Focusing Commitment to Achieve Target (FCAT) Comprehensive Action Plan 2009-2010

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“Every school has leadership that results in improved student performance—and leadership begins with an effective school principal”

SREB Challenge to Lead Goal

From “Schools Need Good Leaders Now”
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Strategic Planning for Assignment of Students
CREATING A MASTER SCHEDULE THAT ADDRESSES STUDENT NEEDS

Recommendations for Master Schedule Development

Elementary

GENERAL

- Identify members of master schedule team
- Follow all requirements of the Student Progression Plan (SPP).
- Schedule students with similar academic needs based on current student data
- Plan for interventions through the master schedule
- Prioritize and rotate common planning so that one grade level will not have the same time each year
- Departmentalize grades 2/3-5 when feasible using either a 2 or 3 way model based on teacher allocations per grade
- Integrate Special Education and ESOL personnel in the school-wide scheduling process at the onset
- Reschedule students based on the results of the FCAT and CELLA to provide proper support and grade level placement
- Consider Tier 1, 2 and 3 students in the teacher assignments when developing the master schedule
- Address imbalances created by summer registrations, withdrawals, and testing results to avoid need for leveling once school starts
- Adjust teacher schedules as teachers transfer or resign since students may need to be rescheduled because of changes
- Develop master schedule timeline and assign tasks.
- Match teacher certification with course certification requirements in order to minimize teachers out of field
- Verify Highly Qualified status

SPECIAL EDUCATION (SPED)

- Assess and review IEP’s and 504 plans in order to address individual student needs
- Identify the subject and support needs of students (consultative, support facilitation, co-teaching
- Summarize support resources for school to determine if you have enough teacher resources to provide the indicated support
- Adjust support to comply with the IEP’s and 504 plans
- Check sections/periods/grade levels to determine support assignments
- Ensure compliance with Individuals with Disabilities (IDEA) through the provision of 504 and IEP-driven support and scheduling

ELEMENTARY LANGUAGE ARTS

- Elementary schools must schedule a 90-minute uninterrupted block of reading/language arts instruction
The reading intervention time should appear as a scheduled block of time in addition to the 90-minute uninterrupted block of reading/language arts instruction:

- Students who score at Level 1 and 2 on FCAT, High Risk on DIBELS, and/or Tier 2 (students in any grade who have been retained once), require 30 minutes intervention
- Students who are Tier 3 (students in 3rd grade who have been retained more than once) require 60 minutes of intervention
- ELL students who have been in the program for less than two years are an exception. These students will receive 150 minutes of Home Language Arts instruction weekly, which represents the comparable time required for interventions
- The ELL committee must convene to make recommendation regarding the more appropriate intervention for all other ELL students who are Tier 1, 2 or 3

**ESOL**
- ELL students in ESOL levels 3 and 4 receive English instruction mainstreamed in the regular class with an appropriately certified/endorsed teacher
- ELL students in ESOL Levels 1 and 2 receive sheltered English instruction through either a self-contained classroom, or an ESOL resource teacher (pull-out)
- Language Arts instruction, if delivered by the ESOL Resource Teacher, must be scheduled to provide 90 minutes of consecutive, uninterrupted daily block
- ELL students in ESOL Levels 1 and 2 must be clustered in a limited number of sections to facilitate the delivery of ESOL, CCHL, and Home Language Arts instruction

**CURRICULUM CONTENT IN THE HOME LANGUAGE (CCHL)**
- A minimum of 45 minutes of daily instruction is required for ESOL Levels I and II students. This is scheduled as either a pull-out or inclusion model. A pull-out model must comply with SPP requirements, e.g., CCHL math must be for 60 minutes, of consecutive uninterrupted daily instruction

**HOME LANGUAGE ARTS (Spanish-S or Haitian-Creole)**
- 150 minutes weekly or the equivalent biweekly of instruction is required for ELL students, unless recommended otherwise by ELL committee

**WORLD LANGUAGES**
- 150 minutes weekly or the equivalent biweekly of instruction is recommended. 60 minutes twice-a-week, plus 30 minutes on a third day, 50 minutes three times a week. Consider scheduling in such a way so as to allow common planning time for classroom teachers
- Students who are required to receive reading interventions may not be able to participate in World language instruction since instruction must be continuous
throughout the year and should not be suspended for prolonged periods. Program numbers should reflect the correct schedule for the entire school year.

**DUAL LANGUAGE PROGRAMS (BISO & EFL)**
- Allow the languages instructional time to be allocated as follows:
  - English Reading/LA and writing → 90 consecutive minutes of uninterrupted daily instruction
  - World Languages → 60 consecutive minutes of uninterrupted daily instruction

**ELEMENTARY GIFTED**
- Elementary schools with 20 gifted students per grade level (+/- depending on class size) or combination grade levels (no more than 2 consecutive grade levels should be combined) should implement the **self-contained full-time model**. In this model, students are served in a self-contained classroom in which gifted strategies are utilized throughout the school day and across all subject areas. All of the students in the gifted course are eligible for gifted services and the teacher is endorsed to teach gifted or on an approved waiver to complete the gifted endorsement.
- Elementary schools implementing a **pull-out Content Model** where students attend the gifted program for part of the day and are in general education classes the other part of the day need to pay special attention to the gifted program schedule. Gifted schedules should be coordinated so that gifted instruction in a given subject area (Reading, Language Arts, Mathematics, Science, and/or Social Studies) occurs at the same time that the specific subject area is being taught in the general education classroom. For example, gifted children should not be pulled out of the regular classroom for gifted language arts during mathematics instruction in the general classroom.

**ELEMENTARY TEACHING ENRICHMENT ACTIVITIES TO MINORITIES (TEAM)**
- Students who are eligible for the gifted program or the Academic Excellence Program do not participate in the TEAM program, since these students are already receiving services for advanced learners.

**ELEMENTARY ACADEMIC EXCELLENCE PROGRAM (AEP)**
- Students who are eligible for the gifted program or the TEAM Program do not participate in the AEP program, since these students are already receiving services for advanced learners.

**MATHEMATICS**
- In grades K-5/6, 60 minutes of consecutive, uninterrupted, daily instruction in mathematics is required.
• Review student's educational progress. Students not meeting district or state performance levels in mathematics must be monitored for progress following the procedures delineated in the school-wide PMP. Additional information of student performance standards with respect to assessment, evaluation, and monitoring of student progress can be found in the Student Progression Plan
• Departmentalization in elementary schools (especially in grades 3, 4, and 5) allows for flexibility of the programs. If such schedule option is used, select teachers to teach mathematics that possess strong mathematics content background or have the ability to effectively adapt information learned at professional development during the mathematics instructional time

SCIENCE
K-2
• In grades K-2, 100 minutes a week of consecutive, uninterrupted, daily instruction in science is required
• There is no subject-specific science certification required to teach science.
3-5
• In grades 3-5, 150 minutes a week of consecutive, uninterrupted, daily instruction in science is required.
• Departmentalize by mathematics and science teacher expertise with a classroom rotational schedule
• Certification requirements are not specific to science however it is highly recommended that teachers who teach science, in a departmentalized model become certified in General Science

SOCIAL STUDIES
• In grades K-1, 90 minutes per week of social studies instruction is required
• In grades 2-5/6, 150 minutes of social studies instruction is required
• Departmentalization in elementary schools better ensures adequate instructional time and content coverage for social studies, especially in grades 3, 4, and 5. If this schedule option is used, teachers that possess strong social studies content backgrounds should be selected to teach the subject

ART
• In grades K-1, 40 minutes per week of art instruction provided by a teacher is required
• In grades 2-5/6, 60 minutes of art instruction provided by the art teacher is required per week

MUSIC
• In grades K-1, 40 minutes per week of music instruction provided by a teacher is required
• In grades 2-5/6, 60 minutes of music instruction provided by the music teacher is required per week
PHYSICAL EDUCATION
- In grades K-1, 150 minutes of weekly instruction in physical education provided by a teacher is required
- In grades 2-5/6, 150 minutes of weekly instruction in physical education provided by a physical education teacher is required

RECESS
- In grades Pre-K through grade 5, 20 minutes twice per week or 15 minutes three times per week of recess is required

Recommendations for Master Schedule Development
Middle School
GENERAL
- Identify members of master schedule team
- Identify “non-negotiables,” e.g., common planning, scheduling students into teams, teachers assigned to teams, location of teams in building
- Follow all requirements of the Student Progression Plan (SPP)
- Provide common planning in core content areas and review needs for departmental, grade level and teams in the process
- Prioritize common planning based on tested subject areas
- Schedule students with similar academic needs based on current student data
- Schedule students in teams who share core academic teachers
- Plan for interventions through the master schedule
- Integrate Special Education and ESOL personnel in the school-wide scheduling process at the onset
- Reschedule students based on the results of the FCAT and CELLA to provide proper support and grade level placement
- Address imbalances created by summer registrations, withdrawals, and testing results to avoid need for leveling once school starts
- Adjust teacher schedules as teachers transfer or resign since students may need to be rescheduled because of changes
- Develop master schedule timeline and assign tasks
- One semester of Career Exploration and Decision Making is to be completed in the 7th grade (may be incorporated into other courses but proper course should be selected in course code directory as well as teachers should be trained)
- For students who enter MDCPS in the 8th grade the one semester of Career Exploration and Decision Making should be completed through the 8th grade U.S. History. A separate code using the appropriate course code should be designated
- Students in grades 7 and/or 8 who have failed language arts, math, science or social studies are eligible to retake the course in a modified time frame. Course may be offered through a computer based program, traditional classroom instruction or a combination
- Develop master schedule timeline and assign tasks
• Match teacher certification with course certification requirements in order to minimize teachers out of field
• Verify Highly Qualified status

SPECIAL EDUCATION (SPED)
• Assess and review IEP’s and 504 plans in order to address individual student needs
• Identify the subject and support needs of students (consultative, support facilitation, co-teaching)
• Summarize support needs in each subject by grade level. Example: grade 8, math: 15 students need support facilitation, 5 students need consultation
• Summarize support resources for school to determine if you have enough teacher resources to provide the indicated support
• Adjust support to comply with the IEP’s and 504 plans
• Check sections/periods/grade levels to determine support assignments
• Ensure compliance with Individuals with Disabilities (IDEA) through the provision of 504 and IEP-driven support and scheduling

GIFTED
• Schools with 22 or more students per grade level should offer Honors and/or gifted Advanced Placement courses in core subject areas and/or the gifted elective course
• Schools with fewer than 22 students per grade level should schedule students in a gifted elective course

ADVANCED and HONORS
• Advanced courses in Language Arts, Mathematics, Science and Social Studies should be scheduled for all grade levels
• Authorized High School courses should be included. Courses authorized to be offered include: Algebra 1, Algebra 1 Honors, Geometry, Geometry Honors, Computer Programming 1 and above, Foreign Language 1 and above, Spanish for Spanish Speakers 1 and above, Haitian Creole for Haitian Creole Speakers 1 and above, Language and Literature for International Studies 1, 2, 3, and 4 (French, German, Spanish)

SOCIAL STUDIES
• One credit in social studies is required in grade 6 (Geography), grade 7 (Civics) and grade 8 (U.S. History)

PHYSICAL EDUCATION
• Students in grades 6, 7, and 8 must have at least one semester of physical education each year, unless the parent requests a waiver. Students may request a full year of physical education in each grade.
ESOL
- All ELL students are enrolled in two ESOL courses: English Through ESOL (counts as Language Arts/English credit and scheduled by grade level) and Developmental Language Arts Through ESOL (elective credit and scheduled by ESOL level)

SCIENCE
- Science instructors need: Middle Grades Science, General Science, or Subject Specific Science certification
- Comprehensive Science I (Regular/Advanced), Comprehensive Science II (Regular/Advanced), and Comprehensive Science III (Regular/Advanced) are the course offerings for middle school
- Earth/Space Science Honors (taught at the high school level of instruction, following the Honors high school course description and pacing guides) may be offered to advanced middle school students who have completed Comprehensive Science I and II
- For the select advanced students who are able to successfully complete Earth/Space Science Honors in the seventh grade (required to be taught at the high school level of instruction, following the Honors high school course description and pacing guides); students may be offered Biology Honors (required to be taught at the high school level of instruction, following the Honors high school course description and pacing guides) with a Biology certified instructor
- Common planning/meeting time for science teachers or, minimally, same grade level/course teachers
- Technology access for at least one computer with screen and projector with unobstructed visibility by students

MATHEMATICS
- The suggested mathematics course sequence for middle school student in the regular program is
  - Grade 6: M/J Mathematics 1
  - Grade 7: M/J Mathematics 2
  - Grade 8: M/J Mathematics 3
- The suggested mathematics course sequence for middle school students with a strong-average mathematical ability is
  - Grade 6: M/J Mathematics 1 Advanced
  - Grade 7: M/J Mathematics 2 Advanced
  - Grade 8: M/J Mathematics 3 Advanced
- For students demonstrating an above average mathematical ability (mastery of the current grade level standards prior to taking the grade level course) is
  - Grade 6: M/J Mathematics 2 Advanced
  - Grade 7: M/J Mathematics 3 Advanced
  - Grade 8: Honors Algebra
MIDDLE SCHOOL LANGUAGE ARTS
- Students must be scheduled in one Language Arts class in grades 6, 7 and 8.
  Disfluent students in grades 6-8 who score FCAT level 1 or 2 must be scheduled in a Language Arts class back to back with an Intensive Reading Plus class (see Middle School Reading).
- Schools with block scheduling should schedule Language Arts and reading classes on alternating days so that students will have a literacy instruction on a daily basis.

