FLORIDA DEPARTMENT OF EDUCATION
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Florida Department of Education Specifications for the 2026-2027 Florida Instructional Materials Adoption, Grades K-12 Mathematics

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Introduction

These specifications are based upon Rule 6A-7.0710, Florida Administrative Code (F.A.C.). This document specifies the requests for the 2026-2027 Florida instructional materials adoption for Grades K-12 Mathematics. Publishers should review this information carefully. The criteria contained in the document will serve as the basis for the evaluation of instructional materials bid for adoption.

The K-5 Mathematics call for adoption is comprised of the courses listed in Tables 1 and 2 of this document. The 6-12 Mathematics call for adoption is comprised of the courses listed in Tables 3 and 4. Each course has an updated course description available online at www.cpalms.org (the course numbers in Tables 1-4 link to the appropriate course page in CPALMS).

- Materials bid for adoption must clearly and completely align to each of the standards, benchmarks, clarifications and examples included in the applicable course description to be deemed acceptable for adoption.
- Materials will be thoroughly evaluated to ensure the content is accurate, appropriately rigorous and comprehensive in its coverage of each of the standards, benchmarks, clarifications and examples in the course description and the additional criteria outlined in this document.
- Special attention should be given to both the course description in CPALMS, any additional notes that are contained in each course description and/or emphasis by each grade level/course.
- Additionally, materials will be thoroughly evaluated to ensure that content aligns with Florida Statutes and State Board of Education Rule.

This adoption is for materials to be utilized in the classroom in the 2027-2028 academic year and beyond. As such, publishers must be sure to select the course description for the latest available academic year. The latest version of each course description, which should be utilized for developing materials for the 2026-2027 mathematics adoption, is indicated in Tables 1-4 below.

2026-2027 K-12 Mathematics Adoption

Florida will only accept bids for materials designed to serve as the major tool of instruction (which may include ancillary materials) for the courses listed in the four tables below. Please note that all courses indicated with an asterisk (*) are remedial courses that do not require additional correlations as outlined in the Program Design section below.

Table 1 K-5 Mathematics: (To be bid as a complete series only)

Course Number	Grade Level	Course Name	Course Version
5012020	K	Grade K Math	2024 and beyond
5012030	1	Grade 1 Math	2024 and beyond
5012040	2	Grade 2 Math	2024 and beyond
5012050	3	Grade 3 Math	2024 and beyond
5012060	4	Grade 4 Math	2024 and beyond
5012070	5	Grade 5 Math	2024 and beyond

Table 2 Additional K-5 Mathematics:

Course Number	Grade Level	Course Name	Course Version
5012055	3	Grade 3 Accelerated Math	2024 and beyond
5012065	4	Grade 4 Accelerated Math	2024 and beyond
5012005	K-2	Foundational Skills in Mathematics K-2*	2024 and beyond
5012015	3-5	Foundational Skills in Mathematics 3-5*	2024 and beyond

Table 3 6-8 Mathematics:

Course Number	Grade Level	Course Name	Course Version
1205010	6-8	Grade 6 Math	2024 and beyond
1205020	6-8	Grade 6 Accelerated Math	2024 and beyond
1205040	6-8	Grade 7 Math	2024 and beyond
1205050	6-8	Grade 7 Accelerated Math	2024 and beyond
1205070	6-8	Grade 8 Math: Pre-Alegbra	2024 and beyond
1204000	6-8	Foundational Skills in Mathematics 6-8*	2024 and beyond

Table 4 9-12 Mathematics:

Course Number	Grade Level	Course Name	Course Version
1200310	9-12	Algebra 1	2024 and beyond
1200320	9-12	Algebra 1 Honors	2024 and beyond
1200330	9-12	Algebra 2	2024 and beyond
1200340	9-12	Algebra 2 Honors	2024 and beyond
1200370	9-12	Algebra 1-A	2024 and beyond
1200380	9-12	Algebra 1-B	2024 and beyond
1210300	9-12	Probability and Statistics Honors	2024 and beyond
1200710	9-12	Mathematics for College Algebra	2024 and beyond

1210305	9-12	Mathematics for College Statistics	2024 and beyond
1207350	9-12	Mathematics for College Liberal Arts	2024 and beyond
1202340	9-12	Precalculus Honors	2024 and beyond
1202300	9-12	Calculus Honors	2024 and beyond
1206310	9-12	Geometry	2024 and beyond
1206320	9-12	Geometry Honors	2024 and beyond
1200384	9-12	Mathematics for Data and Financial Literacy	2024 and beyond
1200388	9-12	Mathematics for Data and Financial Literacy Honors	2024 and beyond
1212300	9-12	Discrete Mathematics Honors	2024 and beyond
1200400	9-12	Foundational Skills in Mathematics 9-12*	2024 and beyond

Major Priorities for Instructional Materials:
K-12 Mathematics Requirements

The priorities as described in this specification document were developed from research findings about what makes instructional materials effective. These priorities have undergone review by individuals who have served on state and district committees, curriculum specialists, instructional designers, evaluation specialists and administrators of the statewide adoption system.

To ensure instructional materials are grade-appropriate, of good quality and content, and aligned to applicable Florida state academic standards and Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards, each material will be evaluated based on compliance to section (s.) 1001.215(4), Florida Statutes (F.S.). In order to be considered for state adoption, materials must meet evaluation criteria and be recommended at each level.

The following priorities constitute the rubric for the evaluation of instructional materials for state adoption. Additionally, a focus on alignment to course standards and benchmarks will determine adoption eligibility, as followed by the review process established in chapter 1006, F.S.

- Content
- Presentation
- Learning
- Florida state academic standards and B.E.S.T. Standards alignment
- Adherence to s. 1003.42(3), F.S., and all other applicable State Board of Education rules

The following sections describe essential features for each of the priority areas. These features generally apply to all formats of instructional materials, whether print or other media/multiple media formats.

I. Content

These features include:

A. Alignment with Curriculum Requirements

B. Level of Treatment of Content

C. Expertise for Content Development

D. Accuracy of Content

E. Currentness of Content

F. Authenticity of Content

G. Accurate Representation

H. Humanity and Compassion

A. Alignment with curriculum requirements

Content must align with the state's standards and benchmarks for the subject, grade level and learning outcomes. See ss. 1006.34(2)(b), 1006.38(3)(b) and 1006.31(2), F.S.

Correlations: Publishers are expected to provide correlation reports in the provided form to show exactly where and to what extent (mentioned or in-depth) the instructional materials cover each required standard and benchmark.

Scope: The content should address Florida's required curriculum standards and benchmarks for the subject, grade level and learning outcomes, including thinking and learning skills.

Completeness: The content of the major tool should be complete enough to stand on its own. To be useful for classroom instruction, instructional materials must be adaptable to the instructional goals and course outlines for individual school districts, as well as the state standards and benchmarks. Content should have no major omissions in the required content coverage and be free of unrelated facts and information that would detract from achievement of Florida's B.E.S.T. Standards for Mathematics.

B. Level of treatment of content

Content must be appropriate for the standards, benchmarks, clarifications and examples, student abilities and grade level, and time periods allowed for teaching. See ss. 1006.31(2) and 1006.34(2)(b), F.S.

Purpose: Content should be simple, complex, technical or nontechnical enough to meet the educational objectives of the course.

Students: Content should be developmentally appropriate for the age and maturity level of the intended students. It should contain sufficient details for students to understand the significance of the information presented and to engage in reflection and discussion.

Time: Content should allow for its coverage during the time periods available for teaching the subject.

C. Expertise for content development

Expertise in the content area and in education of the intended students must be reflected in the authors, reviewers and sources that contributed to the development of the materials. See s. 1006.38(14), F.S.

Authorship: The authors, consultants and reviewers must have actually contributed to the development of the instructional materials and should have credentials that reflect expertise in the subject area, course, course category, grade level, pedagogy, education, teaching or classroom instruction. Qualifications may include expertise in educational psychology or instructional design.

Sources: Primary and secondary sources should reflect expert information for the subject, such as original documents, relevant data from research journals and other recognized scientific sources. The type of sources considered appropriate will vary with the particular subject area.

D. Accuracy of content

Content must be accurate in historical context and contemporary facts and concepts. See ss. 1006.38(8), 1006.31(2) and 1006.35, F.S.

Objectivity: Content that is included in the materials should accurately represent the domain of knowledge and events. It should be factual and objective. It should be free of mistakes, errors, inconsistencies, contradictions within itself and biases of interpretation. It should be free of the biased selection of information. Materials should distinguish between facts and possible interpretations or opinions expressed about factual information. Visuals or other elements of instruction should contribute to the accuracy of text or narrative.

Representativeness: The selection of content should not misrepresent the domain of knowledge and events. It should include the generally accepted and prevalent theories, major concepts, laws, standards and models used within the discipline of the subject area.

Correctness: Presentation of content should be free of typographical and visual errors. It should include correct grammar, spelling, linguistics, terminology, definitions, descriptions, visuals, graphs, sounds, videos and all other components of the instructional materials.

E. Currentness of content

Content must be up to date for the academic discipline and the context in which the content is presented. See ss. 1006.38(8) and 1006.31(2), F.S.

Dates or editions: Copyright dates for photographs and other materials and editions should suggest sufficient currentness of content. Copyright dates and editions serve as indicators about currentness. However, neither the copyright date nor the edition guarantees currentness. Subsequent editions should reflect more up to date information than earlier editions.

Informed examination of the text, narrative and visuals contained in the materials provide the most direct information about currentness of the materials.

Context. Text or narrative, visuals, photographs and other features should reflect the time periods appropriate for the objectives and the intended learners.

a. Sometimes context should be current. For example, a photograph used to show stages of human growth and development will be more relevant when the clothing, hairstyles and activities reflect present-day styles.
b. Sometimes context should be historical. For example, illustrations and photographs of historical events should reflect the historical time period.
c. Sometimes context should be both current and historical. For example, historic images alongside modern ones would convey changes in styles over time.
d. At all times the context should be relevant to the learner, to the Curriculum Frameworks and to the concept presented.

F. Authenticity of content

Content should include problem-centered connections to life in a context that is meaningful to students. See ss. 1006.31(2), 1006.34(2)(b) and 1003.42, F.S.

Life connections: Instructional materials should include connections to the student's life situations to make the content meaningful. Students might be expected to deal with time constraints, consider risks and trade-offs in decision-making and work with teams. Connections may be made to situations of daily home life, careers, vocation, community events and services and leisure or recreation.

Interdisciplinary treatment: Instructional materials also should include interdisciplinary connections to make content meaningful. Examples of situations that connect a variety of subject areas include building projects, playing sports, retrieving information or objects, balancing budgets, creating products and researching information. In addition to subject area connections, instructional materials should connect the course or course category to other disciplines. Examples of approaches to interdisciplinary connections include: explanations and activities for using skills and knowledge from other academic disciplines, assignments that require students to relate learning from other academic disciplines rather than to isolate knowledge or skills and focus on common themes across several subject areas.

G. Accurate representation

Portrayal of sex, ethnicity, age, work situations and various social groups must include accurate representation. See ss. 1003.42, 1006.31(2)(a) and 1006.34(2)(b), F.S.

