4.2.2 - record information (e.g., observations, notes, lists, charts, map labels, legends) related to a topic, including visual aids as appropriate						
LA.4.4.2.3 - write informational/expository essays that contain introductory, body, and concluding paragraphs						
LA.910.4.2.4 - write a business letter and/or memo that presents information purposefully and succinctly to meet the needs of the intended audience following a conventional format (e.g., block, modified block, memo, email);			1			
LA.910.4.2.5 - write detailed travel directions and design an accompanying graphic using the cardinal and ordinal directions, landmarks, streets and highways, and distances;...			1			
LA.910.4.2.6 - write a work-related document (e.g., application, resume, meeting minutes, memo, cover letter, letter of application, speaker introduction, letter of recommendation)....					1	

(The grade level number in the benchmark shows the grade level at which the benchmark is first tested; the benchmark may expand at higher grade levels; hence the ellipses. Numbers indicate how many item sets will be written at each grade level for each benchmark 1

Mathematics

Design

The mathematics design consists of 2 to 8 items from each of the three “Big Ideas” and 4 to 6 items from “Supporting Ideas” for grades 3-8 for a total of 16 items assessed. In grades 9 and 10 four Secondary Bodies of Knowledge are assessed at each grade, with 2 to 6 items per Body of Knowledge for a total of 16 items.

Blueprint

Grades 3 through 8

For each of grades 3 through 8, the state’s Mathematics Standards contain three “Big Ideas” and three or more “Supporting Ideas.” The “Big Ideas” are sufficiently few in number and sufficiently broad in scope that is feasible to have a special education curriculum that encompasses all of them for each grade, based on the access points defined in the Mathematics Standards document.

As a result, the test blueprint is for each grade’s common assessment to contain:

- 2 to 8 items coded to each the three Big Ideas

- 4 to 6 items coded to the Supporting Idea

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	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT
Big Idea 1	5	2	4	2	4	3	4	2	4	1	4	2
MA_.A.01.01: Develop understandings of multiplication and division and strategies for basic multiplication facts and related division facts. Model multiplication and division including problems presented in context: repeated addition, multiplicative comparison, array, how many combinations, measurement, and partitioning.				1				1		1		1
MA_.A.01.02: Develop understandings of multiplication and division and strategies for basic multiplication facts and related division facts. Solve multiplication and division fact problems by using strategies that result from applying number properties.	1				2			1				1
MA_.A.01.03: Develop understandings of multiplication and division and strategies for basic multiplication facts and related division facts. Identify, describe, and apply division and multiplication as inverse operations.		1	1		1							
Big Idea 2	2	2	4	3	2	1	4	3	4	2	4	2
MA_.A.02.01: Develop an understanding of fractions and fraction equivalence. Represent fractions, including fractions greater than one, using area, set and linear models.		2						2				
MA_.A.02.02: Connect ratio and rates to multiplication and division. Interpret and compare ratios and rates.						1		1				
MA_.A.02.03: Develop an understanding of decimals, including the connection between fractions and decimals. Relate equivalent fractions and decimals with and without models, including locations on a number line.				1								
MA_.A.02.04: Develop an understanding of decimals, including the connection between fractions and decimals. Compare and order decimals, and estimate fraction and decimal amounts in real-world problems.				2								

	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT
MA_.G.02.01: Develop an understanding of and use formulas to determine surface areas and volumes of three-dimensional shapes. Justify and apply formulas for surface area and volume of pyramids, prisms, cylinders, and cones.										1		
MA_.G.02.02: Develop an understanding of and use formulas to determine surface areas and volumes of three-dimensional shapes. Use formulas to find surface areas and volume of three-dimensional composite shapes.										1		1
MA_.G.02.04: Analyze two- and three-dimensional figures by using distance and angle. Validate and apply Pythagorean Theorem to find distances in real world situations or between points in the coordinate plane.												1
Big Idea 3	5	4	4	1	4	2	4	1	4	2	2	1
MA_.G.03.01: Describe and analyze properties of two-dimensional shapes. Describe, analyze, compare and classify two-dimensional shapes using sides and angles – including acute, obtuse, and right angles – and connect these ideas to the definition of shapes.		1				1						
MA_.G.03.02: Describe and analyze properties of two-dimensional shapes. Compose, decompose, and transform polygons to make other polygons, including concave and convex polygons with three, four, five, six, eight, or ten sides.		1				1						
MA_.G.03.03: Describe and analyze properties of two-dimensional shapes. Build, draw and analyze two-dimensional shapes from several orientations in order to examine and apply congruence and symmetry.		2		1								
MA_.A.03.01: Write, interpret, and use mathematical expressions and equations. Write and evaluate mathematical expressions that correspond to given situations.								1		2		
MA_.A.03.04: Develop an understanding of operations on all rational numbers and solving linear equations. Use the properties of equality to represent an equation in a different way and to show that two equations are equivalent in a given context.												