MIDDLE SCHOOL READING
- **Intensive Reading Plus** - Disfluent students in grades 6-8 who score FCAT level 1 or 2 must be scheduled in an Intensive Reading Plus class back to back with a Language Arts class taught by the same teacher. Please follow the guidelines in **WB #5927- Technical Assistance for Identification, Placement, and Scheduling of Students in Reading Classes for the 2009-2010 School Year**
- **Intensive Reading** - Fluent students in grades 6-8 who score FCAT level 1 or 2 must be scheduled in an Intensive Reading class in addition to a regular Language Arts class. Please follow the guidelines in **WB #5927- Technical Assistance for Identification, Placement, and Scheduling of Students in Reading Classes for the 2009-2010 School Year**

**Recommendations for Master Schedule Development**

**High School**

**GENERAL**
- Identify members of master schedule team
- Identify “non-negotiables,” e.g., common planning, scheduling students into teams/cohorts, teachers assigned to academies, location of academies in buildings, internship programs, the increase of honors and Advanced Placement (AP) courses and classes
- Follow all requirements of the Student Progression Plan (SPP)
- Provide common planning in core content areas and review needs for departmental, grade level, small learning communities and/or academies in the process
- Prioritize common planning based on tested subject areas: core math grade 10, language arts grade 10, core math grade 9, core language arts grade 9, science grade 11, science grade 10, intensive reading, grade foundations.
- Schedule students with similar academic needs based on current student data
- Plan for interventions through the master schedule
- Analyze ACT, SAT, and CPT data of present 11th graders in order to offer remediation during 12th grade year prior to students graduating and enrolling in colleges and universities
- Integrate Special Education and ESOL personnel in the school-wide scheduling process at the onset
• Reschedule students based on the results of the FCAT, CELLA, entering 9th graders retaking a senior high level course and summer Adult Education Term to provide proper support and grade level placement
• Address imbalances created by summer registrations, withdrawals, and testing results to avoid need for leveling once school starts
• Adjust teacher schedules as teachers transfer or resign since students may need to be rescheduled because of changes
• Plan for 13th year students who will return since test will not be offered in the summer
• Revisit and re-define school mission and vision with regard to the implementation of Secondary School Reform (SSR) through the establishment of career academies and reflect in master scheduling offerings
• Develop master schedule timeline and assign tasks
• Establish a ninth grade transition academy and schedule students into cohorts with common teachers when possible
• Offer semester “freshman experience’ course paired with internship preparatory course when possible
• Elective courses offered should be related to a program of study within an academy
• Develop color coded subject selection sheets by academy
• Develop coding of courses to identify academies
• Schedule OJT, executive Internship and/or Career Experience Opportunity (CEO) classes at end of day in order to provide multiple internships experiences for students
• For high schools offering an eight period schedule, provide course recovery classes
• Develop master schedule timeline and assign tasks
• Match teacher certification with course certification requirements in order to minimize teachers out of field
• Verify Highly Qualified status

SPECIAL EDUCATION (SPED)
• Assess and review IEP’s and 504 plans in order to address individual student needs
• Identify the subject and support needs of students (consultative, support facilitation, co-teaching)
• Align course selection with curriculum/diploma track: ONLY SPED students who meet exemption criteria for FCAT should be enrolled in 7800 and 7900 courses
• Summarize support needs in each subject by grade level. Example: grade 9, Algebra 1: 15 students need support facilitation, 5 students need consultation
• Summarize support resources for school to determine if you have enough teacher resources to provide the indicated support
• Adjust support to comply with the IEP’s and 504 plans
• Check sections/periods/grade levels to determine support assignments
• Ensure compliance with Individuals with Disabilities (IDEA) through the provision of 504 and IEP-driven support and scheduling

GIFTED
• Schools with 25 or more students per grade level should offer Honors and/or gifted Advanced Placement courses in core subject areas and/or the gifted elective course
• Schools with fewer than 25 students per grade level should schedule students in a gifted elective course
• Schools also have the option of offering the Gifted Consultation model where general education teachers and teachers of the gifted meet regularly to plan, implement and monitor instruction in Advanced Placement, Honors, International Baccalaureate or other academically rigorous programs

ADVANCED PLACEMENT (AP)
• Schedules should reflect student participation in core AP courses which includes foreign language as well
• Utilize data sources (AP potential reports, NRT scores, grades) to identify potential AP students
• Promote enrollment through parent communication and meetings
• Increase the number of honors and AP courses
• Utilize AP data reports to review pass/fail rates and make teacher assignments accordingly
• Encourage honors and AP teachers to teach regular classes as well

INTERNATIONAL BACCALAUREATE (IB) and CAMBRIDGE (AICE)
• Students in IB and AICE programs must be scheduled into specific IB and AICE courses as prescribed by the program of study

SOCIAL STUDIES
• One credit in social studies is required in grade 9 (World History), grade 11 (American History) and grade 12 (.5 American Government and .5 Economics)

PHYSICAL EDUCATION
• One credit in physical education which includes .5 of Personal Fitness with health integration and .5 of any physical education elective course

ESOL
• All ELL students are enrolled in two ESOL courses: English Through ESOL (counts as Language Arts/English credit and scheduled by grade level) and Developmental Language Arts Through ESOL (elective credit and scheduled by ESOL level)
SCIENCE
- Students who are college-bound and have taken Earth/Space Science and Biology should be enrolled in the following priority order: 1\textsuperscript{st} Chemistry, 2\textsuperscript{nd} Physical Science/Physics, and 3\textsuperscript{rd} Integrated Science III
- Integrated Science III should be offered to 11\textsuperscript{th} graders not enrolled in a science class who have already taken Earth/Space Science, Biology, and Chemistry and are not college-bound
- Students with the potential to excel in research and who are college-bound should be offered the Science Research Course in any grade level (9-12)
- Students who have completed the three required science courses should be offered Physics and/or any other advanced science course
- Honors and Advanced Placement science courses should be scheduled following the course code directory of offerings
- Biology certified teachers for biology classes. Chemistry certified teachers for chemistry classes and Physics certified teachers for physics classes
- Earth/Space science course – teacher can be certified in any science other than Biology
- Technology access for at least one computer with screen and projector with unobstructed visibility by students

MATHEMATICS
- The suggested mathematics course sequence for students completing M/J 3 in 8\textsuperscript{th} grade is
  - Grade 9: Algebra I
  - Grade 10: Geometry
  - Grade 11: Algebra II
  - Grade 12: Analysis of Functions
- The suggested mathematics course sequence for students completing M/J 3 Advanced in 8\textsuperscript{th} grade is
  - Grade 9: Honors Algebra I
  - Grade 10: Honors Geometry
  - Grade 11: Honors Algebra II
  - Grade 12: PreCalculus
- The suggested mathematics course sequence for students completing Algebra I in 8\textsuperscript{th} grade with a D or F and who have a strong-average mathematical ability is
  - Grade 9: Honors Algebra I
  - Grade 10: Honors Geometry
  - Grade 11: Honors Algebra II
  - Grade 12: PreCalculus
- The suggested mathematics course sequence for students completing Algebra I in 8\textsuperscript{th} grade with an A, B, or C is
  - Grade 9: Honors Geometry
  - Grade 10: Honors Algebra II
  - Grade 11: PreCalculus
  - Grade 12: Advanced Placement Calculus AB or BC
• The suggested course sequence for **struggling learners** is
  o Grade 9: Algebra I
  o Grade 10: Geometry
  o Grade 11: Integrated Math 2
  o Grade 12: Algebra II
• The suggested course sequence for **students scoring a low C or C** in his/her high school mathematics course is
  o Grade 9: Algebra I
  o Grade 10: Geometry
  o Grade 11: Algebra II
  o Grade 12: Advanced Topics in Math (a review of Algebra and topics in Trigonometry, Discrete Math, and Analytic Geometry)
• To provide an opportunity for success for ninth grade Level 1 students, Algebra I and Intensive Math may be offered as a block. The student will have the same teacher for both courses and an opportunity to spend more time developing the concepts and thus increase success
• Students who fail Algebra I must repeat the course prior to enrolling in the next course
• Algebra I courses should have sections scheduled for 9th grade students and a section for all repeaters and 10th, 11th, and 12th grade students. This provides an opportunity to prepare for the appropriate grade level benchmarks.
• Intensive Math courses in grades 9 and 10 should follow the order of the standards found in the Algebra I and Geometry pacing guides to guide the student work and develop lesson activities
• Students who are capable of succeeding in Honors Calculus can be successful in Advanced Placement Calculus. Encourage the teachers to enroll these students in the AP Calculus AB course
• Encourage the advanced students to take both AP Calculus and AP Statistics during the same school year
• Informal Geometry should not be used
• Liberal Arts Math may be used as an SAT prep course
• Algebra II with Financial Literacy is an Honors course and may be taken in place of Honors Algebra II

**ENGLISH**

• Students must be scheduled in English I-IV in grades 9 10, 11, and 12 respectively. Disfluent students in grades 9 and 10 who score FCAT level 1 or 2 must be scheduled in an English class back to back with an Intensive Reading Plus class (see Senior High Reading)

**SENIOR HIGH READING**

• **Intensive Reading Plus** - Disfluent students in grades 9 and 10 who score FCAT level 1 or 2 must be scheduled in an Intensive Reading Plus class back to back with a Language Arts class taught by the same teacher. Please follow the guidelines in **WB #5927- Technical Assistance for Identification, Placement, and Scheduling of Students in Reading Classes for the 2009-2010 School Year**
• **Intensive Reading** - Fluent students in grades 9 and 10 who score FCAT level 1 or 2 must be scheduled in an Intensive Reading class in addition to a regular English class. Please follow the guidelines in *WB #5927- Technical Assistance for Identification, Placement, and Scheduling of Students in Reading Classes for the 2009-2010 School Year*.

• **Eleventh and Twelfth Grade Retakers Reading** - Students in grades 11 and 12 who have not met the graduation requirement must be scheduled in the Retaker Reading class in addition to a regular English class. Please follow the guidelines in *WB #5927- Technical Assistance for Identification, Placement, and Scheduling of Students in Reading Classes for the 2009-2010 School Year*.

• **Homogeneously Grouped English** - Only schools who offered this course in 2008-2009 may offer this course in 2009-2010. Fluent students in grades 9 and 10 who score high FCAT level 2 may be scheduled in a Homogeneously Grouped English class. Please follow the guidelines in *WB #5927- Technical Assistance for Identification, Placement, and Scheduling of Students in Reading Classes for the 2009-2010 School Year*.
Action Plan

Using Data for Targeted Instructional Practices
GENERAL ACTIONS TO BE TAKEN:
- As soon as grades are released, create your list of students in tested grades for reading and update your master schedule to reflect assignment of students to classes/sections based on newly received accountability grades. **July/August**
- Ensure your master schedule is built so that it facilitates providing students the necessary interventions to address deficiencies, as well as AYP.
- Make sure that Reading, Language Arts, and Social Studies teachers are given a copy of the list. In addition, give a copy to all tutors who are part of your tutorial programs. **August**
- In October 2009, revisit the list of your students in tested grades for reading and identify those students who are not in your school during the October FTE period. Remove identified students from your accountability roster.
- This will be your temporary list of students in the accountability groups.
- The list should be given to all teachers (ensure that all Reading, Language Arts, Social Studies teachers, and tutors have this updated list) filtered by accountability area using the following categories: State Mastery, Learning Gains, and Lowest 25% (sort each category for reading).
- When the February 2010 FTE funding report is released, revisit this list and remove students who are not present both in October and February.
- This will be the final list of students in the accountability groups. This final updated list must be provided to all teachers.

STATE MASTERY - % 3 OR ABOVE

A) ELEMENTARY SCHOOLS:
- Identify students in grades 3 and 5 who scored at Achievement Level 3 or higher in Reading during the 2008-2009 school year.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of **regression** in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). **January**
- Identify the students in grade 4 and 5 who scored at this level of state mastery for the first time during the 2008-2009 school year.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of **regression** in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). **January**
- Identify students in grade 4 who scored at state mastery in grade 3. Identifying these students is important because the level was attained without performance task items. In order for the students to make a learning gain this year they must maintain this level of proficiency or higher with performance task questions added to the equation.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, you need to ensure these students are receiving appropriate instruction to maintain the skills mastered and instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without the short/extended items included. If they do not, this is an...
indicator of *regression* in performance and students will need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain or surpass their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. **January**

- Identify the students who scored at achievement level 5 in the 2009 FCAT administration. In order for these students to make a learning gain this year, they must maintain this level of proficiency.

- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels and demonstrate progress. If they do and they are in grades 3 and 5, ensure these students continue to receive the academic services being offered. If they are in grade 4 and demonstrate Satisfactory levels of progress, ensure they receive appropriate instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without these items included. If these students do not demonstrate Satisfactory levels of progress, this is an indicator of *regression* in performance and the students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. **January**

- Ensure implementation of an enrichment program intended to assist students in levels 3-5 to maintain and/or increase achievement levels (i.e. after-school book clubs).

- Utilize FCAT Item Specification as a guide to develop grade level appropriate questions based on the Sunshine State Standards ([http://fcat.fldoe.org/fcatis01.asp](http://fcat.fldoe.org/fcatis01.asp)).

- Ensure Social Studies curriculum includes reading benchmarks that are reflective of the data of the students in levels 3-5.

- Utilize the Social Studies curriculum to support informational text.


**GENERAL INFORMATION TO KEEP IN MIND FOR ELEMENTARY SCHOOL READING:**

- Ensure that the Comprehensive Core Reading Programs (CCRP), Supplemental Intervention Reading Programs (SIRP), and Comprehensive Intervention Reading Programs (CIRP) are being used with fidelity, consistency, and progress monitored for proper pacing of instruction and mastery of all instructional components (Elementary Student Achievement and Instruction, CRRP #2.1-2.3)

- Conduct an inventory of the Comprehensive Core Reading Program (CCRP), Houghton Mifflin, reading textbooks to ensure every learner has access to a copy. Replenish gaps.

- Ensure that the 30 minutes of writing instruction is taking place during the day and provide Language Arts teachers with writing professional development so that the writing process is taught explicitly and systematically.

- Using the data to support decisions, assign the strongest teachers to grades where reading is assessed and to students who are struggling most.

- Ensure that the master schedule complies with all of the time requirements of the Student Progression Plan and Comprehensive Research-Based Reading Plan (90 minutes daily) and additional time for immediate intensive intervention (iii). (Leadership: District Level, CRRP #15.1)

- Establish a Reading Leadership Team (RLT) to build capacity of reading knowledge within the school building and focus on areas of concern on literacy across the school. (Leadership: School Level, CRRP #2.1)
• Provide and monitor opportunities for the Reading coaches to work with teachers at all grade levels to implement and maintain the comprehensive and supplemental core reading programs, model effective strategies for teachers, provide professional development, differentiated instruction, monitor student progress and analyze student data. (Leadership: School Level, CRRP #3)

• Monitor collection and utilization of assessment data, including progress monitoring data by establishing Data Analysis Team meetings to determine intervention and support needs of students. (Leadership: School Level, CRRP #7)

• Ensure that time is provided for teachers to meet weekly for professional development opportunities that include, but are not limited to grade group meetings, additional training, visiting model classrooms and one on one coaching sessions. (Leadership: School Level, CRRP #10)

• Encourage the media specialist to attend grade-level meetings so that collaborative planning for instruction infusing media center circulation of books and audio-visual materials. (Leadership: School Level, CRRP #14.2)

• Using the FCAT Reading Content Cluster and Focus Report Data, compare the performance of your school, at each grade level, for the last four years. Rank the content cluster performance at each grade level from strongest to weakest, to identify areas of curricular need. Using the ranking results, create an instructional focus calendar that will align the curriculum delivered to assessed benchmarks.

• Re-teach content focus benchmarks not mastered and provide enrichment to maintain the ones mastered.

• Create a curriculum calendar for each intervention/enrichment program to ensure a circular approach to instruction that aligns to the benchmarks taught on the school-wide instructional focus calendar.

• Implement with fidelity Voyager Passport for all students who scored at Achievement Level 1 or 2 on the 2009 administration of the FCAT.

• Consider purchasing Elements of Vocabulary Program for fourth and fifth grade, as available.

• Utilize the Accelerated Reader (AR) program to motivate independent reading and assist in monitoring levels of text and amount of student reading. Additionally, classroom teachers can actively utilize leveled libraries to support this endeavor. (Elementary Student Achievement and Instruction, CRRP #2.4) Incorporate an incentive component to reward those students that exceed the monthly goal of books read.

• Utilize the Quick Reads Fluency Development Program to increase fluency rates and positively impact students’ ability to read for comprehension.

• Monitor implementation of independent student center activities in grade K-3 that correlate to the progress monitoring assessments. Work with the Reading Coaches to build their capacity on modeling this concept at each school. Student center activities can be downloaded for grades K-5 on The Florida Center for Reading Research (FCRR) website.