Representation: Instructional materials must accurately portray the ethnic, socioeconomic, cultural, religious, physical and racial diversity in our society, including men and women in professional, career and executive roles, and the role and contributions of the entrepreneur and labor in the total development of this state and the United States.

Additionally, instructional materials shall include the vital contributions of African Americans to build and strengthen American society and celebrate the inspirational stories of African Americans who prospered, even in the most difficult circumstances. Furthermore, instructional materials shall include the contributions of Asian Americans and Pacific Islanders to American society.

Effective treatment of such issues requires consideration of the age and ability levels of students and whether it is appropriate to include such issues in the study of a particular topic.

H. Humanity and compassion

Portrayal of the appropriate care and treatment of people and animals must include compassion, sympathy, and consideration of their needs and values, and exclude pornography, materials harmful to minors under s. 847.012, F.S., and inhumane treatment. See ss. 1003.42, 1006.31(2)(c) and 1006.34(2)(b), F.S.

Instances of compassion: When providing examples in narrative or visuals, materials sometimes depict the care and treatment of people and animals. This means showing in some way a measure of compassion, sympathy or consideration of their needs and feelings.

Exclusion of inhumanity: Florida expressly prohibits material containing *pornography* (ss. 1006.31 and 1006.40(3)(c), F.S.). In addition, instructional materials should not advocate any form of inhumane treatment.

As with the evaluation of multicultural representation, it is important to consider the context of the subject and the age and abilities of the students.

II. Presentation

Features of presentation affect the practical usefulness of materials and the ease of finding and understanding content. These features include:

A. Comprehensiveness of Parent, Student and Teacher Resources

B. Alignment of Instructional Components

C. Organization of Instructional Components

D. Readability of Instructional Materials

E. Pacing of Content

F. Ease of Use of Materials

The following sections describe the presentation features expected for each of these areas.

A. Comprehensiveness of parent, student and teacher resources

Resources must be complete enough to address the targeted learning outcomes without requiring the teacher to prepare additional teaching materials for the course. See ss. 1006.29(2) and 1006.34(2)(b), F.S.

Materials should contain support for students in completing instructional activities and assessments and for teachers in implementing all of the instructional elements. Typically, materials will include test items, study guides, outlines and strategies for teaching, media supplements, learning activities and projects.

The major components generally expected for parent, student and teacher resources are listed below.

Parent resources: Parent resources should be included in student and/or teacher resources for parent

access. Materials may include access to the major resource or program with text or narration, visuals and assignments. Formats may include print, audio, visual, computer or other media like CDs, DVDs or PowerPoint presentations. Effective instructional materials generally integrate the use of reference aids (e.g., index, glossary, maps, bibliography, graphic organizers and pictures) with the topic being studied. Items that guide parents through materials might include clearly labeled materials, directions and explanations, and assignments with menus of choices.

Resources might include pre-made materials that can be shared with parents to give knowledge of what to expect of their student during that unit, videos that support how to navigate the student platform or participation activities such as digital simulations, role-playing situations, investigations and hands-on practice assignments. Review activities might include practice problems with various ways to solve problems. Formats might include digital tutorials and worksheets. Parent resource materials should be available in multiple languages, including English and Spanish, and in closed captioning where applicable.

Student resources: Student materials typically include the major resource or program with text or narration, visuals, assignments and assessments. Formats may include print, audio, visual, computer or other media like CDs, DVDs or PowerPoint presentations, or software adaptable for interactive whiteboards. Effective instructional materials generally integrate the use of reference aids (e.g., index, glossary, maps, bibliography, graphic organizers and pictures) with the topic being studied. Items that guide students through materials might include clearly labeled materials, directions and explanations, and assignments with menus of choices.

Review and practice activities might include participation activities such as digital simulations, role-playing situations, investigations and hands-on practice assignments. Review activities might include self-checks or quizzes. Formats might include digital education games, student tutorials, worksheets, workbooks, journals, lab books, lab logs, charts or maps. Feedback might be in the form of answer keys in student materials or in teacher materials.

Review works best as a logical extension of content, goals, objectives and lessons, with increased similarity to real-life situations. Review activities should require students to recall or apply previously taught knowledge and skills. Frequent short reviews over time or space improve learning more than a concentrated review. Assignments and stages of small practice improve speed and accuracy.

Other components might include enrichment and remediation activities, additional resources and tests and assessment tools either in the student materials or in the teacher's guide or edition.

Teacher resources: Teacher materials typically include a teacher's edition with the annotated student text and copies of supplementary materials (print or digital) with answer keys, worksheets, tests, diagrams, etc., so that the teacher may only use one guide. In-service training, workshops and consulting services should be made available by publishers to support teachers in implementing instructional materials. Professional learning is essential to the success of any program, especially when a program contains non-traditional elements. Publishers should clearly indicate the recommended amount and types of professional learning they will provide, and they should work with districts and schools to ensure teachers receive the support they need. The materials for the teacher should support continued professional learning.

Support, guidelines, resources or features such as the ones described below should be available to help teachers effectively implement materials in classroom and school settings.

(1) **Components and materials are easy to use:** Examples include clearance, license or agreement

for copying and use of materials; clear description and accurate directions for use of required equipment, facilities, resources and environment; clearly labeled grade, lesson, content and other information to identify components; and correct specifications for making instructional media and electronic programs work effectively.

(2) **Materials support lesson planning, teaching and learning:** Examples include overview of components and objectives; background for lectures and discussions; technical terminology and reinforcement and review strategies; scope and sequence chart for activities and planning; sample lesson plans; suggestions for individualized study, small-group and large-group presentations and discussions, school-to-work activities, field or laboratory experiences, safety procedures and other extension activities; suggestions for integrating themes across the subject area or course curriculum and forming connections to other disciplines; and suggestions for parental and community involvement.

(3) **Suggestions are provided for adapting instruction for varying needs:** Examples include alternative approaches to teaching, pacing and options for varied delivery of instruction such as media, tools, equipment and emerging technology; strategies for engaging all students, such as open-ended questions to stimulate thinking, journals, hands-on investigations, explorations and multisensory approaches; suggestions for addressing common student difficulties or adapting to multiple learning styles; and alternative reteaching, enrichment and remediation strategies.

(4) **Guidelines and resources are provided on how to implement and evaluate instruction:** Examples include answers to work assignments, practice activities and tests; sample projects or research results; suggestions for using learning tasks for classroom assessment; and guidelines for alternative assessments, such as sample checklists, rubrics, peer or performance assessments, and portfolios.

(5) **Resources are provided to use in classroom activities:** Examples include technology resources; lists of resources and references, reading strategies, materials to use for displays or photocopies, classroom management strategies and documentation on how to manage the entire instructional program; and in-service workshops or consultation support from the publisher.

B. Alignment of instructional components

All components of an instructional package must align with each other, as well as with the curriculum. See s. 1006.34(2)(b), F.S.

All components of an instructional package—teacher's edition and materials, student's edition and materials, workbook, supplementary materials and others—must be integrated and interdependent and must correspond with each other. For example, support materials in the teacher's edition should align with student activities or assignments. They must match in content and progression of instructional activities.

All components must align to Rule 6A-1.094124(3), F.A.C., Required Instruction Planning and Reporting, and s. 1003.42, F.S. Instructional materials should not encourage or facilitate a teacher to violate this rule or statute.

C. Organization of instructional materials

The structure and format of materials must have enough order and clarity to allow students and teachers to access content and explicitly identify ideas and sequences. See s. 1006.34(2)(b), F.S.

Providing an explicit and teachable structure can double the amount of information remembered. Clear organization allows students and teachers to distinguish important pieces of information through skimming, reading or browsing. Clear organization may be accomplished through a combination of features, but generally not through one feature alone.

Access to content: Some features help in searching and locating information, such as a table of contents; pull-down menu or sitemap of content; directions on how to locate information or complete assignments; an index for quick reference; goals and/or objectives, outlines, lists or checklists for major sections; bibliographies and lists of resources; glossaries for quick access to major terms; and introductions, key concepts and themes, visual cues, illustrations, labeled examples and labeled reviews or summaries.

Visible structure and format: At-a-glance features should signal the organization of content. The following features are desirable:

- Chapter or unit titles and/or frames;
- Headings and subheadings;
- Typographic cues such as bold, italics or changes in size of type;
- Divisions of content such as borders, boxes, circles, highlighting, visual signposts, icons or color cues;
- Diagrams, labels and visuals placed near the related content; and
- Numbering of pages and other components.

Objectives or a content outline may serve a similar purpose by introducing central ideas, providing guideposts to use in searching for key information or serving as a checklist for self-assessment. Certain types of brief narrative sections also contribute to clear organization. For example, the statement of a clear purpose with content organized around central ideas, principles, concepts and logical relationships supports the unity and flow of information. Introductions also play a major role when they include anchoring ideas, a list of key points or conceptual schemes such as metaphors. Summaries also can assist students in understanding the logical order of topics presented.

Logical organization: The pattern of organization of the content should be consistent and logical for the type of subject or topic. Patterns of organization may include compare and contrast, time sequence, cause-effect or problem-solution-effect, concrete to abstract, introduction-review-extension (spiral structure), simple-to-complex, whole-part or part-whole, generalization-examples-review-practice and conflict-inside view-structure.

D. Readability of instructional materials

Narrative and visuals should engage students in reading or listening as well as in understanding of the content at a level appropriate to the students' abilities. See ss. 1006.31(2) and 1006.34(2)(b), F.S.

Language style: Language style and visual features can influence the readability of materials. A popular tool for assessing readability has been the use of a readability formula of one type or another. These formulas tend to focus only on a few countable characteristics of language style such as the length of words, sentences and/or paragraphs.

Other features are more important in establishing the readability of instructional materials, such as: organized, coherent text language and concepts familiar to the student; language that clarifies, simplifies and explains information; transition words such as "yet," "also," "next," "for example," "moreover" or "however;" other phrases that create logical connections; words with concrete and specific images; active rather than passive voice; varied sentence structures and avoiding both choppy sentences and unnecessary words; and specific questions or directions to guide student attention to visuals or key information.

Visual features: Visual features that improve readability include print that is dark and clear, with good contrast paper with clean-cut edges without glare, computer screens without glare and margins wide enough on a page or screen to allow easy viewing of the text chunking (sentence ends on same page as it begins); visuals that are relevant, clear, vivid and simple enough for students to understand; quantity of visuals suitable for the intended students—both lower ability students and higher ability students tend to require more visuals; unjustified text (ragged on the right) rather than justified (lined up on the right); visuals that contain information in a form different from the text; graphs, charts, maps and other visual representations integrated at their point of use; and colors, size of print, spacing, quantity and type of visuals suitable for the abilities and needs of the intended students.

E. Pacing of content

The amount of content presented at one time or the pace at which it is presented must be of a size or rate that allows students to perceive and understand it. See ss. 1006.31(2) and 1006.34(2)(b), F.S.

It is important that materials contain "bite-size" chunks or blocks of information. The chunks should not be so large, nor the pacing so fast, as to overwhelm students. Neither should the chunks be so small, nor the pacing so slow, as to bore them.