	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT
MA_.A.03.06: Write, interpret, and use mathematical expressions and equations. Apply the Commutative, Associative, and Distributive Properties to show that two expressions are equivalent.												
MA_.S.03.01: Analyze and summarize data sets. Select, organize and construct appropriate data displays, including box and whisker plots, scatter plots, and lines of best fit to convey information and make conjectures about possible relationships.												1
MA_.S.03.02: Analyze and summarize data sets. Determine and describe how changes in data values impact measures of central tendency.												
Supporting Ideas	4	0	4	2	6	2	4	2	4	3	6	3
Supporting Ideas: Algebra												1
MA_.A.04.01: Create, analyze, and represent patterns and relationships using words, variables, tables and graphs.												1
MA_.A.04.02: Describe mathematics relationships using expressions, equations, and visual representations.												
Supporting Ideas: Number and Operations				1		1		1		1		1
MA_.A.05.01: Use equivalent forms of fractions, decimals, and percents to solve problems.												
MA_.A.05.02: Compare and order fractions, decimals, and percents, including finding their approximate location on a number line.								1		1		
MA_.A.06.01: Represent, compute, estimate and solve problems using numbers through hundred thousands.												
MA_.A.06.02: Solve non-routine problems by making a table, chart, or list and searching for patterns.						1						
MA_.A.06.04: Determine factors and multiples for specified whole numbers.				1								1
Supporting Ideas: Geometry and Measurement				1				1		1		1
MA_.G.04.01: Understand the concept of π , know common estimates of π (3.014; 22/7) and use these values to estimate and calculate the circumference and the area of circles.								1		1		

	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT	Com	FT
MA_.G.04.02: Find the perimeters and areas of composite two-dimensional figures, including non-rectangular figures (such as semicircles) using various strategies.												
MA_.G.05.01: Compare, contrast, and convert units of measure between different measurement systems (US customary or metric (SI)) and dimensions including temperature, area, volume, and derived units to solve problems.												1
MA_.G.05.02: Identify and describe the results of translations, reflections, and rotations of 45, 90, 180, 270, and 360 degrees, including figures with line and rotational symmetry.												
MA_.G.5.03: Tell time to the nearest minute and to the nearest quarter hour, and determine the amount of time elapsed.				1								
Supporting Ideas: Data Analysis						1						
MA_.S.06.01: Determine the measures of central tendency (mean, median, and mode) and variability (range) for a given set of data.												
MA_.S.06.02: Construct and analyze histograms, stem-and-leaf plots, and circle graphs.												
MA_.S.07.01: Construct and analyze line graphs and double bar graphs.						1						
Supporting Ideas: Probability										1		
MA_.P.07.01: Determine the outcome of an experiment and predict which events are likely or unlikely, and if the experiment is fair or unfair.										1		

The Content Standards are organized according to the following Secondary Bodies of Knowledge:

- Algebra
- Geometry
- Probability
- Statistics
- Finite Mathematics
- Financial Literacy

Each body of knowledge is organized by a number of standards, and for each standard there are a set of access points given.

The test design does presume an emphasis on Algebra and Geometry that is typical of the curriculum for these grades in most states, along with coverage of the four other bodies of knowledge.

