

The Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards for Mathematics are the state's mathematical standards that pave the way for Florida students to receive a world-class education and prepare them for a successful future.

Education leaders from across the state came together to develop Florida's B.E.S.T. Standards for Mathematics. These standards and benchmarks are goals that students are expected to achieve by the end of the school year. A standard is an overarching criterion for a grade level or grade band. A benchmark is a specific expectation or skill for the grade level or grade band that falls within a standard. The B.E.S.T. Standards are designed to ensure that ALL students reach their greatest potential.

**THESE STANDARDS WERE WRITTEN TO:**

Provide clarity on the grade-level expectations for educators, parents and students.

Allow students flexibility to solve problems using a method/strategy of their choice.

Allow for student discovery (i.e., exploration) of strategies rather than the teaching, naming and assessing of each strategy individually.

**Preparing your student for success begins in Kindergarten and continues as your child progresses through each grade. This guide will support parents, guardians and families with students in Grade 2 by helping them:**

- **LEARN** about the B.E.S.T. Standards for Mathematics and why they matter for your student.
- **UNDERSTAND** important educational (academic) words that you will see in your student's grade-level standards and benchmarks.
- **TALK** with your student's teacher about what they will be learning in the classroom.
- **LOCATE** activities and resources to support your student's learning in practical ways at home.



### Learn About the Grade 2 Mathematics Standards

This table describes the areas of emphasis within Grade 2 and provides examples of specific expectations within each area of emphasis. The purpose of the areas of emphasis is not to guide specific units of learning and instruction but to provide insight into major mathematical topics that will be covered within the grade level. The table below is not in any set order in which areas should be taught. Areas of emphasis may be taught in any order, combined with others and taught throughout the year.

Area of Emphasis	Examples
Extending understanding of place value in three-digit numbers.	<ul style="list-style-type: none"> <li>Read and write numbers from 0 to 1,000 in standard form (348), expanded form (<math>300 + 40 + 8</math>), and word form (three hundred forty-eight).</li> <li>Understand and identify the place value of a three-digit number, including the ones place, tens place and hundreds place.</li> <li>Compose and decompose three-digit numbers (e.g., composing: building the number 348 then decomposing: taking apart <math>300 + 40 + 8</math>).</li> <li>Know that you can represent a number in multiple ways. For example, the number 348 you could represent using 348 ones, 34 tens, and 8 ones or 3 hundreds, 4 tens and 8 ones.</li> <li>Plot, order and compare whole numbers to 1,000.</li> <li>Round whole numbers from 0 to 100 to the nearest ten (e.g., 89 would become 90 or 72 would become 70).</li> <li>Understand the terms greater than, less than, and equal to and their corresponding symbols.</li> </ul>
Building fluency and algebraic reasoning with addition and subtraction.	<ul style="list-style-type: none"> <li>Recall addition facts with sums to 20 and related subtraction facts with automaticity. <b>Automaticity is usually the result of repetition and practice. The focus should not be placed on speed</b> (e.g., <math>5 + 7 = 12</math>, <math>7 + 5 = 12</math>, <math>12 - 5 = 7</math>, <math>12 - 7 = 5</math>).</li> <li>Identify the number that is ten more, ten less, one hundred more and one hundred less than a given three-digit number (e.g., ten more than 348 would be 358, ten less than 348 would be 338, 100 more than 348 would be 448, 100 less of 348 would be 248).</li> <li>Add and subtract two whole numbers with sums up to and differences no larger than 100 with reliability.</li> <li>Add and subtract two whole numbers with sums up to 1,000 and differences no larger than 1,000.</li> <li>Solve addition and subtraction one-step and two-step real-world problems including money (dollar bills within \$100 and cents within 100¢), measurement or data.</li> <li>Determine if the addition or subtraction equation is true (e.g., Given <math>8 + 5 = 5 + 8</math>; both sides equal 13 so the equation is true. Given <math>16 - 4 = 18 + 4</math>, this equation is false because 12 is not equal to 22.).</li> <li>Find the unknown whole number in an addition or subtraction problem to make the equation true with the unknown number in any position (e.g., <math>35 - \square = 28 + 1</math>; Students may first solve the side with both numbers known which is 29. They may then find the difference or add to subtract using 35 and 29 to get the missing number, which is 6.).</li> <li>Represent an even number using two equal groups or two equal addends.</li> <li>Represent an odd number using two equal groups with one leftover or two equal addends plus one.</li> </ul>



Area of Emphasis	Examples
Extending understanding of measurement of objects, time and the perimeter of geometric figures.	<ul style="list-style-type: none"> <li>• Partition circles and rectangles into two, three or four equal-sized parts.</li> <li>• Name the parts of a partitioned circle or rectangle using correct language and describe the whole as two halves, three thirds or four fourths.</li> <li>• Estimate and measure the length of an object to the nearest inch, foot, yard, centimeter or meter by using the appropriate tool.</li> <li>• Using analog and digital clocks, tell and write time to the nearest five minutes using a.m. and p.m.</li> <li>• Express portions of an hour using the fractional terms half an hour, half past, quarter of an hour, quarter after and quarter till.</li> <li>• Explore perimeter as the characteristics of a figure by placing unit segments along the boundary without gaps or overlaps. Find the perimeter of a rectangle by counting unit segments (e.g., have your student put cereal around a rectangle then have them count how many pieces of cereal).</li> </ul>
Develop spatial reasoning with number representations and two-dimensional figures.	<ul style="list-style-type: none"> <li>• Identify and draw two-dimensional figures based on their attributes (characteristics). Focus on triangles, rectangles, squares, pentagons, hexagons and octagons.</li> <li>• Categorize two-dimensional figures based on the number and lengths of sides, number of vertices, whether they are closed or not, or whether they are curved or straight.</li> <li>• When using a number line, talk about how it can be presented in different ways.</li> <li>• Collect, categorize and represent data using tally marks, tables, pictographs or bar graphs. Use appropriate titles, labels and units.</li> </ul>

### **B.E.S.T. Instructional Guide for Mathematics**

The B.E.S.T. Instructional Guide for Mathematics (B1G-M) is intended to assist educators with planning for student learning and instruction aligned to Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards. This guide is designed to aid high-quality instruction through the identification of components that support the learning and teaching of the B.E.S.T. Mathematics Standards and Benchmarks. The B1G-M can be utilized by parents, guardians and families to support learning at home through the Instructional Strategies section.

