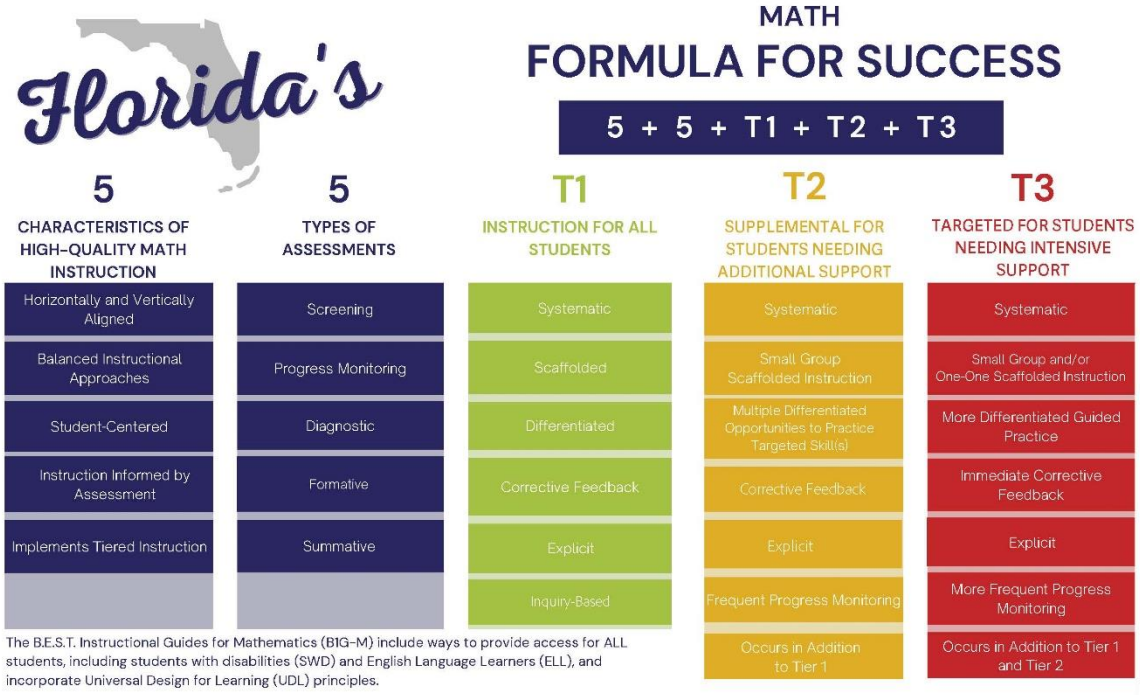
Mathematics Formula for Success

To support the implementation of the Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards for Mathematics with fidelity, the Florida Department of Education developed Florida's Mathematics Formula for Success, establishing the characteristics of benchmarks-aligned, high-quality instruction. Access to high-quality mathematics instruction is a fundamental value provided to Florida's students through the B.E.S.T. Standards. It is the responsibility of all educators to establish the necessary infrastructure to help students thrive. This infrastructure will be student-centered, for all learners and incorporate Universal Design for Learning (UDL) principles.

Benchmarks-aligned, high-quality mathematics instruction:

- builds upon student prior knowledge;
- develops a foundation for future learning;
- is guided by careful planning of appropriate instructional goals, content, methods, routines, and use of materials;
- includes teachers consistently using the appropriate mathematical language within the B.E.S.T. Standards and guiding students to develop their own use of academic vocabulary; and
- results in deeper student understanding of mathematical concepts, strategies, and skills, increased student engagement with mathematics, and improved student learning outcomes.



The first column of the Formula for Success refers to the "5 Characteristics of High-Quality Instruction." Benchmarks-aligned, high-quality mathematics instruction is guided by careful planning and appropriate instructional goals, content, methods, routines and use of high-quality instructional materials. The characteristics of high-quality mathematics instruction include horizontal and vertical alignment, the use of balanced instructional approaches, student-centered instruction, informed assessments and implementation of tiered instruction.

- **The horizontal and vertical alignment of the B.E.S.T. Standards for Mathematics** provide mathematical progressions, alignment and connections within and between strands of the grade level or course. Horizontal alignment is the intentional progression of content within a grade level or course linking skills within and across strands. Vertical alignment is the intentional progression of content from one year to the next spanning across multiple grade levels.

- **Balanced instructional approaches** are used intentionally as the context of the benchmark demands. Teachers encourage students to explore mathematical ideas using manipulatives and different representations (e.g., drawings, equations and graphs) through challenging tasks. Additionally, teachers help students build mathematical fluency with procedures by summarizing steps and encouraging practice.

- **Student-centered instruction** occurs when teachers create both collaborative and independent classroom learning environments, in which students are actively engaged in challenging mathematical tasks; encouraging them to be risk-takers and to persevere in their learning.

- **Instruction is informed by teachers assessing student understanding in multiple ways** (e.g., screening, progress monitoring, formative, diagnostic and summative). Teachers use assessment data to identify the appropriate instructional approach, select appropriate scaffolds, guide differentiation of instruction and use corrective feedback.

- **Implementation of tiered instruction occurs when teachers deliver instruction and intervention** for all students through informed data practices. Teachers determine the level of support students need by utilizing a variety of assessment data.

The second column of the Formula for Success refers to the "5 Types of Assessments." The department emphasizes the use of various data to inform instruction. These data can be derived from screening, progress monitoring, diagnostic, formative and summative assessments.

- **Screening** identifies the probability of risk or success in mathematics achievement. Educators can use screening to measure the effectiveness of Tier 1, or core, instruction in the classroom and identify students needing more intensive interventions and supports (Tier 2 and 3 supports).