• Designate computer usage time in order to integrate educational software to provide additional support in reading growth for all students.
B) SECONDARY SCHOOLS: MIDDLE SCHOOLS (GRADES 6, 7, AND 8)

- Identify students in grades 6 and 7 who scored at Achievement Level 3 or higher in Reading during the 2008-2009 school year.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of regression in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs).
  - January
- Identify students in grade 8 who scored at state mastery in grade 7. Identifying these students is important because the level was attained without performance task items. In order for the students to make a learning gain this year they must maintain this level of proficiency or higher with performance task questions added to the equation.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, you need to ensure these students are receiving appropriate instruction to maintain the skills mastered and instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without the short/extended items included. If they do not, this is an indicator of regression in performance and students will need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain or surpass their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade.
  - January
- Identify the students who scored at achievement level 5 in the 2009 FCAT administration. In order for these students to make a learning gain this year, they must maintain this level of proficiency.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels and demonstrate progress. If they do and they are in grades 6 and 7, ensure these students continue to receive the academic services being offered. If they are in grade 8 and demonstrate Satisfactory levels of progress, ensure they receive appropriate instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without these items included. If these students do not demonstrate Satisfactory levels of progress, this is an indicator of regression in performance and the students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade.
  - January
- Ensure implementation of an enrichment program intended to assist students in levels 3-5 to maintain and/or increase achievement levels (i.e. after-school book clubs).
- Utilize FCAT Item Specification as a guide to develop grade level appropriate questions based on the Sunshine State Standards.
- Ensure Social Studies curriculum includes reading benchmarks that are reflective of the data of the students in levels 3-5.
- Utilize the Social Studies curriculum to support informational text.
HIGH SCHOOLS (GRADES 9 AND 10)

- Identify students in grade 9 who scored at Achievement Level 3 or higher in Reading during the 2008-2009 school year.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of regression in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). January
- Identify students in grade 10 who scored at state mastery in grade 9. Identifying these students is important because the level was attained without performance task items. In order for the students to make a learning gain this year they must maintain this level of proficiency or higher with performance task questions added to the equation.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, you need to ensure these students are receiving appropriate instruction to maintain the skills mastered and instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without the short/extended items included. If they do not, this is an indicator of regression in performance and students will need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain or surpass their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. January
- Identify the students who scored at achievement level 5 in the 2009 FCAT administration. In order for these students to make a learning gain this year, they must maintain this level of proficiency.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels and demonstrate progress. If they do and they are in grade 9, ensure these students continue to receive the academic services being offered. If they are in grade 10 and demonstrate Satisfactory levels of progress, ensure they receive appropriate instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without these items included. If these students do not demonstrate Satisfactory levels of progress, this is an indicator of regression in performance and the students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. January
- Ensure implementation of an enrichment program intended to assist students in levels 3-5 to maintain and/or increase achievement levels (i.e. after-school book clubs).
- Ensure Social Studies and Health curriculum includes reading benchmarks that are reflective of the data of the students in levels 3-5.
- Utilize the Social Studies curriculum to support informational text.
GENERAL INFORMATION TO KEEP IN MIND FOR SECONDARY READING:

- Ensure that Reading teachers have received initial training for the adopted middle and high school Reading programs.
- Ensure that the skills and strategies taught utilizing the Comprehensive Intervention Reading Programs (CIRP) and the Supplemental Intervention Reading Programs (SIRP) are aligned with Sunshine State Standards for Reading at the appropriate grade level, specifically those benchmarks which are assessed by the Florida Comprehensive Assessment Test (FCAT).
- Ensure that all of the necessary instructional materials are available for teachers in order to effectively teach all components of the newly adopted Reading programs.
- Ensure that all secondary reading classes include a specific time allocation for independent reading that is inclusive of a variety of genres that and monitored by the teacher.
- Ensure that students in content area classes receive instruction in reading strategies that meet the unique requirements for the individual subject area.
- Provide content area teachers with Creating Independence through Student-owned Strategies (CRISS) training to ensure that all students are provided instruction in effective reading strategies.
- Ensure that the instructional framework for reading and assessment data is used for the before, during, and after tutorial and/or enrichment services to reinforce the curriculum taught during the school day to target individual needs.
- Provide and monitor opportunities for the coaches to work with teachers at all grade levels to share and model best practices for reading instruction and to serve as a resource teacher for reading.

BUBBLE “2” STUDENTS IN READING
(all students with this level of academic performance regardless of accountability status)

- Revisit the bubble “2” students for reading.
- Look at their Fall and Winter Interim Assessment results to see what their level of performance is like. **January**
- If they score Satisfactory Progress, then these students are on track to reaching state mastery. These students must receive continued instruction on the challenging content and skills across the benchmarks designated for the respective grade level.
- If the students score Limited Progress, these students must receive targeted interventions and remediation in the areas of concern, and continue instruction on the challenging content and skills across the benchmarks designated for the respective grade level.
- If these students score Insufficient Progress, the students must receive intensive interventions and remediation in the areas of concern, and continue instruction on the challenging content and skills across the benchmarks designated for the respective grade level.

LOWEST 25% IN READING
(all students with this level of academic performance regardless of accountability status)

- Revisit the students in the Lowest 25% for reading.
- Look at their Fall and Winter Interim Assessment results to see what their level of performance is like. **January**
- If the performance indicates adequate learning gains were achieved, then continue academic services that are being provided.
If not, **INTENSIFY** immediately the support for these students. This is important because schools are sanctioned if they do not have at least 50% learning gains. If this happens for a second consecutive year, schools are subject to possibly losing a letter grade. For example, if the school has the accountability points for a school grade of a “C”, it will be dropped to a “D”.

**RETAINT STUDENTS IN READING**
*(all students with this level of academic performance regardless of accountability status)*

- Revisit your list of retained students in tested grades for reading.
- Look at their Fall and Winter Interim Assessment results to see what their level of performance is like. **January**
- Keeping in mind that these students must **go up an entire Achievement Level** in order to get a learning gain, evaluate their performance to determine level of support that is needed to achieve this goal.
- If the student is making adequate progress toward increasing to the next Achievement Level, then continue the academic services being offered with intensity.
- If the student is not making adequate progress toward increasing to the next Achievement Level, then make immediate appropriate changes to his/her academic program with intervention support (push-in, pull-out).

**RETAKE STUDENTS IN READING**
*(all students with this level of academic performance regardless of accountability status)*

- Revisit your list of retake students for reading.
- Filter your list by the latest scale scores you receive for the October 2009 administration.
- Determine how many retake students you need to pass in March 2010 to receive the bonus points in the accountability calculations (50% passing rate).
- Identify the students that need to achieve a passing score in March 2010 to achieve the 50% passing rate.
- Look at the Fall and Winter Interim Assessment results for these students. Determine what their progress looks like.
- If the student is making adequate progress, continue the program currently being provided but intensify it (remember one point makes a difference).
- If the student is not making adequate progress, adjust the academic program with appropriate support.

**TEACHER SUPPORT IN READING**

- Look at the Fall and Winter Interim Assessment results by reading and Language Arts teachers in tested grades. Identify patterns of performance (Limited, Satisfactory, etc.) for the students they serve.
- Compare the Winter 2010 levels of performance for the same students to the fall 2009 Assessment results.
- If there is a pattern of growth, then allow the teacher to continue mode of instruction with just providing pull-out or push-in support for those students who demonstrate a regression.
- If there is a pattern of regression, then immediately redirect other personnel within your building to provide additional support for that teacher in parallel or co-teaching models (a large number of students in a class who show regression needs urgent attention).
TUTORIAL PROGRAMS

- Revisit the students who regularly attend tutorial programs that you have had in session minimally since at least October 2009 (if you started after October 2009 then do not complete this section because there would not be enough sessions held to make a fair judgment).
- Compare their levels of performance in Winter 2010 as compared to fall 2009. Make a professional judgment call as to whether the program is effectively attaining learning gains for the school.
- If yes, then continue the process as stipulated in your plan.
- If not, then make material and instructional adjustments as needed, urgently. In budget crisis times, you want to ensure your investments in these programs are giving the school and student an adequate return for your investment.

SCHOOL-WIDE SUGGESTIONS

- Implement “Bell Ringers” in 9th and 10th grade Language Arts classes, 9th grade Social Studies classes, and 10th grade content area and/or elective classes on all reading benchmarks.
- Create school-wide test taking strategies. Test-taking tips should be firmly embedded during DAILY instruction.
- Use appropriate, grade-level material with the appropriate number of words per passage as stated in the FCAT Handbook to promote reading stamina and build endurance.

DIFFERENTIATED SUPPORT PROGRAMS TO CONSIDER FOR READING

Pull-Outs for State Mastery Students who Regressed, Bubble “2’s”, Fragile “3’s”, and Retake status (all students with this level of academic performance regardless of accountability status)

- Determine the period in which the students in this category are having electives or social studies.
- Sort the list of students who demonstrate regression on the winter 2010 Interim Assessment and score at state mastery levels in 2009, by overall percentages in descending order (from highest to lowest).
- Group the students by periods in which they have electives or social studies.
- Divide the students within each period cycle in which they have electives or social studies into groups of no more than 20 students (for example, top 20, next 20, next 20, etc). Determine how many facilitators you will need during each period to implement this support.
- Use these student groups to conduct student workshops. These workshops should be facilitated by your strongest reading teacher/coach/curriculum support specialist/District personnel. The time frame for these workshops should be around one hour, at least, twice a week (depending on the number of students in this category). A schedule should be created for these services to be delivered in a consistent and organized manner.
- An assembly should be scheduled with these students prior to starting the services in order for them to be informed of the reason why they will have to participate in this program and the benefits to their academic performance.
- A meeting should be held with the elective and social studies teacher prior to starting these services so that they are clearly aware of the procedures that will be followed to implement this support. Remember communication is KEY to the success of the initiatives.
• Utilize released passages available on the Florida Department of Education website to teach during the student workshop. One passage should probably take about two sessions if appropriately taught. Please ensure the facilitator has the skills to maximize the instructional opportunities.
• A folder should be kept to reflect the work that is being done with the students in this category so that progress can be monitored.

Push-in Model for students in the Lowest 25% in Reading (all students with this level of academic performance regardless of accountability status)
• Determine the period in which the students in this category are having Language Arts.
• Sort the list of students in this category by overall percentages on the winter 2010 Interim Assessment, in descending order (from highest to lowest).
• Group the students by periods and teachers in which they have Language Arts.
• Determine how many push-in facilitators you need during each period. These push-in services should be facilitated by your strongest reading teacher/coach/curriculum support specialist/academic dean.
• A schedule should be created to reflect when these services are going to be held, by whom, and where to contribute to a consistent implementation.
• Utilize released passages available on the Florida Department of Education website and other supplementary materials available at the school to guide the push-in support activities.
• A folder should be kept to reflect the work that is being done with the students in this category. (Folders will be monitored ongoing.)

Whole Group Instruction Parallel Teaching Model in Reading
• Utilizing the list of teachers who were identified as having instructional regression patterns as evidenced on the Winter Interim Assessment, develop a schedule for coaching support to be provided in co-teaching and parallel format.
• Collaborative planning between the regular teacher and the co-teacher is a crucial component to make this process work.

Home Learning Activities in Reading
• Teachers should send home one mini-skill passage every Friday for each student in tested grade in accordance to the test format to complete on the weekend.
• This passage should be reviewed on Mondays as part of the opening of the Language Arts class.

Software Support Programs in Reading
• Print the usage reports and performance level reports for each of the software programs that you are using in your school.
• Conduct an analysis of the results to see the progress of students compared to the usage rates (fidelity needs to be considered prior to making an assessment).
• If the program is making a difference in the student’s academic performance, intensify the usage.
• If the program is not making a difference in the student’s academic performance, consider alternate sources of remediation or enrichment immediately (there is no time to waste).

Short and Extended Performance Task Questions in Reading
• Daily exposure of short and extended performance task formats is critical at this time of the year (Refer to Appendix B for Benchmark item Formats by Benchmarks at http://fcat.fldoe.org/factis01.asp ).
• Utilize anchor papers as instructional tools when teaching and/or reviewing short and extended responses with the students.
• Utilize student friendly rubrics to assist students in the development of a top score response.
• Ensure language arts and content area teachers assist with the instruction and exposure to short and extended responses.
• After FCAT Writing, schools that have Creative Writing classes should utilize this period to reinforce short and extended performance task questions.
MATHEMATICS

GENERAL ACTIONS TO BE TAKEN:

- As soon as grades are released, create your list of students in tested grades for mathematics and update your master schedule to reflect assignment of students to classes/sections based on newly received accountability grades. **July/August**
- Ensure your master schedule is built so that it facilitates providing students the necessary interventions to address deficiencies, as well as AYP. **August**
- Make sure that mathematics teachers are given a copy of the list. In addition, give a copy to all tutors who are part of your tutorial programs. **August**
- In October 2009, revisit the list of your students in tested grades for mathematics and identify those students who are not in your school during the October FTE period. Remove identified students from your accountability roster.
- This will be your temporary list of students in the accountability groups.
- The list should be given to all teachers (ensure that all mathematics and science, and all tutors have this updated list) filtered by accountability area using the following categories: State Mastery, Learning Gains, and Lowest 25% (sort each category for mathematics).
- When the February 2010 FTE funding report is released, revisit this list and remove students who are not present both in October and February.
- This will be the final list of students in the accountability groups. This final updated list must be provided to all teachers.

STATE MASTERY - % 3 OR ABOVE

A) ELEMENTARY SCHOOLS:

- Identify students in grades 3 and 4 who scored at Achievement Level 3 or higher in mathematics during the 2008-2009 school year.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of **regression** in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). **January**
- Identify the students in grade 4 and 5 who scored at this level of state mastery for the **first** time during the 2008-2009 school year.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of **regression** in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). **January**
- Identify students in grade 5 who scored at state mastery in grade 4. Identifying these students is important because the level was attained without performance task items. In order for the students to make a learning gain this year they must maintain this level of proficiency or higher with performance task questions added to the equation.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, you need to ensure these students are receiving appropriate instruction to maintain the skills mastered and instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without the short/extended items included. If they do not, this is an indicator of **regression** in performance and students will need to be intervened
immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain or surpass their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. **January**

- Identify the students who scored at achievement level 5 in the 2009 FCAT administration. In order for these students to make a learning gain this year, they must maintain this level of proficiency.

- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels and demonstrate progress. If they do and they are in grades 3 and 4, ensure these students continue to receive the academic services being offered. If they are in grade 5 and demonstrate Satisfactory levels of progress, ensure they receive appropriate instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without these items included. If the these students do not demonstrate Satisfactory levels of progress, this is an indicator of **regression** in performance and the students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. **January**

- Ensure that instruction is inclusive of all five strands in order to address all grade level expectations and that a multi-benchmark approach is used (warm-ups, math dailies, etc.)

- Ensure implementation of an enrichment program intended to assist students in levels 3-5 to maintain and/or increase achievement levels (i.e. after-school math clubs).

- Utilize FCAT Item Specification as a guide to develop grade level appropriate questions based on the Sunshine State Standards ([http://fcat.fldoe.org/fcatis01.asp](http://fcat.fldoe.org/fcatis01.asp)).

- Incorporate short/extended response instructions for students in grade 5 across mathematics classes ([http://fcat.fldoe.org/lessonslearned.asp](http://fcat.fldoe.org/lessonslearned.asp)).

**GENERAL INFORMATION TO KEEP IN MIND FOR ELEMENTARY MATHEMATICS:**

- Review textbook inventory to ensure that every learner has access to a current district-adopted textbook as required in the district’s Comprehensive Math Plan. Use schools funds as available to replenish gaps.

- Conduct an inventory of grade level appropriate mathematics manipulatives (geoboards, counters, rulers, protractors, etc.) that should be available to support the instruction of the five strands.

- Using data to support decisions, assign the strongest teachers to grades where mathematics is assessed as well as to students who are struggling most.

- Create a master schedule which complies with all the time requirements of the Student Progression Plan (60 minutes daily).

- Build school-site mathematics leadership capacity and encourage mathematics rich classroom environments as referenced in the district’s Comprehensive Mathematics Plan.