F. Ease of use of materials

Both print and other media formats of instructional materials must be easy to use and replace and be durable enough for multiple uses over time. See ss. 1006.29(4), 1006.38(3)(a), 1006.34(2)(b), 1006.38(5) and 1006.38(6)-(9), F.S.

Warranty: The actual physical and technical qualities of materials should match the description contained in the publisher's warranty.

Use: Materials must be designed for practical use in the classroom and school environments. They must be easy to identify and store. Teachers and students must be able to access and use the materials. Some of the factors influencing their ease of use include number of components, size of components, packaging, quality of materials, equipment requirements and cost to purchase or replace components.

The best choice about weight, size and number of volumes depends on several factors, such as the organization of the content, how well separate volumes may fit time periods for instruction and the ages of students. Technical production requirements, such as page limits or different types of bindings, may lead to multiple volumes.

Examples of classroom use include repeated copying of consumable materials and repeated use of other materials by students over time. Students should be able to easily use the materials and take home, in a convenient form, most of the material they need to learn for the course.

Technology-rich resources should work properly without the purchase of additional software and run without error. Electronic media for student use should be encoded to prevent accidental or intentional erasure or modification. As with textbooks, electronic media should allow students to easily access and interact with them without extensive supervision or special assistance.

The physical and technical qualities of materials should match with the resources of the schools. Materials such as videos, software, CDs and internet sites may serve instructional purposes well but have little value unless they can be implemented with the school's equipment. Publishers should include training, in-service and consultation to help with the effective use of the materials.

Durability: Students and teachers should be able to have materials that will be durable under conditions of expected use. For example, boxes, books or other materials should not fall apart after normal classroom use. The packaging and form of materials should be flexible and durable enough for multiple uses over time. Durability includes considerations such as high-quality paper, ink, binding and cover back, joints, body block and individual pages; worry-free technology that runs properly, with easy to hear, see and control audio and visuals; and the publisher's guarantee for replacement conditions and agreements for reproduction needed to effectively use the materials.

Cost: *Florida's Commissioner of Education will consider the impact of cost in making final decisions.* Cost, while not a direct factor in ease of use, influences the ease with which materials can be obtained or replaced. The impact of cost can be complex to estimate. It requires considering the number of materials available at no additional cost with the purchase of the major program or text, the cost over the adoption period of several years and the number of free materials to support implementation.

Attractive features such as higher quality paper and visuals and greater use of color may escalate cost, without enhancing instructional effectiveness.

III. Learning

The following features have been found to promote learning and apply to most types of learning outcomes.

A. Motivational Strategies

B. Explicit Instruction

C. Guidance and Support

D. Active Participation

E. Targeted Instructional Strategies

F. Targeted Assessment Strategies

The following sections describe the learning features expected for each of these priority areas.

A. Motivational strategies

Instructional materials must include features to maintain learner motivation. See ss. 1006.31(2), 1006.34(2)(b) and 1006.38(4), F.S.

Expectations: Materials should positively influence the expectations of students. Examples include positive expectations for success; novel tasks or other approaches to stimulate intellectual curiosity; meaningful tasks related to student interests, cultural backgrounds and developmental levels; activities with relevance to the student's life; thought-provoking challenges such as paradoxes, dilemmas, problems, controversies and critical thinking; challenges that are neither too difficult to achieve nor so easy that students become bored; hands-on tasks in a concrete context and images, sounds, analogies, metaphors or humorous anecdotes; and variety, including the opportunity for students to ask their own questions, set their own goals and make other choices during learning.

Feedback: Materials should include informative and positive feedback on progress. Examples include: frequent checks on progress, including testing; explanatory feedback with information about correctness of responses, how to avoid or correct common mistakes and/or different approaches to use; and varied forms of assessments (self-assessment, peer assessment and some learning tasks without formal assessments).

Appearance: Materials should have an appearance generally considered attractive to the intended students.

B. Explicit instruction

Instructional materials must contain clear statements of information and outcomes. See ss. 1006.31(2) and 1006.34(2)(b), F.S.

Clarity of directions and explanations: To support success in learning, instructional materials should include clear presentation and explanations of purposes, goals and expected outcomes, concepts, rules, information and terms, models, examples, questions and feedback.

For example, development of specific thinking skills requires an explicit statement of the particular thinking skills to be learned, along with the strategies or steps to follow. Explicit instruction for thinking skills might also involve showing examples of successful thinking contrasted with examples of poor thinking processes.

Similarly, the development of learning skills requires explicit directions about when and how to do activities such as note taking, outlining, paraphrasing, abstracting and analyzing, summarizing, self-coaching, memory strategies, persistence, preview and questioning, reading and listening, reflecting and reciting.

Exclusion of ambiguity: Instructional materials should avoid terms and phrases with ambiguous meanings, confusing directions or descriptions and inadequate explanations.

C. Guidance and support

Instructional materials must include guidance and support to help students safely and successfully become more independent learners and thinkers. See ss. 1006.31(2) and 1006.34(2)(b), F.S.

Level: The type of guidance and support that helps students become more independent learners and thinkers is sometimes referred to as *scaffolding.* Scaffolding is a solid structure of support that can be removed after a job has been completed. As students gain proficiency, support can diminish and students can encounter more complex, life-centered problems. Information and activities should provide guidance and support at the level that is needed—no more and no less. Too much support can squelch student success and too little can lead to failure.

Guidance and support can be accomplished by a combination of the following features: organized routines; advance organizers or models such as condensed outlines or overviews, simplified views of information, visual representations of new information during initial instruction, sample problems and questions to focus on key ideas or important features; examples of solved problems; explanations of how the problems were solved; examples of finished products or sample performances; analogies, metaphors or associations to compare one idea to another; prompts or hints during initial practice; step- by-step instructions; immediate and corrective feedback on the accuracy of performance of each step or task, on how to learn from mistakes and on how to reach the correct answer; simulations with features for realistic practice; and opportunities for students to do research; and to organize and communicate results.

Adaptability: Guidance and support must be adaptable to developmental differences and various learning styles. For example, young children tend to understand concepts in concrete terms and over- generalize

new concepts. Some students need more time, some tend to be more impulsive than reflective, some have trouble distinguishing relevant from irrelevant information and some have better written than spoken language skills.

Approaches for developmental differences and learning styles of students include a variety of *activities* such as structured and unstructured activities; independent and group work, teacher-directed and discovery learning, visual and narrative instruction, hands-on activities, open-ended activities and practice without extrinsic rewards or grades; simple, complex, concrete and abstract examples; variable pacing or visual breaks; and a variety of *modalities* for the various learning styles of students, such as linguistic-verbal, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal and naturalist.

D. Active participation of students

Instructional materials must engage the physical and mental activity of students during the learning process. See ss. 1006.31(2) and 1006.34(2)(b), F.S.

Assignments: Instructional materials should include organized activities of periodic, frequent, short assignments that are logical extensions of content, goals and objectives.

Student responses: Assignments should include questions and application activities during learning that give students opportunities to respond. For example, information and activities might require students to accomplish types of activities that include: respond orally or in writing; create visual representations (charts, graphs, diagrams and illustrations); generate products; think of new situations for applying or extending what they learn; complete discovery activities; add details to big ideas or concepts from prior knowledge; form their own analogies and metaphors; practice lesson-related tasks and/or procedures.

E. Targeted instructional strategies

Instructional materials should include the strategies known to be successful for teaching the learning outcomes targeted in the curriculum requirements. See ss. 1006.31(2), 1006.34(2)(b) and 1003.42, F.S.

Alignment: Research has documented the strategies that effectively teach different types of learning outcomes. The learning strategies included in instructional materials should match the findings of research for the targeted learning outcomes. Different types of learning outcomes require different strategies. For example, a strategy for memorizing verbal information might be helpful, but it would not align with the strategies required for learning a concept or for learning how to solve a problem.

Completeness: Not only should strategies be aligned, they also should be complete enough to effectively teach the targeted outcomes. For example, while the explanation of a problem-solving method or model would be appropriate, other strategies also would be necessary in order for students to learn how to resolve different types of problems.

Research summary: Researchers sometimes use different terms for some similar outcomes. For example, *thinking skills* and *metacognition* refer to some of the same types of skills. The following alphabetical list includes terms as they appeared in research, even though some terms clearly overlap with each other:

- attitudes;
- cognitive strategies;
- comprehension/understanding;
- concepts;
- creativity;
- critical thinking;
- insight;
- metacognition;
- motor skills;
- multiple intelligences;
- problem solving;
- procedural knowledge, principles and rules;
- scientific inquiry;
- thinking skills; and
- verbal information, knowledge or facts.

Effective Teaching Strategies

Teach *Attitudes*

- Explain and show consequences of choices, actions or behaviors.
- Provide relevant human or social models that portray the desired choices, actions or behaviors.

Teach *Reading*

- Monitor and reflect upon the effectiveness of the reading process used.
- Provide appropriate reading strategies that align with s. 1001.215(7), F.S.
- Link instruction to effective reading.

Teach *Cognitive Strategies*

- Monitor and reflect upon the effectiveness of the reading process used.
- Encourage and/or teach:
    - organizing and summarizing information;
    - self-questioning, self-reflection and self-evaluation;
    - reference skills; and
    - when and how to use these different skills.

Teach *Comprehension/Understanding*

- Outline, explain or visually show what will be read/learned in a simple form.
- Explain with concrete examples, metaphors, questions or visual representations.
- Require students to relate new readings to previously learned information.
- Require students to paraphrase or summarize new information as it is read.
- Require students to construct a visual representation of main ideas (map, table, graphs, Venn diagram, etc.).
- Give students opportunities to add details, explanations or examples to basic information.
- Require application of knowledge or information.

Teach *Concepts*

- Provide clear understanding of each concept.
- Point out important and features or ideas.
- Point out examples of the concept, showing similarities and differences.
- Include practice in organizing and classifying concepts.
- Include a wide range of examples in a progressive presentation from simple to more complex examples.
- Emphasize relationships between concepts.

Teach *Creativity*

- Provide examples of creativity.
- Include models, metaphors and analogies.
- Encourage novel approaches to situations and problems.
- Show and provide practice in turning a problem upside down or inside out or by changing perceptions.
- Encourage brainstorming.
- Include open-ended questions and problems.
- Provide opportunities of ungraded, unevaluated creative performance and behavior.

Teach *Critical Thinking*

- Create conflict or perplexity by using paradoxes, dilemmas or other situations to challenge concepts, beliefs, ideas and attitudes.
- Focus on how to recognize and generate proof, logic, argument and criteria for judgments.
- Include practice in detecting mistakes, false analogies, relevant vs. irrelevant issues, contradictions, discrepant events and predictions.
- Provide practice in drawing inferences from observations and making predictions from limited information.
- Explain and provide practice in recognizing factors or biases that may influence choice and interpretations such as culture, experience, preferences, desires, interests and passions, as well as systematic thinking.
- Require students to explain how they form new conclusions and how and why present conclusions may differ from previous ones.