- **Progress monitoring** is used to determine whether students are learning the skills taught and/or meeting benchmarks throughout the school year. Progress monitoring can be done at the state level or the local level. Progress monitoring can also be referred to as interim or formative assessments.

- **Diagnostic** assessments identify a student's strengths and weaknesses for students identified as at-risk on a screening assessment.

- **Formative** assessments monitor student learning to provide ongoing feedback that can be used by educators to identify the current state of the learners' knowledge and skills. More specifically, educators can use formative assessment on a regular basis to monitor student learning and adjust their current instruction to meet the needs of the learner. Formative assessments provide the opportunity for educators to improve their teaching, and for students to improve their learning.

- **Summative,** or outcome, assessments are used to evaluate students' performance relative to a set of content standards generally administered at the end of the school year. Summative assessments can be done at the state level or the local level.

The third, fourth and fifth columns of the Formula for Success refer to a framework of tiered instruction and interventions that includes Tier 1 (T1), Tier 2 (T2) and Tier 3 (T3). Tiered instruction and intervention are critical components of an effective multi-tiered system of support (MTSS). A three-tiered model of intervention and instruction organizes instructional resources on a continuum of increasing intensity. Instruction can be intensified based on student need by increasing time, narrowing the focus to specific barrier skills, and/or reducing the size of the group.

- **Tier 1** includes instruction that is accessible to all students. A Tier 1 intervention is a change or adjustment made to core instruction for all students based on data. Tier 1 interventions are implemented when data indicate that the majority or a high percentage of students in a large group (e.g., class, grade level, school) are performing below expectation. Typically, classroom teachers implement Tier 1 interventions for their class by planning and implementing data-based changes to either whole group or differentiated instruction that impacts all students.

- **Tier 2**, or supplemental instruction and intervention, is provided to students not meeting expectations and is often delivered to small groups of students who will likely benefit from instruction focused on the same target skill(s).

- **Tier 3**, or intensive intervention, is intended for students experiencing significant barriers to learning and can be provided one-on-one or in very small groups. Tier 2 and 3 interventions should be aligned with Tier 1 and include additional instructional time focused on critical skills.

Tier 2 and Tier 3 interventions should be provided in addition to Tier 1 mathematics instruction. When data indicate that a student needs more intensive support of Tier 2 and/or Tier 3, those interventions should be provided in addition to, not in place of, Tier 1. When implemented with fidelity, differentiated instruction within Tier 1 can be a highly effective instructional strategy that helps address the unique needs of all learners, including those in need of intervention.

Within each tier of instruction, a variety of instructional approaches are chosen and utilized purposefully and intentionally to deliver instruction and intervention based on the needs of students. The instructional approaches are as follows:

- **Systematic instruction is a highly structured, organized sequence of teaching** that uses appropriate academic vocabulary while introducing and reinforcing new concepts, strategies, and skills over time, aiming to ensure a cumulative progression of learning from simple to complex. Systematic instruction contributes to the student's continuous acquisition of increasingly complex concepts, strategies and skills to become a confident mathematician. Systematic instruction decreases the possibility of a student developing a mathematics deficiency over time and builds a foundation for future learning.

- **Scaffolded instruction is the intentional and strategic support provided by a teacher** for students to carry out a task, solve a problem or achieve a goal that requires support. The support is planned, temporary and adjustable based on student understanding and need. The support fades as mastery of concepts, strategies and skills increases. Scaffolded instruction contributes to student learning by building upon student knowledge and experience. It bridges learning gaps and helps students deepen their understanding of concepts, strategies and skills at grade or course level. Scaffolded instruction also supports English Language Learners in communicating information, ideas and concepts necessary for academic success. The goal is to enable students to accomplish a learning task independently.

- **Differentiated instruction is adapting instruction** in response to the distinctly assessed skills and needs of students to increase their access and opportunity to meet grade or course level learning goals or progress toward them. Differentiated instruction contributes to student learning by adapting instructional strategies to meet student needs in accessing and mastering grade or course level standards and benchmarks. Differentiated instruction allows students to remediate, stay on task or accelerate their learning as needed.

- **Corrective feedback is identifying and correcting student errors** by explaining what each error is and suggesting how it can be corrected, making sure students understand why an answer is either correct or incorrect. Corrective feedback needs to be timely, specific, individualized and ongoing. Corrective feedback contributes to student learning by providing opportunities to reflect and correct misconceptions or errors and reinforces expectations during lessons. Corrective feedback creates a collaborative process between teachers and students that supports continuous learning and improvement.

- **Explicit instruction is highly structured and intentional teaching, with clear objectives** and purposeful presentation to students, of the concepts, strategies and skills necessary to master benchmark expectations. Explicit instruction models thinking and problem-solving skills and can be implemented as needed in whole groups, small groups or individually. Explicit instruction contributes to student learning by minimizing proximal gaps and misconceptions through teacher modeling and opportunities to master benchmark expectations.

- **Inquiry-based instruction is a discovery-based approach where teachers act as facilitators** while students develop their understanding of concepts, strategies and skills through exploration. Inquiry-Based Instruction contributes to student learning by emphasizing critical thinking, creativity, curiosity, collaboration and problem-solving, allowing students to take ownership of their learning and develop a deeper understanding of concepts, strategies, skills and real-world connections. Inquiry-based instruction provides students the opportunity to justify their methods using appropriate mathematical language and compare their mathematical thinking to the thinking of their peers to advance and deepen understanding of correct and increasingly efficient methods.