- Provide and monitor opportunities for the mathematics coaches/leaders to work with teachers at all grade levels to share and model best practices for mathematics instruction and to serve as resource teachers for mathematics.

- Ensure that the skills and strategies being taught align with the mathematics Sunshine State Standards for the appropriate grade levels; specifically those assessed by the Florida Comprehensive Assessment Test (FCAT).

- Using the FCAT Mathematics Content Cluster and Focus Report Data, compare the performance at your school (at each grade level) for the past four years. Rank the content cluster performance at each grade level from strongest to weakest as a means
of identifying areas of curricular need. Using the results from this ranking, create an instructional focus plan/calendar that will align the curriculum to be delivered to the assessed benchmarks.

- Re-teach content focus benchmarks not mastered and provide enrichment to maintain the ones that have been mastered.
- Create a curriculum calendar for each intervention/enrichment program to ensure circular approach to instruction that aligns to the benchmarks taught in the instructional focus plan/calendar.
- Establish mathematics vertical teams to have conversations about what the expectations are for students from one grade level to the next as a means of providing curriculum alignment.
- Download the mathematics K-2 and 3-5 Resource Guide found on the district’s mathematics website http://math.dadeschools.net/

B) SECONDARY SCHOOLS:

MIDDLE SCHOOLS (GRADES 6, 7, AND 8)

- Identify students in grades 6 and 7 who scored at Achievement Level 3 or higher in Reading during the 2008-2009 school year.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of regression in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). January
- Identify students in grade 8 who scored at state mastery in grade 7. Identifying these students is important because the level was attained without performance task items. In order for the students to make a learning gain this year they must maintain this level of proficiency or higher with performance task questions added to the equation.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, you need to ensure these students are receiving appropriate instruction to maintain the skills mastered and instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without the short/extended items included. If they do not, this is an indicator of regression in performance and students will need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain or surpass their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. January
- Identify the students who scored at achievement level 5 in the 2009 FCAT administration. In order for these students to make a learning gain this year, they must maintain this level of proficiency.
- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels and demonstrate progress. If they do and they are in grades 6 and 7, ensure these students continue to receive the academic services being offered. If they are in grade 8 and demonstrate Satisfactory levels of progress, ensure they receive appropriate instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without these items included. If these students do not demonstrate Satisfactory levels of progress, this is an indicator of regression in performance and the students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. January
Ensure implementation of an enrichment program intended to assist students in levels 3-5 to maintain and/or increase achievement levels (i.e. after-school math clubs).

Ensure that instruction is inclusive of all five strands in order to address all grade level expectations and that a multi-benchmark approach is used (warm-ups, math dailies, etc.)

Utilize FCAT Item Specification as a guide to develop grade level appropriate questions based on the Sunshine State Standards (http://fcat.fldoe.org/fcatis01.asp).


**HIGH SCHOOLS (GRADES 9 AND 10)**

- Identify students in grade 9 who scored at Achievement Level 3 or higher in mathematics during the 2008-2009 school year.

- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, continue academic services being provided to maintain skills mastered. If they do not, this is an indicator of **regression** in performance and students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). **January**

- Identify students in grade 10 who scored at state mastery in grade 9. Identifying these students is important because the level was attained without performance task items. In order for the students to make a learning gain this year they must maintain this level of proficiency or higher with performance task questions added to the equation.

- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels. If they do, you need to ensure these students are receiving appropriate instruction to maintain the skills mastered and instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without the short/extended items included. If they do not, this is an indicator of **regression** in performance and students will need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain or surpass their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. **January**

- Identify the students who scored at achievement level 5 in the 2009 FCAT administration. In order for these students to make a learning gain this year, they must maintain this level of proficiency.

- Look at these students’ Fall and Winter Interim Assessment results to ensure that they score at Satisfactory levels and demonstrate progress. If they do and they are in grade 9, ensure these students continue to receive the academic services being offered. If they are in grade 10 and demonstrate Satisfactory levels of progress, ensure they receive appropriate instruction on how to address performance task questions (SR, ER) since the Interim Assessment is indicating Satisfactory levels without these items included. If these students do not demonstrate Satisfactory levels of progress, this is an indicator of **regression** in performance and the students need to be intervened immediately through support (push-in, pull-out, and tutorial programs). If these students do not maintain their level of achievement on the 2010 FCAT administration, it will affect two out of the eight indicators on the school grade. **January**

- Ensure implementation of an enrichment program intended to assist students in levels 3-5 to maintain and/or increase achievement levels (i.e. after-school math clubs).

- Ensure that instruction is inclusive of all five strands in order to address all grade level expectations and that a multi-benchmark approach is used (warm-ups, math dailies, etc.)
• Utilize FCAT Item Specification as a guide to develop grade level appropriate questions based on the Sunshine State Standards (http://fcat.fldoe.org/fcatis01.asp).
• Incorporate short/extended response instructions for students in grade 10 across mathematics classes (http://fcat.fldoe.org/lessonslearned.asp).

GENERAL INFORMATION TO KEEP IN MIND FOR SECONDARY MATHEMATICS:
• Conduct an inventory of grade level appropriate mathematics manipulatives (calculators, protractors, measurement items, rulers, etc.) which should be available to support mathematics instruction on the five strands.
• Provide and monitor opportunities for the mathematics coaches/leaders to work with teachers at all grade levels to share and model best practices for mathematics instruction and to serve as resource teachers for mathematics.
• Re-teach content focus benchmarks not mastered and provide enrichment to maintain the ones mastered.
• Create a curriculum calendar for each intervention/enrichment program to ensure a circular approach to instruction that aligns to the objectives taught on the instructional focus plan/calendar.
• Evaluate implementation effectiveness of the core mathematics program by examining the percentage of students who began the 2008 year at state mastery levels and ended the 2009 year at state mastery levels.
• Establish mathematics vertical teams to have conversations about what the expectations are for students from one grade level to the next as a means of providing curriculum alignment.

BUBBLE “2” STUDENTS IN MATHEMATICS
(all students with this level of academic performance regardless of accountability status)
• Revisit the bubble “2” students for mathematics.
• Look at their Fall and Winter Interim Assessment results to see what their level of performance is like. January
• If they score Satisfactory Progress, then these students are on track to reaching state mastery. These students must receive continued instruction on the challenging content and skills across the benchmarks designated for the respective grade level.
• If the students score Limited Progress, these students must receive targeted interventions and remediation in the areas of concern, and continue instruction on the challenging content and skills across the benchmarks designated for the respective grade level.
• If these students score Insufficient Progress, the students must receive intensive interventions and remediation in the areas of concern, and continue instruction on the challenging content and skills across the benchmarks designated for the respective grade level.

LOWEST 25% IN MATHEMATICS
(all students with this level of academic performance regardless of accountability status)
• Revisit the students in the Lowest 25% for mathematics.
• Look at their Fall and Winter Interim Assessment results to see what their level of performance is like. January
• If the performance indicates adequate learning gains were achieved, then continue academic services that are being provided.
• If not, **INTENSIFY** immediately the support for these students. This is important because schools are sanctioned if they do not have at least 50% learning gains. If this happens for a second consecutive year, schools are subject to possibly losing a letter grade. For example, if the school has the accountability points for a school grade of a “C”, it will be dropped to a “D”.

**RETAINED STUDENTS IN MATHEMATICS**
(all students with this level of academic performance regardless of accountability status)
• Revisit your list of retained students in tested grades for mathematics.
• Look at their Fall and Winter Interim Assessment results to see what their level of performance is like. **January**
• Keeping in mind that these students must go up an entire Achievement Level in order to get a learning gain, evaluate their performance to determine level of support that is needed to achieve this goal.
• If the student is making adequate progress toward increasing to the next Achievement Level, then continue the academic services being offered with intensity.
• If the student is not making adequate progress toward increasing to the next Achievement Level, then make immediate appropriate changes to his/her academic program with intervention support (push-in, pull-out).

**RETAKE STUDENTS IN MATHEMATICS**
(all students with this level of academic performance regardless of accountability status)
• Revisit your list of retake students for mathematics.
• Filter your list by the latest scale scores you receive for the October 2009 administration.
• Determine how many retake students you need to pass in March 2010 to receive the bonus points in the accountability calculations (50% passing rate).
• Identify the students that need to achieve a passing score in March 2010 to achieve the 50% passing rate.
• Look at the Fall and Winter Interim Assessment results for these students. Determine what their progress looks like.
• If the student is making adequate progress, continue the program currently being provided but intensify it (remember one point makes a difference).
• If the student is not making adequate progress, adjust the academic program with appropriate support.

**TEACHER SUPPORT IN MATHEMATICS**
• Look at the Fall and Winter Interim Assessment results by mathematics teachers in tested grades. Identify patterns of performance (Limited, Satisfactory, etc.) for the students they serve.
• Compare the Winter 2010 levels of performance for the same students to the fall 2009 Assessment results.
• If there is a pattern of growth, then allow the teacher to continue mode of instruction with just providing pull-out or push-in support for those students who demonstrate a regression.
• If there is a pattern of regression, then immediately redirect other personnel within your building to provide additional support for that teacher in parallel or co-teaching models (a large number of students in a class who show regression needs urgent attention).
TUTORIAL PROGRAMS

- Revisit the students who regularly attend tutorial programs that you have had in session minimally since at least October 2009 (if you started after October 2009 then do not complete this section because there would not be enough sessions held to make a fair judgment).
- Compare their levels of performance in winter 2010 as compared to fall 2009. Make a professional judgment call as to whether the program is effectively attaining learning gains for the school.
- If yes, then continue the process as stipulated in your plan.
- If not, then make material and instructional adjustments as needed, urgently. In budget crisis times, you want to ensure your investments in these programs are giving the school and student an adequate return for your investment.

SCHOOL-WIDE SUGGESTIONS

- Implement “Bell Ringers” in 9th and 10th grade mathematics classes.
- Create school-wide test taking strategies. Test-taking tips should be firmly embedded during DAILY instruction.

DIFFERENTIATED SUPPORT PROGRAMS TO CONSIDER FOR MATHEMATICS

Pull-Outs for State Mastery Students who Regressed, Bubble “2’s”, Fragile “3’s”, and Retake status (all students with this level of academic performance regardless of accountability status)

- Determine the period in which the students in this category are having electives.
- Sort the list of students who demonstrate regression on the Winter 2010 Interim Assessment and score at state mastery levels in 2009, by overall percentages in descending order (from highest to lowest).
- Group the students by periods in which they have electives.
- Divide the students within each period cycle in which they have electives into groups of no more than 20 students (for example, top 20, next 20, next 20, etc). Determine how many facilitators you will need during each period to implement this support.
- Use these student groups to conduct student workshops. These workshops should be facilitated by your strongest mathematics teacher/coach/curriculum support specialist/District personnel. The time frame for these workshops should be around one hour, at least, twice a week (depending on the number of students in this category). A schedule should be created for these services to be delivered in a consistent and organized manner.
- An assembly should be scheduled with these students prior to starting the services in order for them to be informed of the reason why they will have to participate in this program and the benefits to their academic performance.
- A meeting should be held with the elective teacher prior to starting these services so that they are clearly aware of the procedures that will be followed to implement this support. Remember communication is KEY to the success of the initiatives.
- Utilize released assessments available on the Florida Department of Education website to teach during the student workshop. Please ensure the facilitator has the skills to maximize the instructional opportunities.
- A folder should be kept to reflect the work that is being done with the students in this category so that progress can be monitored.
Push-in Model for students in the Lowest 25% in mathematics (all students with this level of academic performance regardless of accountability status)

- Determine the period in which the students in this category are having mathematics.
- Sort the list of students in this category by overall percentages on the Winter 2010 Interim Assessment, in descending order (from highest to lowest).
- Group the students by periods and teachers in which they have mathematics.
- Determine how many push-in facilitators you need during each period. These push-in services should be facilitated by your strongest mathematics teacher/coach/curriculum support specialist/academic dean.
- A schedule should be created to reflect when these services are going to be held, by whom, and where to contribute to a consistent implementation.
- Utilize released assessments available on the Florida Department of Education website and other supplementary materials available at the school to guide the push-in support activities.
- A folder should be kept to reflect the work that is being done with the students in this category. (Folders will be monitored ongoing.)

Whole Group Instruction Parallel Teaching Model in mathematics

- Utilizing the list of teachers who were identified as having instructional regression patterns as evidenced on the Winter Interim Assessment, develop a schedule for coaching support to be provided in co-teaching and parallel format.
- Collaborative planning between the regular teacher and the co-teacher is a crucial component to make this process work.

Home Learning Activities in Reading

- Teachers should send home one mini-skill package every Friday for each student in tested grade in accordance to the test format to complete on the weekend.
- This package should be reviewed on Mondays as part of the opening of the mathematics class.

Software Support Programs in Reading

- Print the usage reports and performance level reports for each of the software programs that you are using in your school.
- Conduct an analysis of the results to see the progress of students compared to the usage rates (fidelity needs to be considered prior to making an assessment).
- If the program is making a difference in the student’s academic performance, intensify the usage.
- If the program is not making a difference in the student’s academic performance, consider alternate sources of remediation or enrichment immediately (there is no time to waste).

Short and Extended Performance Task Questions in mathematics

- Daily exposure of short and extended performance task formats is critical at this time of the year (Refer to Appendix B for Benchmark item Formats by Benchmarks at [http://fcat.fldoe.org/factis01.asp](http://fcat.fldoe.org/factis01.asp)).
- Utilize anchor papers as instructional tools when teaching and/or reviewing short and extended responses with the students.
- Utilize student friendly rubrics to assist students in the development of a top score response.
SCIENCE

GENERAL ACTIONS TO BE TAKEN:

- Revisit the list of the fifth, eighth, and eleventh grade students and identify those students who were not in your school in the October 2009 FTE. Remove them from your accountability roster accordingly.
- This will be your temporary list of students in the accountability groups.
- Ensure that when the February FTE funding report is released, you revisit this list for science and remove students who were not present both in October 2009 and February 2010.
- This will be your final list of students in the accountability groups. An updated list should be provided to teachers.
- Make sure you give a copy to your science teachers. In addition, give a copy to all of the tutors you may have in your tutorial programs.

STATE MASTERY - % 3 OR ABOVE

- Revisit your list of the fifth, eighth, and eleventh grade students in the TOP 45% category established at the beginning of the year following the criteria below:
  - Sort students in order by their previous grade mathematics score from 500 to 100
  - Multiply the number remaining by 45%
  - Start Counting from the 500 student until you get to the top 45% (Golden Egg Students)
- Look at the Fall and Winter Interim Assessments results to identify what level of performance was achieved. January
- If the student achieved a Satisfactory Level, he/she is on the right track toward attaining state mastery levels. Therefore, the services provided thus far to the student needs to continue and be intensified, respectively.
- If the student achieved a Satisfactory Level, you need to ensure that the student is receiving appropriate instruction on how to address the short/extended performance task questions for the 2009 FCAT administration. The Interim Assessment is indicating Satisfactory Levels without these items being included; urgent attention is needed to this item.
- If the student scored at the Limited Satisfactory Level or Below Satisfactory level, immediately provide supportive intervention, via pull-out services, to address the area indicated as a weakness for the student.
- If you note students who scored at a Satisfactory level or Limited Satisfactory level on the Fall and Winter Interim Assessments who were not on the original TOP 45% list, these are to be considered your bubble science students. They should definitely be provided some pull-out services immediately. These are potential state mastery students if enriched under the right conditions during the next 30 days.