Teach *Inquiry*

- Emphasize technological design as inquiry and include discovery activities.
- Provide opportunities for experimental design.
- Provide opportunities for critical thinking.
- Facilitate the collection, display and interpretation of data.
- Promote careful observation, analysis, description and definition.

Teach *Metacognition*

- Explain different types of thinking strategies and when to use them.
- Encourage self-evaluation and reflection.
- Include questions that challenge students to wonder why they are doing what they are doing.
- Guide students in how to do systematic inquiry, detect flaws in thinking and adjust patterns of thinking.

Teach *Technology*

- Provide a mental and physical model of desired performance.
- Describe steps in the performance.
- Provide practice with kinesthetic and corrective feedback (coaching).

Teach *Multiple Intelligences/Learning Modalities*

- Visual learning modality focuses on seeing, watching and looking.
- Auditory learning modality focuses on hearing and responding to verbal information and instructions.
- Motor/kinesthetic learning modality focuses on active involvement and hands-on activities.
- Verbal-linguistic dimension focuses on reasoning with language, rhythms and inflections, such as determining meaning and order of words (stories, readings, humor, rhyme and song).
- Logical-mathematical dimension focuses on reasoning with patterns and strings of symbols (pattern blocks, activities to form numbers and letters).
- Musical dimension focuses on appreciation and production of musical pitch, melody and tone.
- Spatial dimension focuses on activities of perceiving and transforming perceptions.
- Bodily kinesthetic dimension focuses on use and control of body and objects.
- Interpersonal dimension focuses on sensing needs, thoughts and feelings of others.
- Intrapersonal dimension focuses on recognizing and responding to one's own needs, thoughts and feelings.
- Naturalist dimension focuses on appreciation of nature and the environment and on comparing, contrasting and classifying attributes.

Teach *Problem Solving*

- Assure student readiness by diagnosing and strengthening related concept, rule and decision-making skills.
- Provide broad problem-solving methods and models.
- Include practice in solving different types of problems.
- Begin with highly structured problems and then gradually move to less structured ones.
- Use questions to guide thinking about problem components, goals and issues.
- Provide guidance in observing and gathering information, asking appropriate questions and generating solutions.
- Include practice in finding trouble, inequities, contradictions or difficulties and in reframing problems.

Teach *Procedural Knowledge, Principles and Rules*

- Define context, problems, situations or goals, and appropriate procedures.
- Explain reasons that procedures work for different types of situations.
- Define procedures including rules, principles and/or steps.
- Provide vocabulary and concepts related to procedures.
- Demonstrate step-by-step application of procedures.
- Explain steps as they are applied.
- Include practice in applying procedures.

Teach *Scientific Inquiry*

- Explain process and methods of scientific inquiry.
- Explain and provide examples of (a) hypotheses formation, (b) valid procedures, (c) isolating variables, (d) interpretation of data and (e) reporting findings.
- Encourage independent thinking and avoidance of dead ends or simplistic answers.
- Require students to explain, verify, challenge and critique the results of their inquiry.

Teach *Thinking Skills*

- Introduce different types of thinking strategies.
- Explain context or conditions of applying different strategies.
- Provide definitions, steps and lists to use in strategies.
- Include examples of different types of thinking strategies, including how to think with open-mindedness, responsibility and accuracy.
- Emphasize persisting when answers are not apparent.
- Provide practice in applying, transferring and elaborating on thinking strategies.
- Integrate metacognitive, critical and creative-thinking skills.

Teach *Verbal Information, Knowledge or Facts*

- Provide a meaningful context to link new information and past knowledge.
- Organize information into coherent groups or themes.
- Use devices to improve memory such as mnemonic patterns, maps, charts, comparisons, groupings, highlighting of key words, visual images, and rhymes.
- Identify central ideas, patterns or relationships within information or sets of facts.

F. Targeted Assessment Strategies

Instructional materials should include assessment strategies that are known to be successful in determining how well students have achieved the targeted learning outcomes. See ss. 1006.31(2), 1006.34(2)(b) and 1006.38(4), F.S.

Alignment: The assessment strategies should match the learner performance requirements for the types of learning outcomes that have been targeted for the subject matter or course. Different strategies are appropriate for assessing different types of learning outcomes. For example, a strategy for testing the acquisition of verbal information would not match the requirements for testing whether or not a student has learned a concept or learned how to solve a problem.

The term "assessment," as used in this section, refers to testing or other strategies that assess student progress as a result of learning activities. The results of such assessment provide information about where to strengthen instruction, but it is particularly important to ask the right questions. If the type of question matches the type of learning outcome, then students and teachers have relevant information about learning progress.

Completeness: In addition to including assessment strategies that align with the performance requirements of the targeted learning outcomes, the strategies should be complete enough to effectively assess the learner's performance with regard to the targeted outcome. For example, a test item that requires the student to state a rule does not assess whether or not the student knows how to *use* the rule.

Research summary: The research summary for effective assessment strategies for different types of learning outcomes follows the same alphabetical sequence as the previous section.

Effective Assessment Strategies

Assess *Attitudes*

- Provide various situations.
- Require choices about behaviors.

Assess *Cognitive Strategies*

- Provide learning tasks.
- Require students to choose good strategies for learning and/or to learn new materials without teacher guidance.
- Require students to discuss and explain methods used for various learning tasks.

Assess *Comprehension/Understanding*

- Provide topic.
- Require summary or restatement of information.
- Provide new context.
- Require application of information.
- Provide several statements using words different from the initial teaching.
- Require identification of the correct meaning.

Assess *Concepts*

- Provide new examples and non-examples.
- Require identification or classification into the correct categories.

Assess *Creativity*

- Provide new problems to "turn upside down," study or resolve—these could be performances, presentations or products.
- Require products or solutions to fit within the particular functions and resources.
- Provide situations requiring novel approaches.

Assess *Critical Thinking*

- Require students to evaluate information or results.
- Require the use of analysis and research.

Assess *Insight*

- Provide situations for inquiry and discovery.
- Provide situations for manipulation.

Assess *Metacognition*

- Provide different situations or problems.
- Require students to identify types of thinking strategies to analyze and evaluate their own thinking.

Assess *Multiple Intelligences/Learning Modalities*

- Provide situations in the multiple intelligence/learning modalities that are targeted, e.g., verbal-linguistic, musical or other learning modalities.
- Provide situations in several multiple intelligence/learning modalities to allow choice.
- Require performance in the targeted or chosen multiple intelligence/learning modality.

Assess *Motor Skills*

- Provide situations and resources for performance of the skill.
- Include checklist for evaluation.

Assess *Problem Solving*

- Require students to choose types of problem-solving strategies for different situations.
- Require solutions to structured and unstructured, simple and complex problems.

Assess *Procedural Knowledge, Principles and Rules*

- Provide situations that require students to recognize the correct use of procedures, principles or rules with routine problems.
- Require students to state procedures, principles or rules.
- Require students to choose which procedures, principles or rules to apply in different situations.
- Provide situations that require students to demonstrate the correct use of procedures, principles or rules with routine problems.

Assess *Scientific Inquiry*

- Provide situations or problems that require speculation, inquiry and hypothesis formation.
- Provide research, hands-on activities and conclusions.

Assess *Thinking Skills*

- Require students to summarize different types of thinking strategies.
- Provide situations that require students to choose the best type of thinking strategy to use.
- Require students to detect instances of open vs. closed-mindedness.
- Require students to detect instances of responsible vs. irresponsible and accurate vs. inaccurate applications of thinking strategies.
- Provide situations that require the student's persistence in order to discover or analyze information to obtain answers to specific questions.
- Require students to apply specific thinking strategies to different real-world situations.

Assess *Verbal Information, Knowledge or Facts*

- Require students to recall information.
- Require students to restate information.
- Require students to understand information.

Grades K-12 Program Design
Mathematics Expectations

Materials submitted for the 2026-2027 K-12 Mathematics adoption must pay attention to, and meaningfully incorporate, the following concepts, in order to be considered fully aligned to the standards, benchmarks, clarifications and examples.

Correlation to all of the following below is expected in order to be considered for state adoption. Correlation is not required for non-core courses as indicated earlier.

- Evidence that benchmarks are not taught in isolation;
- Mathematical Thinking and Reasoning Standards (MTRs), English Language Arts (ELA) Expectations (EEs) and English Language Development (ELDs) are appropriately integrated within every lesson; and
- B.E.S.T. Standards for Mathematics Appendices are integrated within every lesson/unit of instruction.

Areas of Emphasis

The purpose of the Areas of Emphasis is not to guide specific units of learning and instruction, but rather provide insight on major mathematical topics that will be covered within each mathematics course. In addition to its purpose, the Areas of Emphasis are built on the following:

- Supports the intentional horizontal progression within the strands and across the strands in this grade level or course.
- Student learning and instruction should not focus on the stated Areas of Emphasis as individual units.
- Areas of Emphasis are addressed within standards and benchmarks throughout the course so that students are making connections throughout the school year.
- Some benchmarks can be organized within more than one area.
- Supports the communication of the major mathematical topics to all stakeholders.
- Benchmarks within the Areas of Emphasis should not be taught within the order in which they appear. To do so would strip the progression of mathematical ideas and miss the opportunity to enhance horizontal progressions within the grade level or course.

In Kindergarten, Areas of Emphasis include:

1. developing an understanding of counting to represent the total number of objects in a set and to order the objects within a set;
2. developing an understanding of addition and subtraction and the relationship of these operations to counting; and
3. measuring, comparing, and categorizing objects according to various attributes, including their two- and three-dimensional shapes.

In Grade 1, Areas of Emphasis include:

1. understanding the place value of tens and ones within two-digit whole numbers;
2. extending understanding of addition and subtraction and the relationship between them;
3. developing an understanding of measurement of physical objects, money and time; and
4. categorizing, composing and decomposing geometric figures.

In Grade 2, Areas of Emphasis include:

1. extending understanding of place value in three-digit numbers;
2. building fluency and algebraic reasoning with addition and subtraction;
3. extending understanding of measurement of objects, time and the perimeter of geometric figures; and
4. developing spatial reasoning with number representations and two-dimensional figures.

In Grade 3, Areas of Emphasis include:

1. adding and subtracting multi-digit whole numbers, including using a standard algorithm;
2. building an understanding of multiplication and division, the relationship between them and the connection to area of rectangles;
3. developing an understanding of fractions; and
4. extending geometric reasoning to lines and attributes of quadrilaterals.

In Grade 3 Accelerated, Areas of Emphasis include:

1. extending understanding of place value in multi-digit whole numbers;
2. adding and subtracting multi-digit whole numbers, including using a standard algorithm;
3. building an understanding of multiplication and division, the relationship between them and the connection to area of rectangles;
4. developing an understanding of fractions; and
5. extending geometric reasoning to lines, angles and attributes of quadrilaterals.

In Grade 4, Areas of Emphasis include:

1. extending understanding of multi-digit multiplication and division;
2. developing the relationship between fractions and decimals and beginning operations with both;
3. classifying and measuring angles; and
4. developing an understanding for interpreting data to include mode, median and range.