Grade 9

- 6 items from the Algebra body of knowledge
- 4 items from the Geometry body of knowledge
- 4 items from the Financial Literacy of knowledge
- 2 items from the Finite mathematics body of knowledge

Grade 10

- 4 items from the Algebra body of knowledge
- 4 items from the Geometry body of knowledge
- 4 items from the Financial Literacy body of knowledge
- 2 items from the Probability body of knowledge
- 2 items from the Statistics body of knowledge

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	Grade 9		Grade 10	
	Com	FT	Com	FT
Algebra	6	3	4	2
Algebra A.1				
MA.912.A.01.01: Students expand and deepen their understanding of real and complex numbers by comparing expressions and performing arithmetic computations, especially those involving square roots and exponents. They use the properties of real numbers to simplify algebraic expressions and equations, and they convert between different measurement units using dimensional analysis. Know equivalent forms of real numbers (including integer exponents and radicals, percents, scientific notation, absolute value, rational numbers, irrational numbers).		1		
MA.912.A.01.04: Students expand and deepen their understanding of real and complex numbers by comparing expressions and performing arithmetic computations, especially those involving square roots and exponents. They use the properties of real numbers to simplify algebraic expressions and equations, and they convert between different measurement units using dimensional analysis. Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers, and irrational numbers) using multi-step and real-world problems.				
Algebra A.2				
MA.912.A.02.02: Students draw and interpret graphs of relations. They understand the notation and concept of a function, find domains and ranges, and link equations to functions. Interpret a graph representing a real-world situation.				
MA.912.A.02.03: Students draw and interpret graphs of relations. They understand the notation and concept of a function, find domains and ranges, and link equations to functions. Describe the concept of a function, use function notation, determine whether a given relation is a function, and link equations to functions.		1		
Algebra A.3				
MA.912.A.03.01: Students solve linear equations and inequalities. Solve linear equations in one variable that include simplifying algebraic expressions.				
MA.912.A.03.02: Students solve linear equations and inequalities. Identify and apply the distributive, associative, and commutative properties of real numbers and the properties of equality.		1		
MA.912.A.03.03: Students solve linear equations and inequalities. Solve literal equations for a specified variable.				
Algebra A.4				
MA.912.A.04.01: Students perform operations on polynomials. They find factors of polynomials, learning special techniques for factoring quadratics. They understand the relationships among the solutions of polynomial equations, the zeros of a polynomial function, the x-intercepts of a graph, and the factors of a polynomial. Add, subtract, and multiply polynomials.				
Algebra A.5				
MA.912.A.05.01: Students simplify rational expressions and solve rational equations using what they have learned about factoring polynomials. Simplify algebraic ratios.				1

	Grade 9		Grade 10	
	Com	FT	Com	FT
Algebra A.6				
MA.912.A.06.01: Students simplify and perform operations on radical expressions and equations. They also rationalize square root expressions and understand and use the concepts of negative and rational exponents. They add, subtract, multiply, divide, and simplify radical expressions and expressions with rational exponents. Students will solve radical equations and equations with terms that have rational exponents. Simplify radical expressions.				1
Algebra A.7				
MA.912.A.07.01: Students draw graphs of quadratic functions. They solve quadratic equations and solve these equations by factoring, completing the square and by using the quadratic formula. They also use graphing calculators to find approximate solutions of quadratic equations. Graph quadratic equations with and without graphing technology.				
MA.912.A.07.08: Students draw graphs of quadratic functions. They solve quadratic equations and solve these equations by factoring, completing the square and by using the quadratic formula. They also use graphing calculators to find approximate solutions of quadratic equations. Use quadratic equations to solve real-world problems.				
Algebra A.10				
MA.912.A.10.02: In a general sense, all of mathematics is problem solving. In all of their mathematics, students use problem-solving skills: they choose how to approach a problem, they explain their reasoning, and they check their results. Use a variety of problem-solving strategies, such as drawing a diagram, making a chart, guess- and-check, solving a simpler problem, writing an equation, working backwards, and create a table.				
Discrete Mathematics D.7	2	1		
MA.912.D.07.01: Students operate with sets and use set theory to solve problems. Perform set operations such as union and intersection, complement, and cross product.		1		
MA.912.D.07.02: Students operate with sets and use set theory to solve problems. Use Venn diagrams to explore relationships and patterns, and to make arguments about relationships between sets.				
Financial Literacy	4	4	4	2
Financial Literacy F.1				
MA.912.F.01.01: Explain the difference between simple and compound interest.		1		
MA.912.F.01.03: Demonstrate the relationship between simple interest and linear growth.				
Financial Literacy F.2				
MA.912.F.02.01: Calculate the future value of a given amount of money, with and without technology.				
MA.912.F.02.02: Calculate the present value of a certain amount of money for a given length of time in the future, with and without technology.				1
Financial Literacy F.3				
MA.912.F.03.01: Students are familiar with and can describe the advantages and disadvantages of short-term purchases, long-term purchases, and mortgages. Compare the advantages and disadvantages of using cash versus a credit card.		1		1
MA.912.F.03.03: Students are familiar with and can describe the advantages and disadvantages of short-term purchases, long-term purchases, and mortgages. Calculate the finance charges and total amount due on a credit card bill.				