TEACHER SUPPORT IN SCIENCE

- Look at the Fall Interim Assessment and Winter Interim Assessment results by teachers in fifth, eighth, and eleventh grade who have students in TOP 45% or the bubble science students. Identify patterns of performance (Limited, Satisfactory etc.) for the students they serve. January
- If there is a pattern of growth, then allow the teacher to continue mode of instruction with just providing pull-out support for those students who regressed.
If there is a pattern of regression, then immediately redirect personnel within your building to provide additional support for that teacher in parallel or co-teaching models.

DIFFERENTIATED SUPPORT PROGRAMS TO CONSIDER FOR SCIENCE

Pull-Outs for Potential State Mastery Students in Science (all students with this level of academic performance regardless of accountability status)

- Determine the period in which these students’ electives occur.
- Sort the list of students by overall percentages in descending order (from highest to lowest) received on the Winter Interim Assessment.
- Group the students by periods in which they have electives.
- Divide the students within each period cycle in which they have electives into groups of no more than 20 students (for example, top 20, next 20, next 20 etc). Determine how many facilitators you will need during each period to implement this support.
- Use these student groups to conduct student workshops. These workshops should be facilitated by your strongest science teacher/coach/curriculum support specialist/District personnel. The time frame for these workshops should be around one hour at least twice a week (depending on the number of students in this category). A schedule should be created for these services to be delivered in a consistent and organized manner.
- An assembly should be scheduled with these students prior to starting the services in order for them to be informed of the reason why they will have to participate in this program and the benefits to their academic performance.
- A meeting should be held with the elective teachers prior to starting these services so that they are clearly aware of the procedures that will be followed to implement this support. Remember communication is KEY to the success of the initiatives.
- Utilize released assessments available on the Florida Department of Education website to teach during the student workshop. Please ensure the facilitator has the skills to maximize the instructional opportunities.
- A folder should be kept to reflect the work that is being done with the students in this category so that progress can be monitored. (Folders will be monitored ongoing.)

Whole Group Instruction Parallel Teaching Model in Science

- Should be on review mode. This review mode is not to be taken as a "student discovery time" because this time has passed.
- All "Eight Science Strands" should be revisited, re-taught and reviewed.
- Teacher-directed questioning should be at Moderate and High Complexity levels; keeping in mind that 40-60% of the test is composed of moderate complexity questions and 25-35% of the test is composed of high complexity questions.
- Reviews should be timed accordingly to the item formats and students should NOT be asked to recite the correct answer. They should explain the reasoning for the choice. The teacher needs to assure that a clear and concise understanding of the outcome that has occurred between what was asked and what the student choose as a response.
Overview of AYP
COMPONENTS USED FOR THE AYP CALCULATION

- **39 components**
  - **36 subgroups-based components:**
    - 4 measures (percent-tested math; percent-tested reading; proficiency in math; proficiency in reading) \( \times 9 \) subgroups
  - **Plus**
    - **3 school-wide components:**
      - Graduation rate
      - Writing proficiency
      - School grade

For a “YES” on AYP, a school must not fail to meet the AYP criteria for any component.

SUBGROUP CLASSIFICATIONS

AYP calculations are based upon nine subgroups:
1. Total School
2. White (W)
3. Black (B)
4. Hispanic (H)
5. Asian (A)
6. Native American (I)
7. Economically Disadvantaged Students
8. English Language Learners (ELL)
9. Students with Disabilities (SWD)

2009-2010 STATE TARGETS FOR AYP

- 95% participation rate in reading (per subgroup)
- 95% participation rate in mathematics (per subgroup)
- 72% of students proficient in reading (per subgroup)
- 74% of students proficient in mathematics (per subgroup)
- 1% improvement in writing proficiency, or 90% proficient and above (FCAT score of 3.0 or higher) – (school-wide measure)
- 1% improvement in graduation rate, or graduation rate of 85% or higher (school-wide measure)
- School grade not a D or F (school-wide measure)

CALCULATING AYP

- Percent tested (AYP) = percent of students enrolled during Survey 3 who were tested (not counting students who withdrew after Survey 3 but before testing).
- Proficiency for AYP determined via three possible ways:
Percent scoring at or above proficiency level on assessments in the current year meets annual target.

Safe Harbor - requires 10% or greater annual reduction in the percent of non-proficient students (for example, if percent non-proficient equals 80% in prior year, required reduction is 10% of 80% which equals 8%; so percent non-proficient in current year must be 72% or less).

Growth Model – determines percent of students “on track” to be proficient on a three year trajectory, based on comparison of baseline-year test scores and succeeding year scores.

WHEN CAN A SCHOOL USE SAFE HARBOR?
The Safe Harbor provision can be applied only if a school has met all four of the requirements below:

- At least 95% of students in total and in each subgroup have participated in testing.
- The school has met writing criteria.
- The school has met graduation rate criteria.
- The school grade is not D or F.

WHAT ARE THE REQUIREMENTS FOR SAFE HARBOR?
Safe Harbor requires that for each subgroup being evaluated the following are true:

- The percent of non-proficient students decrease by at least 10% from the preceding year.*
- Graduation rate criterion is met.
- Writing criterion is met.

*Example: If NP%=80% in prior year, that percentage must decrease by 10% of 80% (8%). Thus, current year NP% must be 72% or lower to meet Safe Harbor requirement.

INSTRUCTIONAL APPLICATIONS FOR AYP

- Acquire a listing of students by subgroup with FCAT scores.
- Compile these lists in scale order from highest to lowest.
- Identify what percentage is needed to meet the Safe Harbor requirement.
- Identify how many students within each subgroup need to go to a level 3 to meet the Safe Harbor requirement. Highlight these students.
- Provide interventions based on these students academic needs.
Designing an Effective School Wide Testing Plan
DESIGNING AN EFFECTIVE SCHOOL WIDE TESTING PLAN

PHYSICAL PLANT
• Identify testing area in your school site by grade level
• Keep in mind testing time intervals by grade level to facilitate traffic flow throughout your test day
• Grade levels not in testing mode should be separated as much as possible from testing groups in your building, in order to avoid disruptions throughout the test day
• Create a cleaning schedule for each of the test rooms for the custodians
• Shut down automatic bells, check air conditioners to ensure they work, ensure adequate lighting

TESTING ROOMS
• Survey each of the testing rooms to ensure that the desks and chairs are appropriate for students during a testing session
• Remove broken items and replace as needed
• Survey testing rooms for appropriate fixtures such as sharpeners and lighting
• Establish deadline to clear walls and set up testing conditions in tested rooms
• Keep in mind requirements of I.E.P.’s for testing materials such as large print exams, large size calculators

TESTING TEAM
• Identify your test administrators and test proctors
• Group your test administrators and test proctors by subject areas and grade levels
• Assign test administrators to appropriate students as needed
• Plan with your team by holding a faculty meeting with all your school personal
• Review the test schedule, lunch schedule, bath room procedures and emergency procedures with your staff
• Have your staff sign for their attendance at this planning meeting to ensure that everyone is fully vested in the process and its importance.

MEETING INDIVIDUAL STUDENT NEEDS – S.P.E.D.
• Assign your most isolated rooms to SPED students due to flexible scheduling and extended time
• Meet with cafeteria staff to ensure all students requiring flexible scheduling as an accommodation are afforded opportunity to have lunch in a secure environment
• Ensure that any one to one needs are met as required by student I.E.P.
• Ensure that I.E.P. requirements are made for required student accommodations.

MEETING INDIVIDUAL STUDENT NEEDS – E.L.L.
• Assign your most isolated rooms to ELL students due to flexible scheduling and extended time.
• Meet with cafeteria staff to ensure all students requiring flexible scheduling as an accommodation are afforded opportunity to have lunch in a secure environment.
• Ensure that ELL students are provided with dictionaries.
• Not all students use a Spanish-English dictionary; there may be students from multiple language groups.
• Give yourselves time to put in your dictionary orders before the test!
MEETING INDIVIDUAL STUDENT NEEDS

- Further identify students within the grade level by FCAT level and group them accordingly
  - Assign all retained students to similar environments at the middle and high school levels
  - Assign all lowest 25% students to similar environments
  - Assign all level 1 and 2 students to similar environments

PREPARING INDIVIDUAL STUDENTS FOR TESTING

- Run mock testing schedule to ensure that all students and staff know where to report on test day
- Repeat movement schedule on several dates to create familiarity and comfort for your students and staff
- Review and practice test taking strategies with students
- Hold mock testing session(s) to iron-out glitches before the test date

COMMUNICATION

- Develop and disseminate parent communication through January, February and March
- Hold a parent information fair to bring forward the importance of the FCAT exam to your community
- Create a schedule for counselors to meet with students that may express test anxiety
- Schedule Post Program Review conferences for ELL students who exited from the program within the last two years
- Have an emergency plan for students who become sick and ensure that this plan is clear with your entire staff

FINAL DETAILS

- Plan breakfast for test administrators and proctors
- Plan for teacher absences
- Plan for materials distribution and collection
- Plan for Tardy students
  - Always try to get students into their testing room if testing has not begun. Remember, every student tested increases your possible points for attendance
- Plan for electronic devices
- Plan non-sugar and non-peanut Treats for students
  - Protein keeps students going without crashing!
- Plan for parent emergencies
- Plan for the unexpected!
Recommended Saturday Academy Plan
ADMINISTRATIVE PROCEDURES

1) Look at your attendance rosters to determine which students have attended the program with consistency.

2) Group the consistent participants by accountability groups (lowest 25%, bubble “2”, fragile “3”, and state mastery).

3) Using the classroom walkthroughs that you have hopefully conducted during the tutorial sessions, assign the strongest teachers available to the groups mentioned above.

4) These groupings should not be interrupted by new student registrations. You should use other classes where students who are not attending tutorial sessions with consistency can be placed to avoid instructional interruptions.

5) School coaches should review the block framework to be used with the teachers, the focus of the lessons going to be delivered, best practice instructional strategies that should be utilized, and expectation. THIS IS IMPORTANT TO MAINTAIN THE RIGHT LEVEL OF RIGOR IN THE INSTRUCTION.

READING

After reviewing the Winter 2010 Interim Assessment Data and seeing the group averages by clusters, it is recommended that you follow the scope and sequence below for the focused instruction.

<table>
<thead>
<tr>
<th>Reading Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1: Words and Phrases in Context</td>
</tr>
<tr>
<td>Cluster 2: Main Idea, Plot, and Purpose</td>
</tr>
<tr>
<td>Cluster 1: Words and Phrases in Context</td>
</tr>
<tr>
<td>Cluster 3: Comparisons and Cause and Effect</td>
</tr>
<tr>
<td>Cluster 1: Words and Phrases in Context</td>
</tr>
<tr>
<td>Cluster 4: Reference and Research</td>
</tr>
<tr>
<td>Cluster 1: Words and Phrases in Context</td>
</tr>
<tr>
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</tr>
<tr>
<td>Cluster 1: Words and Phrases in Context</td>
</tr>
<tr>
<td>Cluster 3: Comparisons and Cause and Effect</td>
</tr>
<tr>
<td>Cluster 1: Words and Phrases in Context</td>
</tr>
<tr>
<td>Cluster 4: Reference and Research</td>
</tr>
<tr>
<td>Review Clusters 1-4</td>
</tr>
<tr>
<td>Cluster 1: Words and Phrases in Context</td>
</tr>
<tr>
<td>Cluster 2: Main Idea, Plot, and Purpose</td>
</tr>
<tr>
<td>Cluster 3: Comparisons and Cause and Effect</td>
</tr>
<tr>
<td>Cluster 4: Reference and Research</td>
</tr>
</tbody>
</table>
• Teachers should have the passages being used on transparencies so they can model the instructional strategies visually for the students.
• Teachers should receive the materials they will be using one week prior to implementing them in order to adequately prepare. Then, during the planning hour prior to the session starting, the coaches of the school should be available to provide guidance to the teachers as needed to ensure an effective instructional period is achieved.

MATHMATICS

After reviewing the Winter 2009 Interim Assessment Data and seeing the group averages by clusters, it is recommended that the principals follow the scope and sequence below for the focused instruction.

<table>
<thead>
<tr>
<th>Mathematics Strands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strand 1: Number Sense, Concepts, and Operations</td>
</tr>
<tr>
<td>Strand 2: Measurement</td>
</tr>
<tr>
<td>Strand 3: Geometry and Spatial Sense</td>
</tr>
<tr>
<td>Strand 4: Algebraic Thinking</td>
</tr>
<tr>
<td>Strand 5: Data Analysis and Probability</td>
</tr>
</tbody>
</table>

Review Strands 1-5

| Strand 1: Number Sense, Concepts, and Operations |
| Strand 2: Measurement                          |
| Strand 3: Geometry and Spatial Sense           |
| Strand 4: Algebraic Thinking                  |
| Strand 5: Data Analysis and Probability        |

<table>
<thead>
<tr>
<th>Review Strands 1-5</th>
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<td>Strand 5: Data Analysis and Probability</td>
</tr>
</tbody>
</table>

• Teachers should have the passages being used on transparencies so that they can model the instructional strategies visually for the students.
• Teachers should receive the materials they will be using one week prior to implementing them in order to adequately prepare. Then, during the planning hour prior to the session starting, the coaches of the school should be available to provide guidance to the teachers as needed to ensure an effective instructional period is achieved.
General Appendix
Information for Principals
STATE RELEASED INSTRUCTIONAL TOOLS FOR EDUCATORS

Florida Item Specifications

According to the Florida Department of Education, the Specifications are designed to be broad enough to ensure that test items will be developed to measure the concepts presented in each benchmark. The Specifications for Grades 3–10 is a resource document that all item writers and reviewers should use to define the content and format of test items and should serve as a source of information about FCAT design for educators and the general public.

Overall considerations are broad item development issues that should be addressed during the development of test items and performance tasks. Other sections of the General Specifications relate more specifically to one aspect of the development (for example, individual item types or content limits).

Lessons Learned


Florida Reads! Florida Inquires! Florida Solves! Florida Writes! Reports


For the FCAT Science, FCAT Reading, and FCAT Mathematics tests, student reports summarize the total number of points possible on the performance tasks and the number of points each student earned. The three publications, Florida Inquires!, Florida Reads!, and Florida Solves!, include general information about the holistic scoring method used to score the FCAT, scoring rubrics, the actual short-response task as it appeared in FCAT 2007, an example of a top-score response for that test item, ten sample student responses that illustrate the score points, and annotations for each sample student response.
For the FCAT Writing+ tests administered in spring 2007, student reports include an essay score based on a six-point scoring rubric. The three Florida Writes! publications provide general information about the holistic scoring method, scoring rubrics, descriptions of the prompt, sample student responses that illustrate each score point, and annotations for each sample student response.

Therefore, it is imperative that all principals ensure that each of the teachers in tested grades have been provided a copy of documents mentioned above for their respective grade and subject. These documents (if have not been disseminated already) should be provided in a learning community environment with a facilitator who is very proficient in the appropriate use of these documents to enhance the instructional delivery in the classrooms, in the enrichment push-in/pull-out programs, and in the intervention push-in/pull-out programs. This should also be given to teachers who are working in the recommended Saturday Tutorials (don’t assume they have from their home schools).