In Grade 4 Accelerated, Areas of Emphasis include:

1. developing the relationship between fractions and decimals;
2. multiplying and dividing multi-digit whole numbers, including using a standard algorithm;
3. adding and subtracting fractions and decimals with procedural fluency, developing an understanding of multiplication and division of fractions and decimals;
4. developing an understanding of the coordinate plane and plotting pairs of numbers in the first quadrant;
5. extending geometric reasoning to include volume; and
6. developing an understanding for interpreting data to include mean, mode, median and range

In Grade 5, Areas of Emphasis include:

1. multiplying and dividing multi-digit whole numbers, including using a standard algorithm;
2. adding and subtracting fractions and decimals with procedural fluency, developing an understanding of multiplication and division of fractions and decimals;
3. developing an understanding of the coordinate plane and plotting pairs of numbers in the first quadrant;
4. extending geometric reasoning to include volume; and
5. extending understanding of data to include the mean.

In Foundational Skills in Mathematics K-5, Areas of Emphasis include all strands in all elementary mathematics:

1. Grade K-2 mathematical Areas of Emphasis listed above that correspond to each students' needs and supplement core instruction.
2. Grade 3-5 mathematical Areas of Emphasis listed above that correspond to each students' needs and supplement core instruction.

In Grade 6, Areas of Emphasis include:

1. performing all four operations with integers, positive decimals and positive fractions with procedural fluency;
2. exploring and applying concepts of ratios, rates and percent to solve problems;

3. creating, interpreting and using expressions and equations;
4. extending geometric reasoning to plotting points on the coordinate plane, area and volume of geometric figures; and
5. extending understanding of statistical thinking.

In Grade 6 Accelerated, Areas of Emphasis include:

1. performing all four operations with rational numbers with procedural fluency;
2. exploring and applying concepts of ratios, rates, percent and proportions to solve problems;
3. creating, interpreting and using expressions, equations and inequalities;
4. extending geometric reasoning to plotting points on the coordinate plane, area and volume of geometric figures; and
5. extending understanding of statistical thinking to represent and compare categorical and numerical data.

In Grade 7, Areas of Emphasis include:

1. recognizing that fractions, decimals and percentages are different representations of rational numbers and performing all four operations with rational numbers with procedural fluency;
2. creating equivalent expressions and solving equations and inequalities;
3. developing understanding of and applying proportional relationships in two variables;
4. extending analysis of two- and three-dimensional figures to include circles and cylinders; and
5. representing and comparing categorical and numerical data and developing understanding of probability.

In Grade 7 Accelerated, Areas of Emphasis include:

1. representing numbers in scientific notation and extending the set of numbers to the system of real numbers, which includes irrational numbers;
2. generate equivalent numeric and algebraic expressions including using the Laws of Exponents;
3. creating and reasoning about linear relationships including modeling an association in bivariate data with a linear equation;
4. solving linear equations, inequalities and systems of linear equations;
5. developing an understanding of the concept of a function; and
6. analyzing two-dimensional figures, particularly triangles, using distance, angle and applying the Pythagorean Theorem.

In Grade 8, Areas of Emphasis include:

1. representing numbers in scientific notation and extending the set of numbers to the system of real numbers, which includes irrational numbers;
2. generate equivalent numeric and algebraic expressions including using the Laws of Exponents;
3. creating and reasoning about linear relationships including modeling an association in bivariate data with a linear equation;
4. solving linear equations, inequalities and systems of linear equations;
5. developing an understanding of the concept of a function; and
6. analyzing two-dimensional figures, particularly triangles, using distance, angle and applying the Pythagorean Theorem.

In Foundational Skills in Mathematics 6-8, Areas of Emphasis include all strands in all middle grades mathematics:

1. Grade 6 mathematical Areas of Emphasis listed above that correspond to each students' needs and supplement core instruction.
2. Grade 7 mathematical Areas of Emphasis listed above that correspond to each students' needs and supplement core instruction.

3. Grade 8 mathematical Areas of Emphasis listed above that correspond to each students' needs and supplement core instruction.

In Algebra 1, Areas of Emphasis include:

1. performing operations with polynomials and radicals, and extending the Laws of Exponents to include rational exponents;
2. extending understanding of functions to linear, quadratic and exponential functions and using them to model and analyze real-world relationships;
3. solving quadratic equations in one variable and systems of linear equations and inequalities in two variables;
4. building functions, identifying their key features and representing them in various ways; and
5. representing and interpreting categorical and numerical data with one and two variables.

In Algebra 1 Honors, Areas of Emphasis include:

1. performing operations with polynomials and radicals, and extending the Laws of Exponents to include rational exponents;
2. extending understanding of functions to linear, quadratic and exponential functions and using them to model and analyze real-world relationships;
3. solving quadratic equations in one variable and systems of linear equations and inequalities in two variables;
4. building functions, identifying their key features and representing them in various ways; and
5. representing and interpreting categorical and numerical data with one and two variables.

In Algebra 2, Areas of Emphasis include:

1. extending arithmetic operations with algebraic expressions to include radical and rational expressions and polynomial division;
2. graphing and analyzing functions including polynomials, absolute value, radical, rational, exponential and logarithmic;
3. building functions using compositions, inverses and transformations;
4. extending systems of equations and inequalities to include non-linear expressions; and
5. developing understanding of the complex number system, including complex numbers as roots of polynomial equations.

In Algebra 2 Honors, Areas of Emphasis include:

1. developing understanding of the complex number system, including complex numbers as roots of polynomial equations;
2. extending arithmetic operations with algebraic expressions to include polynomial division, radical and rational expressions;
3. graphing and analyzing functions including polynomials, absolute value, radical, rational, exponential and logarithmic;
4. extending systems of equations and inequalities to include non-linear expressions;
5. building functions using compositions, inverses and transformations; and
6. developing understanding of probability concepts.

In Algebra 1-A, Areas of Emphasis include:

1. extending understanding of functions to linear functions and using them to model and analyze real-world relationships;
2. solving linear equations and inequalities in one variable and systems of linear equations and inequalities in two variables;
3. building linear functions, identifying their key features and representing them in various ways; and
4. representing and interpreting categorical and numerical data with one and two variables.

In Algebra 1-B, Areas of Emphasis include:

1. performing operations with polynomials and radicals, and extending the Laws of Exponents to include rational exponents;
2. extending understanding of functions to quadratic and exponential functions and using them to model and analyze real-world relationships;
3. solving quadratic equations in one variable; and
4. building functions, identifying their key features and representing them in various ways.

In Probability and Statistics Honors, Areas of Emphasis include:

1. creating and interpreting data displays for univariate and bivariate categorical and numerical data;
2. comparing and making observations about populations using statistical data, including confidence intervals and hypothesis testing;
3. extending understanding of probability and probability distributions; and
4. developing an understanding of methods for collecting statistical data, including randomized trials.

In Mathematics for College Algebra, Areas of Emphasis include:

1. developing fluency with the Laws of Exponents with numerical and algebraic expressions;
2. extending arithmetic operations with algebraic expressions to include rational and polynomial expressions;
3. solving one-variable exponential, logarithmic, radical and rational equations and interpreting the viability of solutions in real-world contexts;
4. modeling with and applying linear, quadratic, absolute value, exponential, logarithmic and piecewise functions and systems of linear equations and inequalities; and
5. extending knowledge of functions to include inverse and composition.

In Mathematics for College Statistics, Areas of Emphasis include:

1. analyzing and applying linear and exponential functions within the context of statistics;
2. extending understanding of probability using data and various representations, including two-way tables and Venn diagrams;
3. representing and interpreting univariate and bivariate categorical and numerical data; and
4. determining the appropriateness of different types of statistical studies.

In Mathematics for College Liberal Arts, Areas of Emphasis include:

1. analyzing and applying linear and exponential functions within a real-world context;
2. utilizing geometric concepts to solve real-world problems;
3. extending understanding of probability theory;
4. representing and interpreting univariate and bivariate data; and
5. developing understanding of logic and set theory.

In Precalculus Honors, Areas of Emphasis include:

1. extending right triangle trigonometry to unit circle trigonometry and trigonometric functions;
2. extending understanding of functions to trigonometric;
3. developing understanding of conic sections;
4. representing and performing operations with complex numbers and vectors in the coordinate plane;
5. extending understanding of relations in the plane using parametric representations, including polar coordinates; and
6. analyzing arithmetic and geometric sequences and series.

In Calculus Honors, Areas of Emphasis include:

1. developing understanding of limits and continuity of functions;
2. finding derivatives and applying them to motions, slopes, related rates and optimizations;
3. applying limits and derivatives to graph and analyze functions; and
4. evaluating integrals and applying them to areas, volumes, average values and differential equations.

In Geometry, Areas of Emphasis include:

1. proving and applying relationships and theorems involving two-dimensional figures using Euclidean geometry and coordinate geometry;
2. establishing congruence and similarity using criteria from Euclidean geometry and using rigid transformations; and
3. extending knowledge of geometric measurement to two-dimensional figures and three-dimensional figures;
4. creating and applying equations of circles in the coordinate plane and
5. developing an understanding of right triangle trigonometry.

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1. proving and applying relationships and theorems involving two-dimensional figures using Euclidean geometry and coordinate geometry;
2. establishing congruence and similarity using criteria from Euclidean geometry and using rigid transformations;
3. extending knowledge of geometric measurement to two-dimensional figures and three-dimensional figures;
4. creating and applying equations of circles in the coordinate plane; and
5. developing an understanding of right triangle trigonometry.

In Mathematics for Data and Financial Literacy, Areas of Emphasis include:

1. extending knowledge of ratios, proportions and functions to data and financial contexts;
2. developing understanding of basic economic and accounting principles;
3. determining advantages and disadvantages of credit accounts and short- and long-term loans;
4. developing understanding of planning for the future through investments, insurance and retirement plans; and
5. extending knowledge of data analysis to create and evaluate reports and to make predictions.

In Mathematics for Data and Financial Literacy Honors, Areas of Emphasis include:

1. extending knowledge of ratios, proportions and functions to data and financial contexts;
2. developing understanding of basic economic and accounting principles;
3. determining advantages and disadvantages of credit accounts and short- and long-term loans;
4. developing understanding of planning for the future through investments, insurance and retirement plans; and
5. extending knowledge of data analysis to create and evaluate reports and to make predictions.

In Discrete Mathematics Honors, Areas of Emphasis include:

1. extending understanding of sequences and patterns to include Fibonacci sequences and tessellations;
2. applying probability and combinatorics;
3. extending understanding of systems of equations and inequalities to solve linear programming problems;
4. developing an understanding of Graph Theory, Election Theory and Set Theory; and
5. developing an understanding of propositional logic, arguments and methods of proof.

In Foundational Skills in Mathematics 9-12, Areas of Emphasis include all strands in all 9-12 mathematics:

1. Grade 9-12 mathematical Areas of Emphasis listed above that correspond to each students' needs and supplement core instruction.