	Grade 9		Grade 10	
	Com	FT	Com	FT
MA.912.F.03.04: Students are familiar with and can describe the advantages and disadvantages of short-term purchases, long-term purchases, and mortgages. Compare the advantages and disadvantages of deferred payments.		2		
Geometry	4	2	4	2
Geometry G.1				
MA.912.G.01.01: Students understand geometric concepts, applications, and their representations with coordinate systems. They find lengths and midpoints of line segments, slopes, parallel and perpendicular lines, and equations of lines. Using a compass and straightedge, patty paper, a drawing program or other techniques, students also construct lines and angles, explaining and justifying the processes they use. Find the lengths and midpoints of line segments in two-dimensional coordinate systems.				
MA.912.G.01.04: Students understand geometric concepts, applications, and their representations with coordinate systems. They find lengths and midpoints of line segments, slopes, parallel and perpendicular lines, and equations of lines. Using a compass and straightedge, patty paper, a drawing program or other techniques, students also construct lines and angles, explaining and justifying the processes they use. Use coordinate geometry to find slopes, parallel lines, perpendicular lines, and equations of lines.				
Geometry G.2				
MA.912.G.02.02: Students identify and describe polygons (triangles, quadrilaterals, pentagons, hexagons, etc.), using terms such as regular, convex, and concave. They find measures of angles, sides, perimeters, and areas of polygons, justifying their methods. They apply transformations to polygons. They relate geometry to algebra by using coordinate geometry to determine transformations. Students use algebraic reasoning to determine congruence, similarity, and symmetry. Students create and verify tessellations of the plane using polygons. Use properties of congruent and similar polygons to solve mathematical or real-world problems.		1		
MA.912.G.02.05: Students identify and describe polygons (triangles, quadrilaterals, pentagons, hexagons, etc.), using terms such as regular, convex, and concave. They find measures of angles, sides, perimeters, and areas of polygons, justifying their methods. They apply transformations to polygons. They relate geometry to algebra by using coordinate geometry to determine transformations. Students use algebraic reasoning to determine congruence, similarity, and symmetry. Students create and verify tessellations of the plane using polygons. Explain the derivation and apply formulas for perimeter and area of polygons (triangles, quadrilaterals, pentagons, etc.).				
Geometry G.3				
MA.912.G.03.01: Students classify and understand relationships among quadrilaterals (rectangle, parallelogram, kite, etc.). They relate geometry to algebra by using coordinate geometry to determine regularity, congruence, and similarity. They use properties of congruent and similar quadrilaterals to solve problems involving lengths and areas, and prove theorems involving quadrilaterals. Describe, classify, and compare relationships among quadrilaterals including the square, rectangle, rhombus, parallelogram, trapezoid, and kite.				