**READING**

**GENERAL INFORMATION**

Principals are to keep in mind the following information as they plan for this crucial time:

1. These two kinds of passages serve as the basis for the two reading subscores on FCAT: Constructs Meaning from Literature and Constructs Meaning from Informational Text.
2. As shown below, the approximate percentage of each type of passage at each grade changes gradually across grades.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Literary Text</th>
<th>Informational Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>4</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>5</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>6</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>7</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>8</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>9</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>10</td>
<td>30%</td>
<td>70%</td>
</tr>
</tbody>
</table>

3. Literary text allows a focus on the text as a work of art with language as its medium. It provides entertainment or inspiration and includes fiction, nonfiction, poetry, and drama. Passages representing literary text should address a variety of themes appropriate for and interesting to students at the designated grade level. Excerpts from literary text must contain all of the qualities of good literature.
4. Informational passages must include a variety of grade-appropriate information sources, both primary and secondary. They should address the Sunshine State Standards subject areas that are not directly assessed by FCAT: science, social studies, foreign language, the arts, health education, and physical education.
5. Passage length should vary within grade levels. The table below suggests approximate average length of passages.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range of Number of Words per Passage</th>
<th>Average of Number of Words Per Passage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>100-700</td>
<td>350</td>
</tr>
<tr>
<td>4</td>
<td>100-900</td>
<td>400</td>
</tr>
<tr>
<td>5</td>
<td>200-900</td>
<td>450</td>
</tr>
<tr>
<td>6</td>
<td>200-1000</td>
<td>500</td>
</tr>
<tr>
<td>7</td>
<td>300-1100</td>
<td>600</td>
</tr>
<tr>
<td>8</td>
<td>300-1100</td>
<td>700</td>
</tr>
<tr>
<td>9</td>
<td>300-1400</td>
<td>800</td>
</tr>
<tr>
<td>10</td>
<td>300-1700</td>
<td>900</td>
</tr>
</tbody>
</table>

**KNOWLEDGE AND SKILLS TESTED**

**Table 6: Approximate Percentage Distribution of Raw Score Points Across FCAT Reading Content Clusters by Grade Level**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Words and Phrases In Context</th>
<th>Main Idea, Plot, and Purpose</th>
<th>Comparison and Cause/Effect</th>
<th>Reference and Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>3–5</td>
<td>15–20%</td>
<td>30–55%</td>
<td>20–45%</td>
<td>5–15%</td>
</tr>
<tr>
<td>6–8</td>
<td>15–20%</td>
<td>30–55%</td>
<td>15–25%</td>
<td>10–30%</td>
</tr>
<tr>
<td>9–10</td>
<td>15–20%</td>
<td>20–50%</td>
<td>10–25%</td>
<td>20–40%</td>
</tr>
</tbody>
</table>
At Grades 3, 4, and 5, FCAT Reading assesses the following skills:

**Words and Phrases in Context**
- uses strategies to increase vocabulary through word structure clues (prefixes, suffixes, roots), word relationships (antonyms, synonyms), and words with multiple meanings
- uses context clues to determine word meanings

**Main Idea, Plot, and Purpose**
- determines main idea or essential message in a text
- identifies relevant details and facts
- recognizes and arranges events in chronological order
- identifies author’s purpose in a text
- understands plot development and conflict resolution in a story

**Comparisons and Cause/Effect**
- recognizes the use of comparison and contrast
- recognizes cause-and-effect relationships
- identifies similarities and differences among characters, settings, and events in various texts

**Reference and Research**
- uses maps, charts, photos, or other multiple representations of information
- reads, organizes, and interprets written information for various purposes, such as making a report, conducting an interview, taking a test, or performing a task

At Grades 6, 7, and 8, FCAT Reading assesses the following skills:

**Words and Phrases in Context**
- uses various strategies, including contextual and word structure clues, to analyze words and text
- draws conclusions from a reading text

**Main Idea, Plot, and Purpose**
- determines the stated or implied main idea or essential message in a text
- identifies relevant details and facts
- recognizes organizational patterns
- identifies and uses the author’s purpose and point of view to construct meaning from text
- recognizes persuasive text
- recognizes and understands how literary elements support text (e.g., character and plot development, point of view, tone, setting, and conflicts and resolutions)

**Comparisons and Cause/Effect**
- recognizes comparison and contrast
- recognizes cause-and-effect relationships

**Reference and Research**
- locates, organizes, and interprets written information for a variety of purposes
- synthesizes information within or across texts
- checks validity and accuracy of research information
- synthesizes strong versus weak arguments
CRITERIA FOR FCAT READING TEST ITEMS

The FCAT reading test includes three kinds of test items: multiple-choice items (MC), short-response performance tasks (SR), and extended-response performance tasks (ER). The short- and extended-response tasks are called “Read, Think, and Explain” performance tasks. The general specifications on pages 9 through 12 cover the following criteria for FCAT tests:

- Cognitive Levels
- Item Style
- Format Scope of Items

ITEM DIFFICULTY AND COGNITIVE LEVELS

The degree of challenge of FCAT multiple-choice items is currently categorized in two ways: **item difficulty** and **cognitive complexity**. Item difficulty has two meanings, depending on the stage of item development. Before testing, item difficulty is a prediction of the percentage of students who will choose the correct answer. After testing, item difficulty refers to the percentage of students who actually chose the correct answer. Items for which the correct answer is chosen by more than 70 percent of the students are considered easy. Items for which the correct answer is chosen by 40–70 percent of the students are considered average. Items for which the correct answer is chosen by less than 40 percent of the students are considered challenging.
The categories—low complexity, moderate complexity, and high complexity—form an ordered description of the demands an item may make on a student. For example, low complexity items may require a student to solve a one-step problem. Moderate complexity items may require multiple steps. High complexity items may require a student to analyze and synthesize information. The distinctions made in item complexity ensure that items will assess the depth of student knowledge at each benchmark. The intent of the item writer weighs heavily in determining the complexity of an item.

<table>
<thead>
<tr>
<th>Grades</th>
<th>Low Level (Approximate Percentages)</th>
<th>Moderate Level (Approximate Percentages)</th>
<th>High Level (Approximate Percentages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>25–35</td>
<td>50–70</td>
<td>5–15</td>
</tr>
<tr>
<td>4*</td>
<td>20–30</td>
<td>50–70</td>
<td>10–20</td>
</tr>
<tr>
<td>5–7</td>
<td>15–25</td>
<td>50–70</td>
<td>15–25</td>
</tr>
<tr>
<td>8*</td>
<td>10–20</td>
<td>50–70</td>
<td>20–30</td>
</tr>
<tr>
<td>9</td>
<td>10–20</td>
<td>50–70</td>
<td>20–30</td>
</tr>
<tr>
<td>10*</td>
<td>10–20</td>
<td>45–65</td>
<td>25–35</td>
</tr>
</tbody>
</table>

**ITEM STYLE AND FORMAT**

FCAT items should be clear and concise and should use vocabulary and sentence structure appropriate for the grade level.

Whenever possible, item stems should be expressed as questions. Full capitalization should be used to emphasize key words as appropriate for the grade level being tested (e.g., LEAST, EXCEPT, NOT, FIRST, BEST).

An equal balance of male and female names should be used, including names representing different racial and/or ethnic groups appropriate for Florida.

For all grades, story, article, passage, or poem—whichever is appropriate—is used when referring to reading selections. For grades 7, 8, 9, and 10, excerpt is used if the reading selection is an excerpt from a book or other material.

Especially in grades 3, 4, and 5, use the words ALIKE and DIFFERENT in items calling for comparison or contrast.

**Multiple-Choice (MC) Items** 1 minute per item to solve

- Multiple-choice items are used in grades 3 through 10. Grades 3, 5, 6, 7, and 9 use only multiple-choice items.
- Multiple-choice items are worth one point each and should take approximately one minute per item to answer.
- Items have four answer choices (A, B, C, D or F, G, H, I).
- During item development and review, the correct response for each item should be indicated with an asterisk next to the letter of that response.
- In most cases, response choices should be parallel in concept and format and should be arranged vertically beneath the item stem.
- Each student response is recorded on a scannable document that is machine scored.

**Read, Think, and Explain Performance Tasks**

Performance tasks are used in grades 4, 8, and 10 and consist of two types: short-response (SR) tasks and extended-response (ER) tasks. Each student response is scored by at least two trained raters using scoring guidelines, rubrics, and anchor papers.

**TASKS SHORT-RESPONSE (SR)**

1. SR tasks should take approximately **3 to 5 minutes per item to complete**.
2. ER tasks are worth 2 points. Students earn a score of 0, 1, or 2 points depending on the completeness and accuracy of their responses.
3. The tasks require the student to write a short text-based response to a question or statement (e.g., briefly describing why a character takes a certain action in a story).
4. A scoring rubric and a sample top-score response must be provided for each item.

**EXTENDED-RESPONSE (ER) TASKS**

1. ER tasks should take approximately **10 to 15 minutes per item to complete**.
2. ER tasks are worth 4 points. Students earn a score of 0, 1, 2, 3, or 4 points depending on the completeness and accuracy of their responses.
3. These tasks require a longer text-based student response to a question (e.g., comparing two passages or describing how a character changes throughout a passage).
4. A scoring rubric and a sample top-score response must be provided for each item.

**FCAT RUBRICS**

Rubrics are the scoring guidelines or criteria used to evaluate all FCAT Reading, Mathematics, and Science performance tasks and FCAT Writing essays. The rubric describes what is required for each possible score point. Six separate documents provide rubrics for FCAT Reading, Mathematics, and Science, and three separate documents provide rubrics for FCAT Writing.

FCAT rubrics are available for download at [http://fcat.fldoe.org/rubrcpag.asp](http://fcat.fldoe.org/rubrcpag.asp).
MATHEMATICS

GENERAL INFORMATION
Principals are to keep in mind the following information as they plan for this crucial time:

1. Each item should be written to measure primarily one benchmark; however, other benchmarks may also be reflected in the item content.
2. When benchmarks are combined for assessment, the individual specification indicates which benchmarks are combined.
3. Items should be appropriate for students in terms of grade-level difficulty, cognitive complexity, and reading level.
4. At a given grade level, the test items will exhibit a varied range of difficulty.
5. For mathematics items, the reading level should be approximately one grade level below the grade level of the test, except for specifically assessed mathematical terms or concepts.
6. Items should not provide an advantage or disadvantage to a particular group of students. Items should not exhibit or reflect disrespect to any segment of the population with regard to age, gender, race, ethnicity, language, religion, socioeconomic status, disability, or geographic region.
7. At Grades 3–6, all items should be written so they can be answered without using a calculator. At Grades 7–10, students are allowed to use a four-function calculator, although items should still be written to be answered easily without a calculator within the timing guidelines for each item type.
8. Items may require the student to apply mathematical knowledge described in the Sunshine State Standards benchmarks from lower grades.
9. Some items should provide information for students to analyze and use in order to respond to the items.
10. Items should provide clear and complete instructions to students.
11. Each item should be written to clearly and unambiguously elicit the desired response.
12. A reference sheet of appropriate formulas and conversions is provided to students in Grades 6–10 for use during testing. Copies of the reference sheets are included after the General Content Limits section of this document.
13. If formulas are needed in Grades 3–5, they should be included with the item.

KNOWLEDGE AND SKILLS TESTED

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number Sense, Concepts, and Operations</th>
<th>Measurement</th>
<th>Geometry and Spatial Sense</th>
<th>Algebraic Thinking</th>
<th>Data Analysis and Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>30%</td>
<td>20%</td>
<td>17%</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>4</td>
<td>28%</td>
<td>20%</td>
<td>17%</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>5–8</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>9–10</td>
<td>17%</td>
<td>17%</td>
<td>25%</td>
<td>25%</td>
<td>16%</td>
</tr>
</tbody>
</table>
Mathematics Content Tested

FCAT Mathematics assesses the following skills at Grades 3–10:

**Number Sense, Concepts, and Operations**
- identifies operations (+, −, ×, ÷) and the effects of operations
- determines estimates
- knows how numbers are represented and used

**Measurement**
- recognizes measurements and units of measurement
- compares, contrasts, and converts measurements

**Geometry and Spatial Sense**
- describes, draws, identifies, and analyzes two- and three-dimensional shapes
- visualizes and illustrates changes in shapes
- uses coordinate geometry

**Algebraic Thinking**
- describes, analyzes, and generalizes patterns, relations, and functions
- writes and uses expressions, equations, inequalities, graphs, and formulas

**Data Analysis and Probability**
- analyzes, organizes, and interprets data
- identifies patterns and makes predictions, inferences, and valid conclusions
- uses probability and statistics

FCAT Mathematics includes four types of test items: multiple-choice items (MC), gridded-response items (GR), short-response performance tasks (SR), and extended-response performance tasks (ER). The SRs and ERs are called “Think, Solve, Explain” performance tasks. The general specifications on pages 3 through 15 cover the following criteria for the FCAT:

- Use of Graphics
- Item Style and Format
- Scope of Items
- Cognitive Complexity of Mathematics Items
- Universal Design
- Guidelines for Item Writers
- Benchmark Classification System

**USE OF GRAPHICS**

Graphics are used extensively in the FCAT to provide both necessary and supplemental information. That is, some graphics contain information that is necessary for answering the question, while other graphics illustrate or support the context of the question. The benchmarks
assessed by the FCAT require different levels of graphics and illustrations. For example, the mathematics strand “Geometry and Spatial Sense” depends heavily upon graphics to present geometric concepts and/or properties required for answering a question. In contrast, items or tasks in other strands may contain graphics or pictures that illustrate and enhance interest but are not required to answer the question.

Most of the individual benchmark specifications in the Specifications indicate the extent to which graphics should be used to support test items and performance tasks developed for the benchmark. When no reference is made to the use of graphics, graphics are not necessary, even though they may be used.

**ITEM STYLE AND FORMAT**

This section presents stylistic guidelines and formatting directions that should be followed while developing test items. Guidelines are provided separately for each type of item to be developed.

**General Guidelines**

1. Items should be clear and concise, and they should use vocabulary and sentence structure appropriate for the grade level being assessed.
2. The final sentence of any MC or GR item stem must be expressed as a question.
3. If an item or task asks a question involving the word “not,” the word “not” should be emphasized by all uppercase letters (e.g., “Which of the following is NOT an example of . . .”).
4. For performance tasks (SR and ER items) that require estimation strategies, all uppercase letters should be used for the words ESTIMATE and ESTIMATION. For MC and GR items that refer to an estimate (noun), lowercase letters should be used.
5. As appropriate, boldface type should be used to emphasize key words in items (e.g., least, most, greatest, percent, mode, median, mean, range, etc.).
6. Masculine pronouns should NOT be used to refer to both sexes. Plural forms should be used whenever possible to avoid gender-specific pronouns (e.g., instead of “The student will make changes so that he . . . ,” use “The students will make changes so that they . . .”).
7. An equal balance of male and female names should be used, including names representing different ethnic groups appropriate for Florida.
8. For clarity, operation symbols, equality signs, and ordinates should be preceded and followed by one space.
9. Decimal numbers between -1 and 1 (including currency) should have a leading zero. Metric numbers should be expressed in a single unit when possible (e.g., 1.4 kilograms instead of 1 kilogram 400 grams).
10. Decimal notation should be used for numbers with metric units (e.g., 1.2 grams instead of 11\_5 grams).
11. The comma should be used in a number greater than or equal to 1,000 unless the number indicates a metric unit. Metric numbers with four digits should be presented without a comma or a space (e.g., 9960 meters). For metric numbers with more than four digits, a thin space should be inserted in place of a comma (e.g., 10 123 kilograms).
12. Units of measure should be spelled out, except in graphics where an abbreviation may be used (e.g., ft or yd). Abbreviations that also spell a word must be punctuated to avoid confusion. For example, to avoid confusion with the preposition “in,” the abbreviation “in.” should be used for the unit of measure “inches.” If an abbreviation is used in a graphic, an explanation of the meaning of the abbreviation should be included in the stem.
13. In titles for tables and charts and in labels for axes, the units of measure should be included, preferably in lowercase in parentheses [e.g., height (in inches)].