Structural Framework and Intentional Design of the B.E.S.T. Standards for Mathematics

Florida's B.E.S.T. Standards for Mathematics were built on the following:

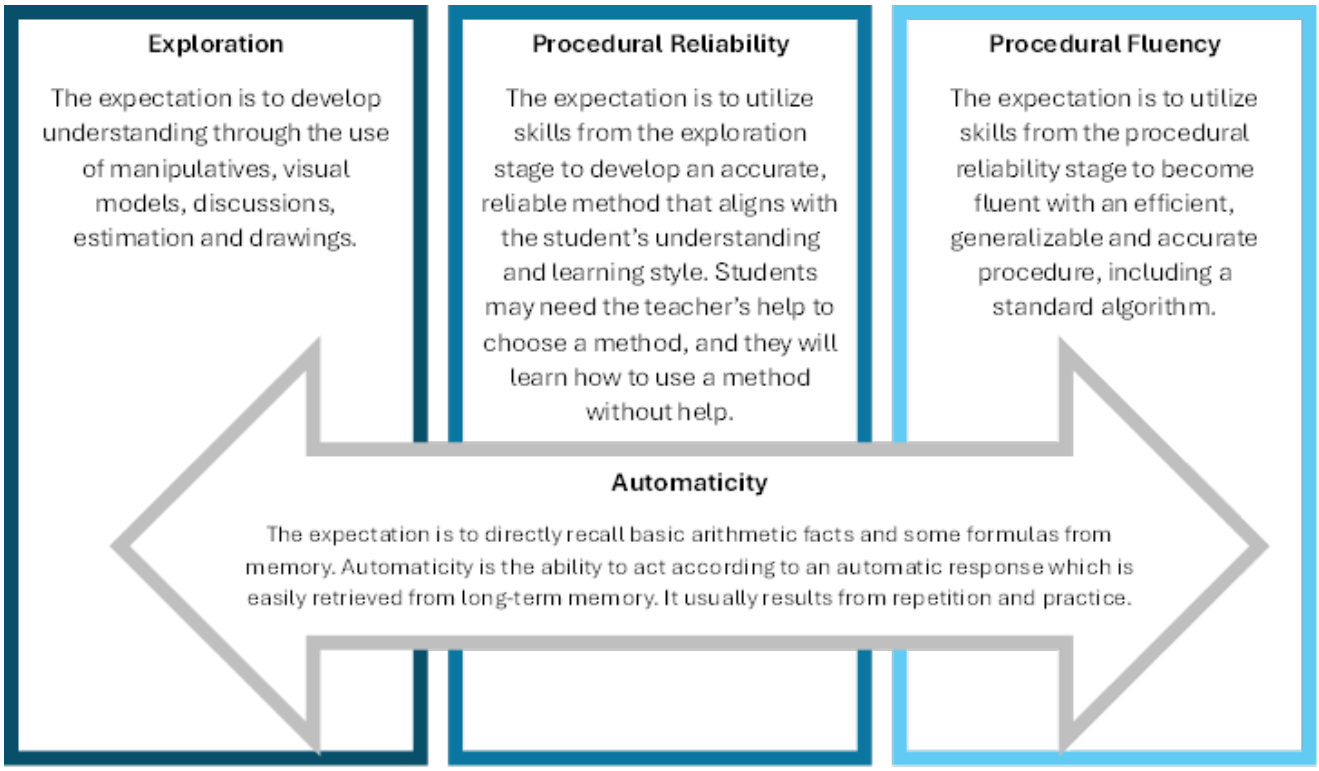
- The coding scheme for the standards and benchmarks was changed to be consistent with other content areas. The new coding scheme is structured as follows: Content.Grade Level/Band.Strand.Standard.Benchmark.
- Strands were streamlined to be consistent from kindergarten to high school.
- The standards and benchmarks were written to be clear and concise to ensure that they are easily understood by all stakeholders.
- The benchmarks were written to allow teachers to meet students' individual skills, knowledge and ability.
- The benchmarks were written to allow students the flexibility to solve problems using a method or strategy based upon their individual student preference to reliably achieve an accurate result.
- The benchmarks were written to allow for student exploration of methods or strategies that should be embedded within the instruction of benchmarks, rather than to require the usage of a particular method or strategy. The focus of instruction or assessment should not be a particular method or strategy.
- The benchmarks were written to support multiple pathways for success in career and college for students.
- The benchmarks should not be taught in isolation but should be combined purposefully.
- The benchmarks may be addressed at multiple points throughout the year, with the intention of gaining mastery by the end of the year.
- Appropriate progression of content within and across strands was developed for each grade level/course and across grade levels/courses.
- There is an intentional balance of conceptual understanding and procedural fluency with the application of accurate real-world context intertwined within mathematical concepts for relevance.
- The use of other content areas, like science and the arts, within real-world problems should be accurate, relevant, authentic and reflect grade-level appropriateness.

Evidence That Benchmarks Are Not Taught in Isolation

Below are elementary and secondary examples that demonstrate the integration of multiple benchmarks within a lesson and benchmarks are not taught in isolation. Please keep in mind that these are examples of how some benchmarks could be incorporated into instruction. There may be other benchmarks that can be considered in addition to the ones shown in the example below. There is no one correct way to integrate specific benchmarks.

Fluency

Building a strong numeracy foundation is critical to every child's mathematical success. The B.E.S.T. Standards for Mathematics were developed to allow skills to build upon one another within a grade level as well as from one grade to the next. Benchmark expectations have been developed with a hierarchy in mind consisting of three stages: exploration, procedural reliability and procedural fluency. The three stages illustrated below show the stages students may work through when learning.



Elementary Example

Benchmark of Focus

MA.2.AR.1.1 Solve one- and two-step addition and subtraction real-world problems.

Connecting Benchmarks	**Possible Interactions between Benchmark of Focus and Connecting Benchmarks**
• MA.2.NSO.2.3 • MA.2.AR.2.1 • MA.2.M.1.2 • MA.2.M.1.3 • MA.2.M.2.2 • MA.2.GR.2.2	• A prerequisite skill of adding and subtracting whole numbers with sums and differences up to 100 with procedural reliability will help in determining if addition and subtraction equations are true or false within a real-world problem involving one and two steps. • Finding the perimeter of limited polygons will make a connection to measuring the lengths of two objects using the same unit and determining the difference between one- and two-step real-world measurement problems. • Solving addition and subtraction real-world problems involving either dollar bills or coins appropriately will help extend instruction of the focus benchmark. Note: In addition to the benchmark of focus, connecting benchmark(s) should either make a mathematical connection or be a prerequisite benchmark. Connecting benchmarks should be authentic and purposeful and should support student learning in order to gain mastery by the end of the year.

Mathematical Thinking and Reasoning Standards (MTRs)

- MA.K12.MTR.1.1
- MA.K12.MTR.2.1
- MA.K12.MTR.3.1
- MA.K12.MTR.4.1
- MA.K12.MTR.5.1
- MA.K12.MTR.6.1
- MA.K12.MTR.7.1

Note: Integrated MTRs may vary depending on the demands of the lesson.*

*Please see the next section that explains the MTRs more in depth.

Purpose

During instruction of MA.2.AR.1.1 there are multiple benchmarks that can interact to support the addition and subtraction of whole numbers with sums up to 100 with procedural reliability by the end of the school year. The above examples provide ways the benchmark of focus can connect with other benchmarks to show how solving one- and two-step problems can be addressed through multiple entry points (i.e., working with money, finding the perimeter of figures or identifying differences in length).

Secondary Example

Benchmark of Focus

MA.6.GR.2.2 Solve mathematical and real-world problems involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles.

Connecting Benchmarks	Possible Interactions between Benchmark of Focus and Connecting Benchmarks
• MA.6.NSO.2.1 • MA.6.NSO.2.2 • MA.6.NSO.2.3 • MA.6.AR.2.2 • MA.6.AR.2.3 • MA.6.AR.2.4 • MA.6.GR.2.1	• Performing operations with positive rational numbers is a prerequisite skill to the benchmark of focus. • It is an expectation to know from memory a formula for the area of a triangle. Having reinforcement of MA.6.GR.2.1 will allow for mastery of memorization of the formula by the end of the year. • A possible connection includes the application of solving one-step equations when determining missing dimensions within problems pertaining to the benchmark of focus. Note: In addition to the benchmark of focus, connecting benchmark(s) should either make a mathematical connection or be a prerequisite benchmark. Connecting benchmarks should be authentic and purposeful and should support student learning in order to gain mastery by the end of the year.

MTRs

- MA.K12.MTR.1.1
- MA.K12.MTR.2.1
- MA.K12.MTR.3.1
- MA.K12.MTR.4.1
- MA.K12.MTR.5.1
- MA.K12.MTR.6.1
- MA.K12.MTR.7.1

Note: Integrated MTRs may vary depending on the demands of the lesson.*

*Please see the next section that explains the MTRs more in depth.

Purpose

During instruction of MA.6.GR.2.2 there are multiple benchmarks that can interact to support the application of solving area problems involving quadrilaterals or composite figures. The above examples provide ways the benchmark of focus can connect with other benchmarks to show how previously learned mathematical concepts (i.e., operations with positive rational numbers or solving one-step equations) are reinforced through a later entry point to gain mastery by the end of the school year.

Structural Framework and Intentional Design of the Mathematical Thinking and Reasoning Standards

The Mathematical Thinking and Reasoning Standards (MTRs) are built on the following.

- The MTRs have the same coding scheme as the standards and benchmarks, however they are written at the standard level because there are no benchmarks.
- In order to fulfill Florida's unique coding scheme, the 5th place (benchmark) will always be a "1" for the MTRs.
- The B.E.S.T. Standards for Mathematics should be taught through the lens of the MTRs.
- The MTRs should be authentically and appropriately embedded throughout every lesson based on the expectation of the benchmark(s).
- The bulleted language of the MTRs was written for students to use as self-monitoring tools during instruction every day.
- The clarifications of the MTRs were written for teachers to use as a guide to inform their instructional practices.
- The MTRs ensure that students stay engaged, persevere in tasks, share their thinking, balance conceptual understanding and procedures, assess their solutions and make connections to previous learning and extended knowledge.
- The MTRs should not stand alone as a separate focus for instruction, but should be combined purposefully.
- The MTRs may be addressed at multiple points throughout the year, with the intention of gaining mastery of mathematical skills by the end of the year and build upon these skills as they continue in their K-12 education.
- The Concrete, Representational, Abstract (CRA) Instructional Model* should be evident in the instructional materials specific to the MTRs in order to assist understanding of mathematical concepts.

*The CRA Instructional Model is a sequence that progresses students from concrete modeling to pictorial representations to abstract thinking, which provides students with a greater understanding of mathematical concepts. This model incorporates the use of three levels of instruction: concrete modeling using tangible and hands-on materials; two-dimensional pictures and representations; and abstract thinking with symbols, numbers and algorithms.

Sample of How the Mathematical Thinking and Reasoning Standards are Integrated

Below are elementary and secondary examples that demonstrate the embedding of the MTRs within a lesson. Please keep in mind that these are examples of how some MTRs could be incorporated into instruction and that there may be other MTRs that can be considered in addition to the ones shown in the example below. Additionally, some MTRs may be incorporated at different points of instruction of the benchmark.