	Grade 9		Grade 10	
	Com	FT	Com	FT
Geometry G.4				
MA.912.G.04.01: Students identify and describe various kinds of triangles (right, acute, scalene, isosceles, etc.). They define and construct altitudes, medians, and bisectors, and triangles congruent to given triangles. They prove that triangles are congruent or similar and use properties of these triangles to solve problems involving lengths and areas. They relate geometry to algebra by using coordinate geometry to determine regularity, congruence, and similarity. They understand and apply the inequality theorems of triangles. Classify, construct, and describe triangles that are right, acute, obtuse, scalene, isosceles, equilateral, and equiangular.		1		
MA.912.G.04.02: Students identify and describe various kinds of triangles (right, acute, scalene, isosceles, etc.). They define and construct altitudes, medians, and bisectors, and triangles congruent to given triangles. They prove that triangles are congruent or similar and use properties of these triangles to solve problems involving lengths and areas. They relate geometry to algebra by using coordinate geometry to determine regularity, congruence, and similarity. They understand and apply the inequality theorems of triangles. Prove that triangles are congruent or similar and use the concept of corresponding parts of congruent triangles.				
Geometry G.5				
MA.912.G.05.02: Students apply the Pythagorean Theorem to solving problems, including those involving the altitudes of right triangles and triangles with special angle relationships. Students use special right triangles to solve problems using the properties of triangles. State and apply the relationships that exist when the altitude is drawn to the hypotenuse of a right triangle.				
Geometry G.6				
MA.912.G.06.02: Students define and understand ideas related to circles (radius, tangent, chord, etc.). They perform constructions and prove theorems related to circles. They find measures of arcs and angles related to them, as well as measures of circumference and area. They relate geometry to algebra by finding the equation of a circle in the coordinate plane. Define and identify: circumference, radius, diameter, arc, arc length, chord, secant, tangent and concentric circles.				1
MA.912.G.06.05: Students define and understand ideas related to circles (radius, tangent, chord, etc.). They perform constructions and prove theorems related to circles. They find measures of arcs and angles related to them, as well as measures of circumference and area. They relate geometry to algebra by finding the equation of a circle in the coordinate plane. Solve real-world problems using measures of circumference, arc length, and areas of circles and sectors.				
Geometry G.7				
MA.912.G.07.03: Students describe and make regular and nonregular polyhedra (cube, pyramid, tetrahedron, octahedron, etc.). They explore relationships among the faces, edges, and vertices of polyhedra. They describe sets of points on spheres, using terms such as great circle. They describe symmetries of solids and understand the properties of congruent and similar solids. Identify, sketch, and determine areas and/or perimeters of cross sections of three-dimensional solids.				1

	Grade 9		Grade 10	
	Com	FT	Com	FT
MA.912.G.07.05: Students describe and make regular and nonregular polyhedra (cube, pyramid, tetrahedron, octahedron, etc.). They explore relationships among the faces, edges, and vertices of polyhedra. They describe sets of points on spheres, using terms such as great circle. They describe symmetries of solids and understand the properties of congruent and similar solids. Explain and use formulas for lateral area, surface area, and volume of three-dimensional solids.				
Geometry G.8				
MA.912.G.08.02: In a general sense, mathematics is problem solving. In all mathematics, students use problem-solving skills: they choose how to approach a problem, they explain their reasoning, and they check their results. At this level, students apply these skills to making conjectures, using axioms and theorems, constructing logical arguments, and writing geometric proofs. They also learn about inductive and deductive reasoning and how to use counterexamples to show that a general statement is false. Use a variety of problem-solving strategies, such as drawing a diagram, making a chart, guess-and-check, solving a simpler problem, writing an equation, and working backwards.				
Probability			2	1
Probability P.1				
MA.912.P.01.02: Students understand the counting principle, permutations, and combinations and use them to solve problems. Use formulas for permutations and combinations to count outcomes and determine probabilities of events.				
Probability P.2				
MA.912.P.02.02: Students develop rules for finding probabilities of combined and complementary events. They understand and use conditional probability and the related Bayes' Theorem. Determine probabilities of independent events.				1
Statistics S.3			2	1
MA.912.S.03.01: Students learn to work with summary measures of sets of data, including measures of the center, spread, and strength of relationship between variables. Students learn to distinguish between different types of data and to select the appropriate visual form to present different types of data. Read and interpret data presented in various formats. Determine whether data is presented in appropriate format, and identify possible corrections. Formats to include: bar graphs, line graphs, stem and leaf plots, circle graphs, histograms, box and whiskers plots, scatter plots, cumulative frequency (ogive) graphs.				
MA.912.S.03.03: Students learn to work with summary measures of sets of data, including measures of the center, spread, and strength of relationship between variables. Students learn to distinguish between different types of data and to select the appropriate visual form to present different types of data. Calculate and interpret measures of the center of a set of data, including mean, median, and weighted mean, and use these measures to make comparisons among sets of data.				1
MA.912.S.03.05: Students learn to work with summary measures of sets of data, including measures of the center, spread, and strength of relationship between variables. Students learn to distinguish between different types of data and to select the appropriate visual form to present different types of data. Calculate and interpret the range and quartiles of a set of data.				

Science

Design

The Science design consists of the four Bodies of Knowledge. Each of the Bodies of Knowledge assesses 3 to 7 items. The assessment consists of a total of 16 common items.