14. Fractions should be typed with a horizontal fraction bar. The numerator and denominator should be centered with respect to each other. The bar should cover all portions (superscripts, parentheses, etc.) of the numerator and denominator. In a mixed number, a half space should appear between the whole number and the fraction. If a variable appears before or after a fraction bar, the variable should be centered with respect to the fraction bar. If a stimulus, stem, or set of responses contains a fraction in fractional notation, that portion of the item should be 1.5-spaced.

15. In general, numbers zero through nine should be presented as words, and numbers 10 and above should be presented as numerals. In the item stem, any numbers needed to compute answers should be presented as numerals.

**MULTIPLE-CHOICE (MC) ITEMS**

1. MC items should take an average of 1 minute per item to solve.
2. MC items are worth 1 point each.
3. MC items should have four answer choices (A, B, C, D or F, G, H, I for alternating items).
4. During item development and review, the correct response should be indicated with a star next to the answer choice letter.
5. During item development and review, the rationale for distractors (incorrect answer choices) should be indicated and set off in brackets.
6. In most cases, answer choices should be arranged vertically beneath the item stem.
7. If four graphics are labeled horizontally or vertically and horizontally, the labeling should be as follows (Grade 4 graphics should not be stacked.).
8. If the answer choices for an item are strictly numerical, they should be arranged in ascending or descending order, with the place values of digits aligned. When the item requires the identification of relative size or magnitude, choices should be arranged as they are presented in the item stem.
9. If the answer choices for an item are neither strictly numerical nor denominate numbers, the choices should be arranged by the logic presented in the question or by length.
10. Distractors should represent computational or procedural errors commonly made by students who have not mastered the assessed concepts. Each distractor should be a believable answer for someone who does not really know the correct answer.
11. Outliers (i.e., answer choices that are longer phrases or sentences than the other choices, or choices with significantly more/fewer digits than the other choices) should NOT be used.
12. Responses such as “None of the Above,” “All of the Above,” and “Not Here” should NOT be used.
13. Responses such as “Not Enough Information” or “Cannot Be Determined” should NOT be used unless they are a part of the benchmark being assessed. They should not be used as distractors for the sake of convenience.
14. If a response is a phrase, the phrase should start with a lowercase letter. No period should be used at the end of a phrase.
15. If a response is a sentence, the sentence should be conventionally capitalized and punctuated.
GRIDDED-RESPONSE (GR) ITEMS

1. GR items should take an average of 1.5 minutes per item to complete.
2. GR items are worth 1 point each.
3. The bubble grids used with GR items contain either four or five columns. Each column contains the digits 0 through 9 enclosed in bubbles.
4. The GR format is designed for items that require a positive numeric solution (whole numbers, decimals, percents, or fractions).
5. Multiple formats (e.g., equivalent fractions and decimals) are acceptable for items as long as each form of the correct response can be recorded in the grid.
6. Four-column grids are used for Grade 5 and may be preceded with a dollar sign ($) or followed by a percent sign (%), as appropriate.
7. Special grids are provided at Grade 5 for gridding decimal numbers and currency. The decimal grid is five columns wide with a fixed decimal point in the middle. That is, there are two columns preceding the column with the decimal and two columns following it. The currency grid is the same as the decimal grid with a dollar sign ($) preceding it.
8. Grades 6 through 10 use a five-column grid that includes the digits 0 through 9 plus two symbols: the decimal point (.) and the slash (/) for gridding fractions.
9. Both four- and five-column grids include light shading in alternate columns. Shading should not interfere with students' ability to read the numbers inside each column.
10. GR items should include instructions that specify the unit in which the answer is to be provided (e.g., inches).
11. GR items are written with consideration for the number of columns in the grid.

THINK, SOLVE, EXPLAIN PERFORMANCE TASKS

Two types of performance tasks are used: short-response (SR) and extended-response (ER). Instructions for completing each task should be provided in the test book.

Trained scorers score each student response using rubrics, top-score responses, and anchor papers. The materials used to train scorers include examples that illustrate each possible score point. These examples are called rangefinders or anchor papers.

The response space will vary according to the demands of individual performance tasks. Adequate space must be allotted for students to respond thoroughly to the task. Response areas may include coordinate planes, lines, graphics, and/or open space.

SHORT-RESPONSE (SR) TASKS

1. SR tasks should take approximately 3 to 5 minutes per item to complete.
2. SR tasks are worth 2 points. Students earn a score of 0, 1, or 2 points depending on their responses.
3. Items should be written so that students are prompted to include in responses solutions to the problem, the procedures used to solve the problem, an explanation of the methods needed or used to solve the problem, and/or a justification or reason for the method used to solve the problem.
4. Items should be written so that students have opportunities to solve the problems by using different approaches.
5. The appropriate scoring rubric and an example of a top-score response should be provided for each item.
EXTENDED-RESPONSE (ER) TASKS

1. ER tasks should take approximately **10 to 15 minutes per item to complete**.
2. ER tasks are worth 4 points. Students earn a score of 0, 1, 2, 3, or 4 points depending on their responses.
3. Items should be written to include multiple, related steps.
4. Items should be written so that students are prompted to include in responses solutions to the problem, the procedures used to solve the problem, an explanation of the methods needed or used to solve the problem, and/or a justification or reason for the method used to solve the problem.
5. Items should be written so that students have opportunities to solve the problems by using different approaches.
6. The appropriate scoring rubric and an example of a top-score response should be provided for each item.

CALCULATORS, REFERENCE SHEETS, AND RULERS

Items for Grades 3–6 are designed to not require calculators, and students in those grades may not use them. In Grades 7–10, four-function calculators are provided to all students for use on all items in all testing sessions. Visually impaired students in these grades are provided with “talking calculators.” A reference sheet of appropriate formulas and conversions is provided to students in Grades 6–10 for use during testing. If any formula is needed in Grades 3–5, the appropriate formula is included with the test item. Although rulers may be used on the NRT portion of the FCAT, they are not required and may not be used during FCAT Mathematics.

FCAT RUBRICS

Rubrics are the scoring guidelines or criteria used to evaluate all FCAT Reading, Mathematics, and Science performance tasks and FCAT Writing essays. The rubric describes what is required for each possible score point. Six separate documents provide rubrics for FCAT Reading, Mathematics, and Science, and three separate documents provide rubrics for FCAT Writing. FCAT rubrics are available for download at [http://fcat.fldoe.org/rubrcpag.asp](http://fcat.fldoe.org/rubrcpag.asp).

COGNITIVE COMPLEXITY OF MATHEMATICS ITEMS

The benchmarks in the *Sunshine State Standards* identify knowledge and skills students are expected to acquire at each level, with the underlying expectation that students also demonstrate critical thinking. Goal 3, Standard 4, of *Florida’s System of School Improvement and Accountability* makes this expectation clear: “Florida students use creative thinking skills to generate new ideas, make the best decisions, recognize and solve problems through reasoning, interpret symbolic data, and develop efficient techniques for lifelong learning.” FCAT test items, while assessing *Sunshine State Standards* benchmarks, must also reflect this goal and standard. It is important to develop items that elicit the complexity of knowledge and skills required to meet these objectives.
The degree of challenge of FCAT items is currently categorized in two ways, item difficulty and cognitive complexity. Item difficulty has two meanings, depending on the stage of item development. At the item review stage (before use on the test), item difficulty is a prediction of the percentage of students who will choose the correct answer. After item review, item difficulty refers to the percentage of students who actually chose the correct answer.

Items for which students will choose the correct answer more than 70 percent of the time are considered easy. Items for which students will choose the correct answer 40–70 percent of the time are considered average. Items for which students will choose the correct answer less than 40 percent of the time are considered challenging.

Cognitive complexity refers to the cognitive level associated with the item. Since the inception of the FCAT, Bloom’s Taxonomy has been used for this purpose; however, Bloom’s Taxonomy is difficult to use because it requires an inference about the skill, knowledge, and background of the students responding to the item. Beginning in 2004, a new cognitive classification system will be used that is based largely upon Dr. Norman L. Webb’s work with “Depth of Knowledge” levels. The rationale for classifying items by their level of complexity is to focus on the mathematical expectations of the item, not the mathematical ability of the student. The demands on thinking that an item makes—what the item requires the student to recall, understand, reason about, and do—are made with the assumption that the student is familiar with the mathematics of the task. If a student has not learned the particular mathematics at hand, the task is more apt to have varied and heavier demands, and the student may not be as successful with it. Items are chosen for the FCAT based on the Sunshine State Standards and their grade-level appropriateness, but the complexity of the items remains independent of the particular curriculum a student has experienced.

The categories—low complexity, moderate complexity, and high complexity—form an ordered description of the demands an item may make on a student. For example, items at the low level of complexity may ask a student to solve a one-step problem. At the moderate level, an item may ask the student to extend a pattern or retrieve information from a graph and use it to solve a problem. At the high level, an item may ask a student to perform a procedure having multiple steps and multiple decision points. The distinctions made in item complexity are intended to provide a balance across the tasks administered at each grade level.

### Percentage of Points by Cognitive Complexity Level for FCAT Mathematics

<table>
<thead>
<tr>
<th>Grades</th>
<th>Low Level (Approximate Percentages)</th>
<th>Moderate Level (Approximate Percentages)</th>
<th>High Level (Approximate Percentages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3–4</td>
<td>25–35</td>
<td>50–70</td>
<td>5–15</td>
</tr>
<tr>
<td>5*</td>
<td>10–20</td>
<td>50–70</td>
<td>20–30</td>
</tr>
<tr>
<td>6–7</td>
<td>10–20</td>
<td>60–80</td>
<td>10–20</td>
</tr>
<tr>
<td>8*</td>
<td>10–20</td>
<td>50–70</td>
<td>20–30</td>
</tr>
<tr>
<td>9</td>
<td>10–20</td>
<td>60–80</td>
<td>10–20</td>
</tr>
<tr>
<td>10*</td>
<td>10–20</td>
<td>50–70</td>
<td>20–30</td>
</tr>
</tbody>
</table>
SCIENCE

GENERAL INFORMATION
Principals are to keep in mind the following information as they plan for this crucial time:

Effective science learning enables students to connect and apply science concepts and processes to everyday events. Learning science actively engages students in the world around them and should enable them to:

• engage in quantitative and qualitative observations;
• investigate thoughtful questions;
• make logical predictions;
• design and conduct experiments and other types of investigations;
• collect and organize data;
• offer reasonable explanations;
• explore possible conclusions;
• communicate their understanding; and
• make well-reasoned, data-based decisions and communicate them effectively.

Science literacy depends on the knowledge and integration of facts into larger constructs and on the use of scientific tools, procedures, and reasoning processes for an increased understanding of the universe. Rather than concentrating on facts in isolation, the statewide science assessment in Florida reflects the organization and structure of scientific knowledge and the nature of science. For FCAT Science testing and reporting purposes, the Sunshine State Standards are grouped into four equally weighted clusters: physical and chemical sciences, earth and space sciences, life and environmental sciences, and scientific thinking. While some benchmarks have been identified for annual assessment, most benchmarks will be assessed using content-sampling methods (sampled across different years of the test). Benchmarks are identified as annually assessed (AA) or content sampled (CS) in the grade-level Chart of Benchmarks and Appendix B.

OVERALL CONSIDERATIONS

1. Each item should be written to measure primarily one benchmark; however, other benchmarks may also be reflected in the item content. When benchmarks are combined for assessment, the individual specification indicates this relationship.
2. Items should be appropriate for students in terms of grade-level difficulty, life experiences, and reading level.
3. Items may not be limited to the related terms defined in the glossary (Appendix D). Terms in the glossary were identified by Florida educators as essential to assessing the Science Sunshine State Standards. While the glossaries for Grades 5, 8, and 10 define terms students are required to understand, they have not been written in grade-appropriate language. Not all science vocabulary words are listed, since it is assumed they will be in the frame of knowledge for students in Grade 5, 8, or 10.
4. At a given grade, items should range in difficulty from easy to challenging.
5. The items should be written with reading levels approximately one grade level below the grade level of the test.
6. Items should not disadvantage or show disrespect to any segment of the population in regard to age, gender, race, ethnicity, language, religion, socioeconomic status, disability, or geographic region.

7. At Grade 5, all items should be written so they can be answered without using a calculator. At Grades 8 and 10, students will be allowed to use the FCAT calculator, although items will not require its use.

8. Some items may require the student to apply previously acquired scientific knowledge from lower grade levels.

9. Some items should provide experimental data, processes, or information for students to analyze and use in their response.

10. Items should provide clear and complete instructions to students.

11. Each item should be written clearly and unambiguously to elicit the desired response.

12. Reference sheets of appropriate formulas and conversions are provided to students in Grades 8 and 10 during testing. Copies of the reference sheets are included after the Content Limits by Grade section of this document.

13. If formulas are needed in Grade 5, they should be included with each item.

**KNOWLEDGE AND SKILLS TESTED**

FCAT Science measures student achievement of the science benchmarks contained in the *Sunshine State Standards* at Grades 5, 8, and 11. The eight science strands found in the *Standards* are grouped into four reporting clusters: (1) Physical and Chemical Sciences; (2) Earth and Space Sciences; (3) Life and Environmental Sciences; and (4) Scientific Thinking. Items in all clusters may require scientific thinking, although success on the first three clusters depends primarily upon content knowledge. Items classified as Scientific Thinking may be presented in the context of another cluster, but success on these items depends primarily on scientific thinking skills rather than content knowledge. At all three grade levels tested, score points are distributed approximately evenly across the four clusters.
Science Content Tested

At Grade 5, FCAT Science annually assesses the following skills:

**Physical and Chemical Sciences**
- understands that matter can be described, classified, and compared
- traces the flow of energy in a system
- identifies the differences between renewable and non-renewable energy sources
- describes, predicts, and measures the types of motion and effects of forces
- identifies the types of force that act upon an object

**Earth and Space Sciences**
- understands that changes in climate, geological activity, and life forms can be traced and compared
- recognizes that Earth’s systems change over time
- identifies the cause of the phases of the Moon and seasons
- recognizes the role of Earth in the vast universe

**Life and Environmental Sciences**
- understands that living things are different but share similar structures
- recognizes that many characteristics of an organism are inherited
- explains the relationship and interconnectedness of all living things to their environments
- understands that plants use carbon dioxide, minerals, and sunlight to produce food (photosynthesis)

**Scientific Thinking**
- uses scientific methods and processes to solve problems
- recognizes that most natural events occur in consistent patterns
- understands the interdependence of science, technology, and society

At Grade 8, FCAT Science annually assesses the following skills:

**Physical and Chemical Sciences**
- recognizes the differences between solids, liquids, and gases
- contrasts physical and chemical changes
- identifies atomic structures
- recognizes properties of waves
- describes how energy flows through a system
- describes, measures, and predicts the types of motion and effects of force

**Earth and Space Sciences**
- recognizes that forces within and on Earth result in geologic structures, weather, erosion, and ocean currents
- explains the relationship between the Sun, Moon, and Earth
- understands that activities of humans affect ecosystems
- compares and contrasts characteristics of planets, stars, and satellites

**Life and Environmental Sciences**
- identifies the structure and function of cells
- compares and contrasts structures and functions of living things
- understands the importance of genetic diversity
- recognizes how living things interact with their environments

**Scientific Thinking**
- uses scientific methods and processes to solve problems
- recognizes that most natural events occur in consistent patterns
- understands the interdependence of science, technology, and society
At Grade 11, FCAT Science annually assesses the following skills:

**Physical and Chemical Sciences**
- describes and explains the structure of an atom and its interactions with other atoms
- recognizes and explains chemical reactions
- describes how energy flows through a system
- describes, measures, and predicts the types of motion and effects of force

**Earth and Space Sciences**
- recognizes that forces within and on Earth result in geologic structures, weather, erosion, and ocean currents
- identifies and explains the interconnectedness of Earth’s systems
- understands that human activities affect ecosystems
- compares and contrasts characteristics of planets, stars, and satellites

**Life and Environmental Sciences**
- compares and contrasts the structure and function of major body systems
- recognizes that structures, physiology, and behaviors of living things are adapted to their environments
- identifies and explains the role of DNA
- explains the relationship and interdependence of all living things and their environments

**Scientific Thinking**
- uses scientific methods and processes to solve problems
- recognizes that most natural events occur in consistent patterns
- understands the interdependence of science, technology, and society

### TEST CONTENT AND FORMAT

FCAT Science includes multiple-choice and short-and extended-response performance tasks at all three grade levels. Gridded response items are also included at Grades 8 and 11. Performance tasks, scored with two- or four-point rubrics, require students to explain the scientific concept or process used to determine the answer and to provide the answer in their own words. A short-response item may ask the student to explain a scientific concept. An extended-response item (shown at right) requires a longer, more detailed response, such as describing the steps to use in an experiment. Performance task answer spaces may include blank work space, charts, drawings, or lined answer space, based on what is required to answer the item.