Elementary Example		
MA.3.NSO.2.4 Multiply two whole numbers from 0 to 12 and divide using related facts with procedural reliability.		
MTR	**Teacher Moves**	**Student Moves**
MA.K12.MTR.1.1 *Actively participate in effortful learning both individually and collectively.*	• Teacher chooses differentiated, challenging tasks that fit the students' needs to help build perseverance in students • Teacher builds community of learners by encouraging students and recognizing their effort in staying engaged in the task	• Student asks questions to self, others and teacher when necessary • Student stays engaged in the task and helps others during the completion of the task • Student analyzes the task in a way that makes sense to themselves
MA.K12.MTR.2.1 *Demonstrate understanding by representing problems in multiple ways.*	• Teacher plans ahead to allow students to choose their tools • While sharing student work teacher purposefully shows various representations to make connections between different strategies or methods	• Student chooses their preferred method of representation • Students represent a multiplication problem in more than one way and are able to make connections between the representations
MA.K12.MTR.4.1 *Engage in discussions that reflect on the mathematical thinking of self and others.*	• Teacher purposefully groups students together to provide opportunities for discussion • Teacher chooses sequential representation of methods to help students explain their reasoning	• Students effectively justify their reasoning for their methods • Students can identify errors within their own work and create possible explanations • Students can identify errors in the work presented by others and offer explanations
MA.K12.MTR.5.1 *Use patterns and structure to help understand and connect mathematical concepts.*	• Teacher allows for students to engage with information to connect current understanding to new methods	• Student determines what information is needed and logically follows a plan to solve problems piece by piece
MA.K12.MTR.6.1 *Assess the reasonableness of solutions.*	• Teacher encourages students to check and revise solutions and provide explanations for results	• Student provides explanation of results
MA.K12.MTR.7.1 *Apply mathematics to real-world contexts.*	• Teacher provides real-world context in mathematical problems to support students in making connections using models and investigations	• Student relates their real-world experience to the context provided by the teacher during instruction

Secondary Example		
MA.912.AR.4.3 Given a table, equation or written description of an absolute value function, graph that function and determine its key features.		
MTR	**Teacher Moves**	**Student Moves**
MA.K12.MTR.1.1 *Actively participate in effortful learning both individually and collectively.*	• Teacher builds a classroom community by allowing students to build their own set of "norms" • Teacher creates a culture in which students are encouraged to ask questions, including questioning the accuracy within a real-context	• Student builds perseverance in self by staying engaged and modifying methods as they solve a problem
MA.K12.MTR.2.1 *Demonstrate understanding by representing problems in multiple ways.*	• Teacher helps make connections between different representations (table, equation or written description) of absolute functions to students	• Student determines key features of graph by representing the absolute value function in multiple ways
MA.K12.MTR.3.1 *Complete tasks with mathematical fluency.*	• Teacher provides opportunity for students to reflect on the method they used to graph an absolute value function, determining if there is a more efficient way depending on how the information is presented	• Students become fluent in graphing absolute value functions and determining their key features • Students use feedback from teacher and peers to improve efficiency when graphing absolute value functions and determining their key features
MA.K12.MTR.4.1 *Engage in discussions that reflect on the mathematical thinking of self and others.*	• Teacher provides opportunities for students to be able to discuss and make connections between graphing linear and quadratic functions to graphing absolute value functions	• When working in small groups, students recognize errors of their peers and offer suggestions to correctly graph an absolute value function • Students communicate mathematical vocabulary efficiently to others
MA.K12.MTR.5.1 *Use patterns and structure to help understand and connect mathematical concepts*	• Teacher provides opportunities for students to discuss and develop generalizations about the equation of an absolute value function and its key features • Teacher provides opportunities for students to develop their own steps in graphing an absolute value function	• Students are able to make connections to absolute value functions from knowledge of absolute value as a distance from the zero point
MA.K12.MTR.6.1 *Assess the reasonableness of solutions.*	• Teacher allows opportunities for students to verify their solutions by providing justifications to self and others	• Before a student graphs an absolute function from an equation, they check their calculations
MA.K12.MTR.7.1 *Apply mathematics to real-world contexts.*	• Teacher provides opportunities for students to explore absolute value functions within a real-world context for relevance	• Students perform investigations to determine if a scenario can represent a real-world context

Incorporation of the Appendices

Through Rule 6A-1.09401, F.A.C., Student Performance Standards, the appendices are adopted as part of Florida's B.E.S.T. Standards for Mathematics and are to be included within all lessons and units of instruction. Please keep in mind that Appendix B is not intended to drive instruction or curriculum. That chart includes multiple strands in order to visualize the connections related to fluency. The purpose of Appendix C is to provide a reference list for teachers to support the expectations of Florida's B.E.S.T Standards for Mathematics for kindergarten to grade twelve. This glossary is not intended to comprise a comprehensive vocabulary list for teachers or students. The Florida Department of Education (FDOE) recognizes that there may be alternative definitions for some terms that are also mathematically correct; however, the intention here is to provide common language and shared understanding among all stakeholders in the state of Florida. While there is a K-5 and 6-12 section to the glossary, definitions apply across all grade levels and courses from Kindergarten through grade twelve.

Consistent Language Across All Grade/Course Levels

Using the term "benchmark expectations" is essential to ensure that instruction centers on teaching the full breadth and depth of each benchmark, rather than narrowing the focus to learning objectives, essential questions, learning targets or focus areas. This approach promotes a comprehensive understanding of the standards and fosters deeper learning, as students engage with the complete set of skills and knowledge outlined in the benchmarks.

Student-Centered Methods and Strategies to Solve Problems

Florida's B.E.S.T. Standards for Mathematics were written to allow for student-centered instruction which necessitates that methods and strategies are embedded within instructional materials lessons as appropriate to the problem. Students will explore a variety of methods, as a part of instruction, with a goal that students are able to master at least one method that works reliably to achieve an accurate result. In addition, the inclusion of a mix of practice sets will provide students with the opportunity to experience different types of problem-solving within the scope of one lesson. A student may select and master a favorite method for doing a particular type of problem, but the student will benefit from being exposed to other methods, in order to deepen their own understanding of their favorite method and to facilitate better communication with other students.

Intention of Examples and Clarifications

Through Rule 6A-1.09401, F.A.C., Student Performance Standards, the examples and clarifications are adopted as part of Florida's B.E.S.T. Standards for Mathematics and are to be included within all lessons and units of instruction. The clarifications and examples establish a baseline for mastery of the benchmarks. Instruction can go beyond any limitations or expectations set within clarifications as appropriate.

Incorporation of Digital Resources; Parent Resources; Student Resources

With the increase of remote learning, it is the expectation that publishers include digital resources for teachers, parents and students. Digital features might include virtual manipulatives, adaptive tasks, various assessment item types, searchable tasks and assessment items by benchmark and interactive activities and lessons that can be completed simultaneously online or on paper.

Rule 6A-1.094124, F.A.C., Required Instruction Planning and Reporting

Instructional materials must comply with subsection 3 of Rule 6A-1.094124, F.A.C., Required Instruction Planning and Reporting, and all other sections pertinent to ELA education.

Critical Race Theory, Social Justice, Culturally Responsive Teaching, Social and Emotional Learning and any other unsolicited theories that may lead to student indoctrination are prohibited.

Subsection 3 states:

(3) As provided in Section 1003.42(2), F.S., members of instructional staff in public schools must teach the required instruction topics efficiently and faithfully, using materials that meet the highest standards of professionalism and historical accuracy.

(a) Efficient and faithful teaching of the required topics must be consistent with the state academic standards and the Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards.

(b) Instruction on the required topics must be factual and objective, and may not suppress or distort significant historical events, such as the Holocaust, slavery, the Civil War and Reconstruction, the civil rights movement and the contributions of women, African American and Hispanic people to our country, as already provided in Section 1003.42(2), F.S. Examples of theories that distort historical events and are inconsistent with State Board approved standards include the denial or minimization of the Holocaust, and the teaching of Critical Race Theory, meaning the theory that racism is not merely the product of prejudice, but that racism is embedded in American society and its legal systems in order to uphold the supremacy of white persons. Instruction may not utilize material from the 1619 Project and may not define American history as something other than the creation of a new nation based largely on universal principles stated in the Declaration of Independence. Instruction must include the U.S. Constitution, the Bill of Rights and subsequent amendments.

(c) Efficient and faithful teaching further means that any discussion is appropriate for the age and maturity level of the students, and teachers serve as facilitators for student discussion and do not share their personal views or attempt to indoctrinate or persuade students to a particular point of view that is inconsistent with the state academic standards and the Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards.

Required Instruction Statute (s. 1003.42, F.S.)

Mathematics instructional materials must be in compliance with s. 1003.42, F.S. Content from s. 1003.42, F.S., must be included in instructional materials as appropriate for grade-level, subject, course and mathematics standards.

Prohibition of Critical Race Theory (CRT) and its Applied Principles and Social Emotional Learning

Materials must be aligned to s. 1003.42(3), F.S., which states:

(a) No person is inherently racist, sexist, or oppressive, whether consciously or unconsciously, solely by virtue of his or her race or sex.

(b) No race is inherently superior to another race.

(c) No person should be discriminated against or receive adverse treatment solely or partly on the basis of race, color, national origin, religion, disability, or sex.

(d) Meritocracy or traits such as a hard work ethic are not racist but fundamental to the right to pursue happiness and be rewarded for industry.

(e) A person, by virtue of his or her race or sex, does not bear responsibility for actions committed in the past by other members of the same race or sex.

(f) A person should not be instructed that he or she must feel guilt, anguish, or other forms of psychological distress for actions, in which he or she played no part, committed in the past by other members of the same race or sex.

In addition, materials must be aligned to s. 1000.05(4)(a), F.S., which states:

> It shall constitute discrimination on the basis of race, color, national origin, or sex under this section to subject any student or employee to training or instruction that espouses, promotes, advances, inculcates, or compels such student or employee to believe any of the following concepts:
>
> 1. Members of one race, color, national origin, or sex are morally superior to members of another race, color, national origin, or sex.
> 2. A person, by virtue of his or her race, color, national origin, or sex, is inherently racist, sexist, or oppressive, whether consciously or unconsciously.
> 3. A person's moral character or status as either privileged or oppressed is necessarily determined by his or her race, color, national origin, or sex.
> 4. Members of one race, color, national origin, or sex cannot and should not attempt to treat others without respect to race, color, national origin, or sex.
> 5. A person, by virtue of his or her race, color, national origin, or sex, bears responsibility for, or should be discriminated against or receive adverse treatment because of, actions committed in the past by other members of the same race, color, national origin, or sex.
> 6. A person, by virtue of his or her race, color, national origin, or sex, should be discriminated against or receive adverse treatment to achieve diversity, equity, or inclusion.
> 7. A person, by virtue of his or her race, color, sex, or national origin, bears personal responsibility for and must feel guilt, anguish, or other forms of psychological distress because of actions, in which the person played no part, committed in the past by other members of the same race, color, national origin, or sex.
> 8. Such virtues as merit, excellence, hard work, fairness, neutrality, objectivity, and racial colorblindness are racist or sexist, or were created by members of a particular race, color, national origin, or sex to oppress members of another race, color, national origin, or sex.