Blueprint

In developing the test blueprint for science, several documents were examined:

Alternate Assessment in Science for Students with Disabilities
Sunshine State Standards with Access Points

The content assessed in alternate assessment should generally reflect the same areas assessed by the FCAT: nature of science, earth and space science, physical science and life science.

In order to meet the above criteria, the blueprint distributes the assessment items across the four science Bodies of Knowledge covered in FCAT. Items will focus on the science content assessed by the FCAT at each grade level based upon the Big Ideas that are addressed.

Therefore, the Science Blueprint chart involves:

1. Distribution of major science Bodies of Knowledge across each grade level.
2. Assessment of the majority of Big Ideas that are addressed at each of the grade levels.

An emphasis was placed on the Bodies of Knowledge at each grade level based upon looking at the Big Ideas to see the range and quantity of benchmarks addressed and the range and quantity of Access Points addressed. The Access Points were then reviewed to see if they are broad or narrow and if the topics within them can support more items and seem more relevant for this population of students. Special attention was paid to the Participatory Level Access Points as these can be very few and narrow, very few and broad, or many. Based on the review of the Access Points not all Big Ideas that are addressed at each grade level for instruction will be assessed at each grade level. However, all of the Big Ideas are assessed at least once throughout a student's school years.

Grade 5:

- Only 2 of the 4 Big Ideas in Nature of Science are addressed leading to less emphasis and the recommendation for 3 items. The Big Idea: The Practice of Science is the constant across all grade levels for assessment.
- Five Big Ideas in Physical Science are addressed leading to more emphasis. Three of the 5 Big Ideas are assessed at this grade level for a total of 5 items.
- Life Science and Earth and Space Science remain at 4 items each.

Grade 8:

- This grade has the most limiting number of Big Ideas addressed overall.
- The 4 Big Ideas in Nature of Science are addressed. Two of the 4 Big Ideas are assessed at this grade level for a total of 3 items. The Big Idea: The Practice of Science is the constant across all grade levels for assessment.
- Physical Science addresses 2 Big Ideas which is more emphasis than Earth and Space Science and Life Science, therefore the recommendation of 7 items for assessment.
- Earth and Space Science and Life Science have fewer Access Points to address for a recommendation of 3 items each for assessment.

Grade 11:

- The four Big Ideas in Nature of Science are addressed. Two of the four Big Ideas are assessed at this grade level for a total of 3 items. The Big Idea: The Practice of Science is the constant across all grade levels for assessment.
- Life Science addresses 5 Big Ideas leading to more emphasis. Three of the 5 Big Ideas are assessed at this grade level for a total of 6 items.
- Physical Science and Earth and Space Science each address 3 Big Ideas. Two of the 3 Big Ideas are assessed in each of the Bodies of Knowledge, with a recommendation of 4 items in Physical Science and 3 items in Earth and Space Science.

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	Grade 5		Grade 8		Grade 11	
	Common	FT	Common	FT	Common	FT
Body of Knowledge: Nature of Science	3	0	3	3	3	1
Big Idea 1: The Practice of Science	2		1	1	2	
Big Idea 2: The Characteristics of Scientific Knowledge	1					
Big Idea 3: The Role of Theories, Laws, Hypotheses, and Models					1	1
Big Idea 4: Science and Society			2	2		
Body of Knowledge: Earth and Space Science	4	2	3	1	3	2
Big Idea 5: Earth in Space and Time			3	1		
Big Idea 6: Earth Structure					1	1
Big Idea 7: Earth Systems and Patterns	4	2			2	1
Body of Knowledge: Physical Science	6	4	7	2	4	1
Big Idea 8: Properties of Matter			5	2		
Big Idea 9: Changes in Matter			2			
Big Idea 10: Forms of Energy	3	2			2	1
Big Idea 11: Energy Transfer and Transformations	1					
Big Idea 12: Motion of Objects					2	
Big Idea 13: Forces and changes in Motion	2	2				
Body of Knowledge: Life Science	4	2	3	2	6	4
Big Idea 14: Organization and Development of Living Organisms	3	1			2	2
Big Idea 15: Diversity and Evolution of Living Organisms					2	1
Big Idea 16: Heredity and Reproduction					2	1
Big Idea 17: Interdependence	1	1				
Big Idea 18: Matter and Energy Transformations			3	2		

Overall Item Specifications

Items should clearly address the concept and/or skill described in the access points for each level. To the extent possible, the tasks for each of the access points within a given item should be related, i.e., the task for the independent access point should assess the same concept and/or skill as the task for the participatory level, but at a higher level of cognitive demand. This is also true from grade level to grade level test.