### Table 10: Number of Science Items per Item Type and Total Test Time by Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Multiple-Choice</th>
<th>Gridded-Response</th>
<th>Performance Tasks</th>
<th>Total Minutes per Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>45–55</td>
<td>0</td>
<td>5–7</td>
<td>120</td>
</tr>
<tr>
<td>8</td>
<td>40–45</td>
<td>3–6</td>
<td>5–7</td>
<td>120</td>
</tr>
<tr>
<td>11</td>
<td>40–45</td>
<td>3–6</td>
<td>5–7</td>
<td>150</td>
</tr>
</tbody>
</table>

Note: Total testing time is divided into two testing sessions. The data in this table give ranges for the approximate number of items by item type. These ranges include both operational and field-test or anchor items.
CALCULATORS AND REFERENCE SHEETS

Students in Grades 8 and 11 are provided with reference sheets that include important formulas and conversions and a periodic table of the elements. If any formula is needed in Grade 5, the appropriate formula is included with the test item. Although four-function calculators are provided to students in Grades 8 and 11, use of calculators is not essential because of item design.

SCIENCE COGNITIVE TASK LEVELS

The benchmarks in the Sunshine State Standards identify knowledge and skills students are expected to acquire at each level, with the underlying expectation that students also demonstrate critical thinking. Goal 3, Standard 4, of Florida’s System of School Improvement and Accountability makes this expectation clear: “Florida students use creative thinking skills to generate new ideas, make the best decisions, recognize and solve problems through reasoning, interpret symbolic data, and develop efficient techniques for lifelong learning.” FCAT test items, while assessing Sunshine State Standards benchmarks, must also reflect this goal and standard. It is important to develop items that elicit the complexity of knowledge and skills required to meet these objectives.

The degree of challenge of FCAT items is currently categorized in two ways, item difficulty and cognitive complexity. Item difficulty has two meanings, depending on the stage of item development. At the item review stage (before use on the test), item difficulty is a prediction of the percentage of students who will choose the correct answer. After item review, item difficulty refers to the percentage of students who actually chose the correct answer.

Items for which students will choose the correct answer more than 70 percent of the time are considered easy. Items for which students will choose the correct answer 40–70 percent of the time are considered average. Items for which students will choose the correct answer less than 40 percent of the time are considered challenging.

Cognitive complexity refers to the cognitive level associated with the item. Since the inception of the FCAT, Bloom’s Taxonomy has been used for this purpose; however, Bloom’s Taxonomy is difficult to use because it requires an inference about the skill, knowledge, and background of the students responding to the item. Beginning in 2004, a new cognitive classification system will be used that is based largely upon Dr. Norman L. Webb’s work with “Depth of Knowledge” levels. The rationale for classifying items by their level of complexity is to focus on the mathematical expectations of the item, not the mathematical ability of the student. The demands on thinking that an item makes—what the item requires the student to recall, understand, reason about, and do—are made with the assumption that the student is familiar with the mathematics of the task. If a student has not learned the particular mathematics at hand, the task is more apt to have varied and heavier demands, and the student may not be as successful with it. Items are chosen for the FCAT based on the Sunshine State Standards and their grade-level appropriateness, but the complexity of the items remains independent of the particular curriculum a student has experienced.

The categories—low complexity, moderate complexity, and high complexity—form an ordered description of the demands an item may make on a student. For example, items at the low level of complexity may ask a student to solve a one-step problem. At the moderate level, an item
may ask the student to extend a pattern or retrieve information from a graph and use it to solve a problem. At the high level, an item may ask a student to perform a procedure having multiple steps and multiple decision points. The distinctions made in item complexity are intended to provide a balance across the tasks administered at each grade level.

<table>
<thead>
<tr>
<th>Grades</th>
<th>Low Level (Approximate Percentages)</th>
<th>Moderate Level (Approximate Percentages)</th>
<th>High Level (Approximate Percentages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 *</td>
<td>15-25</td>
<td>40-60</td>
<td>25-35</td>
</tr>
<tr>
<td>8*</td>
<td>15-25</td>
<td>40-60</td>
<td>25-35</td>
</tr>
<tr>
<td>11*</td>
<td>15-25</td>
<td>40-60</td>
<td>25-35</td>
</tr>
</tbody>
</table>

**USE OF GRAPHICS**

Graphics are used extensively in FCAT Science to provide both necessary and supplemental information. Some graphics contain information that is necessary for answering the question, while other graphics only illustrate or support the context of the question. The benchmarks assessed by FCAT require different levels of graphics and illustrations (e.g., some strands may use graphics to present concepts and/or information required for answering a question). In contrast, items or tasks in other strands may contain graphics or pictures that illustrate and enhance interest but are not required to answer the question.

Each individual benchmark specification in the Specifications indicates the extent to which graphics should be used to support test items and performance tasks developed for the benchmark. When no reference is made to the use of graphics, graphics are not necessary, though they may be used. Graphics should be used with approximately 40 percent or more of the items and/or performance tasks selected for FCAT Science.

**ITEM STYLE AND FORMAT**

FCAT Science includes four types of items, questions, or problems: multiple choice (MC), gridded response (GR), short response (SR), and extended response (ER). Context-dependent (CD) sets are also included in the FCAT Science tests. This section presents stylistic guidelines and formatting directions that should be followed for the development of all test items and performance tasks. In addition, guidelines are provided separately for each type of item or task to be developed.

**GENERAL GUIDELINES**

1. Items should be clear and concise and use vocabulary and sentence structure appropriate for the grade level being assessed.
2. Item stems should be expressed as questions. Real-world science context should link the stem and question.
3. Context-dependent item sets should be developed for each strand.
4. As appropriate, boldface type should be used to emphasize key words in items (e.g., least, most, greatest, and best).

5. Masculine pronouns should not be used to refer to both sexes. Plural forms should be used whenever possible to avoid gender-specific pronouns (e.g., instead of “The student will make changes so that he . . .” use “The students will make changes so that they . . .”).

6. An equal balance of male and female names should be used, including names representing different ethnic groups in Florida.

7. For clarity, all operation symbols, equality signs, and ordinates, when used, should be preceded and followed by one space.

8. Decimal numbers less than one (including currency) should have a leading zero.

9. Metric numbers should be expressed in a single unit when possible (e.g., 1.4 kilograms in place of 1.0 kilogram 400 grams).

10. Decimal notation should be used for numbers with metric units (e.g., 2.0 grams in place of 2 grams).

11. The comma should be used in a number greater than or equal to 1,000 unless the number indicates a metric unit. Metric numbers with four digits should be presented without a comma or a space (e.g., 9960 meters). For metric numbers with more than four digits, a hair space should be inserted in place of a comma (e.g., 10123 kilograms).

12. Units of measure should be spelled out, except in graphics, where an abbreviation may be used (e.g., km). Abbreviations that also spell a word must be punctuated to avoid confusion (e.g., a.m.). If an abbreviation is used in a graphic, an explanation of the meaning of the abbreviation should be included in the stem.

13. In titles for tables and charts, and labels for axes, the units of measure should be included, preferably in lowercase within parentheses [e.g., Height (in meters)].

14. In the item stem, numbers needed to compute answers should be presented as numerals. Numbers zero to nine should be presented as words, and numbers 10 and above should be presented as numerals. If beginning a sentence with a number is unavoidable, the number should be presented as a word.

15. Capitalization of astronomical terms should follow the conventions accepted by the scientific community. Names of planets and their satellites, asteroids, stars, constellations, and unique celestial objects are capitalized (e.g., Earth, Sun, Moon, Milky Way, and Venus). References in the generic sense should be lowercase [e.g., Saturn’s moons, our solar system in this galaxy, the stars in the universe, and a mound of earth (soil)]. Note that the conventions of capitalization have changed since the language of the Sunshine State Standards was drafted. Strand, standard, and benchmark text has been reproduced in the Specifications exactly as it is found in the Sunshine State Standards, so there will be inconsistencies in the capitalization of astronomical terms between the text of the Sunshine State Standards and FCAT items.

MULTIPLE-CHOICE (MC) ITEMS

1. MC items should take an average of 1 minute per item to solve.
2. MC items are worth one point each.
3. MC items should have four answer choices (A, B, C, D or F, G, H, I for alternating items).
4. During item development and review, the correct response should be indicated by an asterisk next to the answer choice letter.
5. During item development and review, the rationale for the incorrect answer choices should be indicated and set off in parentheses. This rationale must be specific to the item.
6. In most cases, answer choices should be arranged vertically beneath the item stem.
7. If the answer choices for an item are strictly numerical, they should be arranged in ascending or descending order, with the place values of digits aligned. When the item requires the identification of relative size or magnitude, choices should be arranged as they are presented in the item stem.
8. If the answer choices for an item are neither strictly numerical nor denominate numbers, the choices should be arranged by the logic presented in the question or by length. Single-word answer choices should be arranged in alphabetical order.
9. If an answer choice is a phrase, the phrase should start with a lowercase letter. No period should be used at the end of a phrase.
10. If an answer choice is a sentence, the sentence should be conventionally capitalized and punctuated.
11. The order of information (i.e., text, art) in the answer choices should appear in the same order as the information appears in the stem.
12. Outliers (i.e., answer choices that are longer phrases or sentences than the other choices, or choices with significantly more/fewer digits than the other choices) should not be used.
13. Distractors should relate to a common context. Each distractor should be a believable answer for someone who does not know the correct answer. Rationales for these choices must include explanations for these errors.
14. Distractors should be as short and clear as possible. Opposite distractors should be avoided whenever possible.
15. Distractors such as “None of the Above,” “All of the Above,” and “Not Here” should not be used.
16. Distractors such as “Not Enough Information” or “Cannot Be Determined” should not be used unless they are part of the benchmark being assessed. They should not be used as distractors for the sake of convenience.

GRIDDED-RESPONSE (GR) ITEMS

1. GR items will be used for Grade 8 and Grade 10 only.
2. GR items should take an average of 1.5 minutes per item to complete.
3. GR items are worth one point each.
4. GR items must require the use of the science construct in the benchmark being assessed. GR items should not be computation problems only.
5. The GR format is designed for items that require a numeric solution (whole numbers, decimals, percents or interpretation of data on charts and/or graphs).
6. GR items are written taking into consideration the number of columns in the grid.
7. GR items should include instructions that specify the unit in which the answer is to be provided (e.g., meters).
8. GR items use a five-column grid that includes the numbers zero to nine plus one symbol, the decimal point (.). The grids include shading in alternate columns. Shading should not interfere with the student’s ability to read the numbers inside each column.
9. During item development, the correct response should include an explanation of solution strategies.
CONTENT LIMITS BY GRADE

The content limits described below are applicable to all items developed for Grade 5, 8, and 11.

**Grades 5**
The content limits defined in the individual benchmark specifications, however, may be an expansion or further restriction of these limits.

1. Items will use age-, grade-, and experience-appropriate statements, scenarios, graphics, diagrams, and illustrations.
2. Item graphics will be clearly labeled and contain any information necessary to answer the item correctly.
3. Items will not require students to define terms.
4. Items will not require memorization of the periodic table.
5. Items with elements, chemical formulas, or compounds will contain both name and formula [e.g., carbon dioxide (CO₂)].
6. Items will not require memorization of chemical formulas. If a formula is required to answer the item, it must be provided in the stimulus.
7. Items will assess only one aspect (e.g., water cycle) or method (e.g., freezing) at a time.
8. Examples of solutions will not contain more than two chemicals.

For items requiring mathematical computation, the General Content Limits for Grade 5 FCAT Mathematics will be used.

1) **Addition**: Items should not exceed three addends. Addends should not exceed four digits.
2) **Subtraction**: Numbers should not exceed six digits.
3) **Multiplication**: Products should not exceed four digits, unless one or both factors are a multiple of 10.
4) **Division**: Divisors should not exceed one digit and dividends should not exceed three digits.

• Decimal fractions should be used rather than common fractions and place values should range from tenths to thousandths.

**Grades 8 and 10**
The content limits described below are applicable to all items developed for Grades 8 and 11. The content limits defined in the individual benchmark specifications, however, may be an expansion or further restriction of these limits.

1. Items will use age-, grade-, and experience-appropriate statements, scenarios, graphics, diagrams, and illustrations.
2. Item graphics will be clearly labeled and contain any information necessary to answer the item correctly.
3. Items will not require the memorization of the periodic table.
4. Items will not address transitional elements or quantify physical properties.
5. Items will not address matter acting as something entirely different from a wave or a particle.
6. Items may address data interpretations in a scientific context.
7. Items with elements, chemical formulas, or compounds will contain both name and formula [e.g., sulfuric acid (H₂SO₄)].
8. Items will not address possible life forms different from life on Earth.
9. Items will not require calculations involving scientific notation.
10. Decimal fractions should be used rather than common fractions. Place values should range from tenths to ten-thousandths.

**Grade 8 Content Limits**
For items requiring mathematical computation, the General Content Limits for Grade 8 FCAT Mathematics will be used.

1. **Addition**: Items should not exceed five addends. Addends should not exceed six digits.
2. **Subtraction**: Numbers should not exceed six digits.
3. **Multiplication**: Products should not exceed eight digits.
4. **Division**: Divisors should not exceed three digits, and dividends should not exceed five digits.

**Grade 10 Content Limits**
For items requiring mathematical computation, the General Content Limits for Grade 10 FCAT Mathematics will be used.

1) **Addition**: Items should not exceed six addends. Addends should not exceed six digits.
2) **Subtraction**: Numbers should not exceed six digits.
3) **Multiplication**: Products should not exceed eight digits.
4) **Division**: Divisors should not exceed three digits, and dividends should not exceed five digits.
REFERENCES


FCAT Item Specifications http://fcat.fldoe.org/fcatis01.asp


FCAT Lessons Learned -Data Analyses and Instructional Implications http://fcat.fldoe.org/lessonslearned.asp

FCAT Released Tests & Questions http://fcat.fldoe.org/fcatrelease.asp

Florida Achieves http://cim.florida-achieves.com/