Social Emotional Learning in instructional materials are considered extraneous, unsolicited strategies prohibited in the specifications for the texts and are not part of the subject-area standards.

Additionally, materials must be aligned to s. 1001.42(8)(c)3., F.S., which states:

> Classroom instruction by school personnel or third parties on sexual orientation or gender identity may not occur in prekindergarten through grade 8, except when required by ss. 1003.42(2)(o)3. and 1003.46, F.S. If the instruction is provided in grades 9 through 12, the instruction must be age-appropriate or developmentally appropriate for students in accordance with state standards.

Digital Resources, Parent Resources and Student Resources

It is the expectation that publishers include digital resources for teachers, parents and students. Digital features might include virtual lectures, primary source analysis, adaptive tasks, various assessment item types, searchable tasks and assessment items by benchmark, and interactive activities and lessons that can be completed simultaneously online or on paper.

Access for English Language Leaners (ELL) and Students with Disabilities

It is important that the program meets the needs of Florida's students and teachers. A number of different components included in the evaluation document capture the overall quality of the program's design. It is important that the program design includes tiered instruction through a Multi-Tiered System of Support (MTSS), providing access for all students including English Language Learners and students with disabilities.

A Multi-Tiered System of Support integrates the instruction and intervention, which is delivered to students in varying intensities (multiple tiers) based on student need. Additionally, it ensures that resources reach the appropriate students at the appropriate levels to accelerate the performance of ALL students to achieve and/or exceed proficiency. The program must align all tiers of instruction and intervention.

For ELLs, features are important in establishing the readability of instructional material language and concepts including:

- Language that clarifies, simplifies and explains information;
- Transition words such as "yet," "also," "next," "for example," "moreover" or "however;"
- Words with concrete and specific images;
- Active rather than passive voice;
- Varied sentence structures and avoidance of both choppy sentences and unnecessary words;
- Specific questions or directions to guide student attention to visuals or key information;
- Chunking text;
- Visuals that are relevant, clear, vivid, and simple enough for students to understand;
- Quantity of visuals suitable for the intended students;
- Visuals that contain information in a form different from the text;
- Graphs, charts, maps and other visual representations integrated at their point of use.

Instructional materials should include multilingual glossaries/dictionaries with content area vocabulary translated into Florida's primary languages: Spanish, Haitian-Creole, Portuguese, Vietnamese, French, Arabic, Chinese, Russian, Tagalog and Urdu.

All students with disabilities, are entitled to grade-level accessible instructional materials, therefore publishers who submit material for consideration will be required to incorporate strategies, materials, activities, accessibility, etc. that consider the special needs of these students. In providing for students with special needs, Florida evaluators should consider the guidelines and information provided by the National Center on Universal Design for Learning at www.UDLCenter.org.

Providing access in a timely manner to both appropriate and accessible instructional materials (AIM) is an inherent component of the provision of a free and appropriate public education (FAPE) under the Individuals with Disabilities Education Act of 2004 (IDEA) for students with disabilities (34 Code of Federal Regulations [CFR]§300.210(b)(3)). The individual educational plan (IEP) team is responsible for determining if a student needs accessible instructional materials, the format of such materials and the necessary related accommodations for the student to participate in the general curriculum. One way to provide AIM is by ensuring that programs include flexible digital instructional materials.

Flexible Digital Instructional Materials

All instructional materials must be provided in formats that are appropriate and accessible for students with disabilities and struggling students to ensure that all students can effectively and independently complete instructional activities addressing the common core standards. The following are features that should be available in all digital and online instructional materials.

Presentation Features

- Fonts can be adjusted in type and size.
- Font colors and background colors can be adjusted.
- High contrast color settings are available.
- Text-to-speech tools are included or text can be selected and used with text-to-speech utilities.
- Text-to-speech tools read math formulas correctly.
- All images have alt tags.
- All videos are captioned.
- Text, image tags and captioning can be sent to refreshable Braille displays.

Navigation Features

- Non-text navigation elements (buttons, icons, etc.) can be adjusted in size.
- All navigation elements and menu items have keyboard shortcuts.
- All navigation information can be sent to refreshable Braille displays.

Study Tools

- Highlighters are provided in the 4 standard colors (yellow, rose, green, blue).
- Highlighted text can be automatically extracted into another document.
- Note taking tools are available for students to write ideas online as they are processing curriculum content.
- Resizable digital calculators are available in all math materials.
- Information can be entered (e.g., voice, scan, grade and drop) and accessed in a variety of ways.

Assistive Technology Supports

- Assistive technology software can be run in the background. Examples include:
    1. Magnification
    2. Text-to-speech
    3. Text-to-American Sign Language
    4. On-screen keyboards
    5. Switch scanning controls
    6. Speech-to-text

Flexible digital materials can also support all students within a Universal Design for Learning framework, not just students with disabilities. A feature that supports a student with a disability can also be used by other students. For example, text-to-speech and text-to-audio tools can be used as a reading scaffold for any student who struggles with decoding text. These tools can also be used by gifted students to convert print to audio so they can listen to the content while multi-tasking. Being able to adjust the size of menus and navigation elements helps students who are using switch systems to control a computer as well as help any students use the instructional materials on smaller screens, such as a mobile device or tablet.

Requirements for Production of Accessible Instructional Materials

Instructions for Preparing Electronic Files Required for Production of Instructional Materials in Braille and Other Accessible Formats in a Timely Fashion

Statutory Authorization

Section 1003.55(5), F.S., states "….any publisher of a textbook adopted pursuant to the state instructional materials adoption process shall furnish the Department of Education with a computer file in an electronic format specified by the Department at least two years in advance that is readily translatable to Braille and can be used for large print or speech access. Any textbook reproduced pursuant to the provisions of this subsection shall be purchased at a price equal to the price paid for the textbook as adopted. The Department of Education shall not reproduce textbooks obtained pursuant to this subsection in any manner that would generate revenues for the department from the use of such computer files or that would preclude the rightful payment of fees to the publisher for use of all or some portion of the textbook."

Section 1006.29(3), F.S., states "Beginning in the 2015-2016 academic year, all adopted instructional materials for students in kindergarten through grade 12 must be provided in an electronic or digital format. For purposes of this section, the term: (a) 'Electronic format' means text-based or image-based content in a form that is produced on, published by, and readable on computers or other digital devices and is an electronic version of a printed book, whether or not any printed equivalent exists. (b) 'Digital format' means text-based or image-based content in a form that provides the student with various interactive functions; that can be searched, tagged, distributed, and used for individualized and group learning; that includes multimedia content such as video clips, animations, and virtual reality; and that has the ability to be accessed at anytime and anywhere. The terms do not include electronic or computer hardware even if such hardware is bundled with software or other electronic media, nor does it include equipment or supplies."

Section 1006.38(15), F.S., states "Grant, without prior written request, for any copyright held by the publisher or its agencies automatic permission to the department or its agencies for the reproduction of

instructional materials and supplementary materials in braille, large print, or other appropriate format for use by visually impaired students or other students with disabilities that would benefit from use of the materials."

Objective

Electronic formats are needed to accelerate the production of instructional materials in Braille, large print and other appropriate accessible formats. These accessible formats are used by visually impaired students or other students with disabilities utilizing specialized translation software and peripheral devices. Access to Braille, enlarged print, audio and digital materials, including web-based online applications is crucial to the successful inclusion of students with disabilities in the classroom. The objective of these statutes is to prompt publishers to provide instructional materials data in an electronic format that will be useful to Braille and other accessible format producers while at the same time allowing each publisher the flexibility of providing files in the current version of: EPub3, HTML5 or MathML3 (as appropriate). Instructional materials that contain mathematical and scientific instructional content are to be marked up by using the MathML3 module of the DAISY/NIMAS Structure Guidelines as posted and maintained at the DAISY Consortium web site: http://www.daisy.org/z3986/structure/SG- DAISY3/index.html.

By April 1 of each year, publishers of adopted student textbooks for instructional materials must be able to provide the approved electronic formats UPON REQUEST. The requested electronic files shall be provided to the Florida Instructional Materials Center for the Visually Impaired (FIMC-VI), 4210 West Bay Villa Avenue, Tampa, Florida 33611; (813) 837-7826; in Florida WATS (800) 282-9193 or (813) 837-7979 (FAX). The center will contact each publisher of an adopted textbook and provide delivery instructions.

Federal Requirements for the National Instructional Materials Accessibility Standard (NIMAS)

National Instructional Materials Accessibility Standard guides the production and electronic distribution of digital versions of textbooks and other instructional materials so they can be more easily converted to accessible formats, including Braille and text-to-speech. A National Instructional Materials Access Center (NIMAC) has been established to receive and catalog publishers' electronic files of print instructional materials in the NIMAS format.

These files will be used for the production of alternate formats as permitted under the law for students with print disabilities. Under these guidelines, "textbook" means the principal tool of instruction such as state-adopted instructional materials used in the classroom. It is a printed book or books that contain most, if not all, of the academic content a student needs to learn to meet the state or local educational agency's curriculum requirements for that subject area. "Related core materials" are printed materials, other than textbooks, designed for use by students in the classroom in conjunction with a textbook and which, together with the state-adopted textbook, are necessary to meet the curriculum requirements for the intended course. The materials should be directly related to the textbook and wherever possible they should be published by the publisher of the textbook. Related core materials do not include materials that are not written and published primarily for use by students in the classroom (e.g., trade books not bundled with the textbook, newspapers and reference works) or ancillary or supplemental materials that are not necessary to meet the curriculum requirements for the intended course. For purposes of these definitions, the term "curriculum requirements for the intended course" refers to relevant curriculum standards and requirements as established by a state educational agency or local educational agency.

The details of the metadata elements required as part of the NIMAS File set will be found at http://www.nimac.us/pdf/NIMAC_Metadata1.pdf. Please note that some elements are required, while others are optional. Some fields also allow for multiple entries (e.g., subject terms).

Complete information concerning NIMAS and NIMAC can be found at http://aim.cast.org and http://www.nimac.us. (IDEA-2004).

Questions from publishers concerning electronic files in Florida can be directed to Chelsea Strickland at Chelsea.Strickland@fldoe.org.

Contact Information and Links

Florida Department of Education
Office of Instructional Materials
325 W. Gaines Street – Suite 432
Tallahassee, Florida 32399-0400
850-245-0425 Office
850-245-0826 Fax

Instructional Materials Program Specialist
Caroline Palmer
850-245-5035 Office
Caroline.Palmer@fldoe.org

Instructional Materials Program Specialist
Laurel Garrison
850-245-9149 Office
Laurel.Garrison@fldoe.org

General Questions
850-245-0425
IMStaff@fldoe.org
Instructional Materials Website: http://www.fldoe.org/academics/standards/instructional-materials

Attachments:

- K-12 Evidence that Benchmarks Are Not Taught in Isolation (Attachment 1)
- Evidence of MTRs, EEs and ELDs (Attachment 2)
- B.E.S.T. Standards for Mathematics Appendices Correlation (Attachment 3)
- Core Questions Rubric (Attachment 4)