Where not otherwise specified in the standard being assessed, numbers and other elements of items should be kept as simple as possible.

To the extent possible, items should involve situations or contexts that can be expected to be familiar to most students and that are age-appropriate. In particular, items for the secondary grades should involve situations, contexts, and objects that are of interest to older students, that are as concrete as possible and that relate to real life activities.

Items will be developed with real world contexts in mind. Items will be kept at as concrete a level as possible.

Distracters

Where students are asked to select a single choice from a set of options, there should be at most three options provided. On occasion, however, for example in an item that asks a student to recognize examples and non-examples of a given concept, students may be given up to six options and asked to address each one. (e.g., show six different shapes and ask student to identify all the ones that are squares)

For Reading the response items do not have to match the passage exactly. At the supported level item responses may come directly from the passage, but at the independent level they should not come directly from the passage this ensures increased complexity.

The naming of the materials (distracters) is especially important. It is important to look at both the way the question is phrased and how the materials are labeled so that the answer is not given away. For example “Who is Mrs. Smith?” and materials list Mrs. Smith, instead ask “Who was the story about?” or use an action “Who bought a puppy?” and then the material label of Mrs. Smith works.

At all Access Point levels of complexity (participatory, supported and independent), students may respond with the mode of communication that the student most commonly uses, such as yes/no cards, picture cards, word cards, sentence strips, verbal or written responses, eye gaze, assistive technology, and/or signing. Typically, response options will be provided in a three selection format for the student to choose from.

- Participatory Level Access Points – Materials provided for response for new development will primarily be word/picture cards, and number cards. If the

Access Point indicates “words paired with pictures”, word picture cards will definitely be provided. The two incorrect options will not relate to the item stimulus. This “not related to the item stimulus” will be a mix of items where the incorrect responses are not at all related (cat, pencil, cup- cat being correct response) and incorrect responses that are within the same larger category (cat, dog, horse- cat being correct).

- Supported Level Access Points – Materials provided for response for new development will primarily be picture cards, word/picture cards, sentence/picture strips and number cards. Pictures will not be on response cards/strips where the Access Point requires the student to read. At least one of the two incorrect options will relate to the item stimulus.
- Independent Level Access Points – Materials provided for response for new development will primarily be picture cards, word/picture cards, sentence/picture strips, and number cards. Pictures will not be on response cards/strips where the Access Point requires the student to read. Both of the incorrect options will relate to the item stimulus. In writing, there may also be open ended questions where the student will be expected to independently provide a response

Graphics

Graphics should be consistent within a stimulus set or within a response set. If there are 2 stimulus cards they will both be PECs or both be line art.

Graphics, whenever possible, will be PECs symbols when suitable at grades 3-5, a mix of PECs (especially at the participatory level) and line art at grades 6-8, and only line art at grades 9-11.

- PECs symbols will not be customized. They shall remain as they appear in the Mayer-Johnson library.
- PECs symbols may be with or without hair. All responses to an item level will be consistently one or the other.

Line art, both for passages and item responses will be black and white drawings using a heavy weight line (2-2.5 point). Grayscale will be used only if necessary. For example, in a glass or pitcher showing a liquid, the liquid will be shaded.

Graphics will focus in on the essence of the idea and leave out extraneous information.

Graphics, whenever possible, should be of pictures of objects that can be easily replaced by the real objects. These objects need to be easily accessible in a school setting. Graphics of objects that may be replaced by the real object need to be small enough to fit on a desk space and to remain stable (not rolling around).

Graphics should avoid foods or dangerous objects as much as possible.

Graphics should use the entire space provided on a card or strip to be as large as possible.

All coin graphics will show coins at actual size.

All graphics including bills need to depict the bills as large as possible.

Clock graphics will include minute marks only if the item requires them (8:17, 4:12).

All default emotions of characters will be happy, unless the item or passage specifies otherwise.

Graphics of objects will be as “real” as possible and will not be interpretive. At grades 3-5 it may be appropriate for graphics to be somewhat cartoon-like or PECs-like (suns, clouds, raindrops), but starting at grade 6 the graphics need to be more realistic.

Graphics that include bodies will provide appropriate context to detail. For example, if an ear is the object a whole head will be drawn with an arrow pointing to the ear; if a leg is required a whole body will be drawn with an arrow pointing to the leg.

A graphics library will be created with graphics that are available to developers, but developers may ask for graphics that do not exist in the library.

All charts, graphs and words or numbers in a graphic will be a minimum of 18 point font.

All tables and charts must have titles and keys as appropriate. All keys should be placed so that they stand out.

All counting objects for item graphics will avoid complex graphics. For example a pattern of circle, square, triangle is more appropriate than a car, dog, horse pattern.

Reading to the Student

Passages will be read aloud to the student unless otherwise indicated in the item.

All charts and graphs will be read to the student. If there is a key with the chart or graph it will also be read to the student.

At all Access Points, word cards and sentence strips will be read to the student. When cards /strips are not to read to the student (Fluency items) the item clearly states this.

All passages will be a minimum of 18 point font.

Item Terminology

To determine whether a word is appropriate to use in an item, a variety of sources will be used: Dolch Basic Sight Word List, Revised Dolch List, the work of Chall and Popp described in *Teaching and Assessing Phonics: Why, What, When, How* (Educators Publishing Service, Inc. 1996), *EDL Core Vocabularies in Reading, Mathematics, Science, and Social Studies*, (Steck-Vaughn Company, 1989), and *The Living Word* by Dale and O'Rourke (World Book-Childcraft International, Inc., 1981). Again, we will rely on the Review Committee of Practitioners to help make the word choices appropriate for the student population and make the test an experience that measures what a student knows and is able to do.

All items will be written as simply as possible, avoiding wordiness.

Simple content terminology will be used in grades 3-5 and at the participatory level at all grades, with more accurate content terminology usage at grades 6-11. For example in grades 3-5 the question may be "What is the story mostly about?" and at grades 6-11 the question will be "What is the main idea?"

It is important to keep in mind that it is the concept that is being assessed not the vocabulary in most instances.

When identifying in the teacher scripting that there are three pictures in the item, when all three items represent the same conceptual entity the identifying of the three pictures should be more specific. For example, "Here are three angles, shapes, animals." So long as this specificity does not give away the answer to the item.

Stimulus cards may be identified in the item teacher scripting. For example, "Here is a girl." vs. "Here is a picture" As long as identifying the picture does not give away the answer to the item.

Teacher Gathered Materials

All students will have calculators, number lines and counting blocks available to them for all math items as determined by the teacher. Items should only list any of these tools as teacher gathered materials if the Access Point is assessing their use. If this is the case the item needs to indicate their use to the student and the Student Will portion should indicate the use as part of a correct response.

Items may presume the use of some readily available classroom materials, such as counters. However, most items should include all necessary materials, e.g., shapes. and other manipulatives (e.g., picture cards) will be provided as graphics on regular paper.

Items will refrain from referring to the color of objects, mathematics items can refer to shapes that can be readily felt instead.

Mathematics

Mathematics items will always include definitions of terminology and formulas as needed. For example an item will not ask "Which one is the isosceles triangle?" Rather it will ask

“Which triangle is isosceles – two of the three sides are the same length?” or “Which triangle has two of the three sides the same length?”

There should be a mix of items in mathematics, some with context and some without context. It is important not to introduce context into an item that is confusing or too language heavy.

All numbers that are 4 digits or longer will include commas.

Mathematics computation items should be presented as a mix of horizontal and vertical items.

Other

Other item specifications will follow two sets of guidelines:

1. Those described in the FCAT Reading, Writing, Mathematics and Science Test Item and Performance Task Specifications.
2. Item-writing guidelines typically followed by Measured Progress.
 - a. Aligned to the particular standard and appropriate level of difficulty,
 - b. Items and tasks are clear, concise and easy to read.
 - c. Having one and only one answer for multiple choice,
 - d. Irrelevant clues to the correct answer are avoided.
 - e. Most items will be positively worded.
 - f. Distracters will have similar length.
 - g. All options will be similar in grammatical structure and form.
 - h. Item context will avoid any cultural, racial, or gender bias.
 - i. Items will follow the principles of Universal Design