This document is posted on the B.E.S.T. Standards for Mathematics webpage (<https://www.fldoe.org/academics/standards/subject-areas/math-science/mathematics/bestmath.shtml>) of the Florida Department of Education's website and will continue to undergo edits as needed.



**Mathematical Words to Know and Use in Grade 2**

Addition	Difference	Halves	Partition	Square	Vertices
Attributes	Digit	Inch	Pentagon	Subtraction	
Bar graph	Edge	Label	Perimeter	Sum	
Categorical data	Equal sign	Length	Place value	Thirds	
Cent	Estimate	Less than	Polygon	Trapezoid	
Centimeter	Equation	Line plot	Recall	Triangle	
Circle	Expanded form	Line of symmetry	Rectangle	Whole number	
Compose	Expression	More than	Rounding	Word form	
Cylinder	Fourths	Number line	Scale	Units	
Decompose	Hexagon	Octagon	Standard form	Vertex	

*Note: Within Grade 2, it is not the expectation that students be able to spell all these words.*

*This is not a comprehensive list – please access the K-5 Glossary at*

<https://cpalmsmediaproduct.blob.core.windows.net/uploads/docs/standards/best/ma/appendixc.pdf>

**Support Learning at Home**

You can encourage learning mathematics at home in ways that are fun for you and your student. Try these ideas after school, on weekends, and during the summer:

- ✓ Take a walk and identify all the digits of house numbers. What number is in the ones place, tens place, and hundreds place? Practice saying the numbers in word form (e.g., 341 is three hundred forty-one). Ask your student if it is even or odd. How do you know?
- ✓ Draw multiple sets of three cards and then order the three-digit numbers from least to greatest, or greatest to least.
- ✓ Using a deck of cards (remove face cards), make two 2-digit numbers. Add those numbers together. Then, subtract the smaller number from the larger number.
- ✓ Give your child some dollar bills, coins or play money. Have them count the money. Then ask how much they will have if you give them another \$17.
- ✓ Ask your child to tell you the time. Is it a.m. or p.m.?
- ✓ Play “What tool would you use?” Call out an object in your house (table, pencil, door). Your child should choose a tool (ruler, measuring tape, meter stick) and measure the object. You can have them measure it in inches or centimeters. Have them find the difference in the lengths of two items using the same unit of measurement.
- ✓ Play “Do you see?” with your child. Give attributes of a figure (e.g., four vertices and four equal sides) and have your child find a real-world object that has those attributes.
- ✓ Using modeling dough, create circles and rectangles and practice portioning them into halves, thirds and fourths. Have your student prove to you why they are equal (e.g., “They are equal when I stack them”).



### **Talk with Your Student's Teacher**

Remember, you are your student's first teacher. Think about a parent-teacher conference as a "team meeting" in which you will discover the special contributions each of you brings to your student's success. Here are some questions you could ask to prompt discussions:

Which facts or figures is my student working on? Which have they mastered? How can I support them at home?

In the area of mathematics, what are my student's strengths? How are those strengths supported during instruction? Where is my student struggling and how can I help?

Can my student show you that they understand what they are learning about through manipulatives, drawing, talking and writing? If not, what challenges are they facing?

What topics in connection to science and social studies is my student learning about through math?

What behaviors should I see when my student is doing math? Can I see an example of the type of problems my student is given? How can I support them at home?



**Mathematical Thinking and Reasoning Standards (MTRs)**

Florida students are expected to engage with mathematics through the Mathematical Thinking and Reasoning Standards (MTRs). These standards are written in clear language so all stakeholders can understand them and teachers can assist students in using them as self-monitoring tools. The MTRs promote deeper learning and understanding of mathematics. By understanding the MTRs, parents, guardians and families can support the development of these skills at home.

<b>MA.K12.MTR.1.1</b> Actively participate in effortful learning both individually and collectively.		<b>MA.K12.MTR.2.1</b> Demonstrate understanding by representing problems in multiple ways.	
<b>MA.K12.MTR.3.1</b> Complete tasks with mathematical fluency.		<b>MA.K12.MTR.4.1</b> Engage in discussions that reflect on the mathematical thinking of self and others.	
<b>MA.K12.MTR.5.1</b> Use patterns and structure to connect mathematical concepts.	<b>MA.K12.MTR.6.1</b> Assess the reasonableness of solutions.		<b>MA.K12.MTR.7.1</b> Apply mathematics to real-world contexts.

Your student will develop the above skills (MTRs) throughout their education and during their life. These skills will help maintain positive relationships through effective communication, collaboration, conflict resolution and problem-solving.

Below are some ways you can help develop mathematical thinking and reasoning skills for your Grade 2 student:

- ✓ Encourage your student to ask questions when they do not understand what is being asked of them.
- ✓ Ask your student to estimate before determining a solution to the task at hand.
- ✓ Identify a problem and create a plan to tackle it in smaller steps that are more manageable.
- ✓ Try activities like a scavenger hunt or a puzzle.

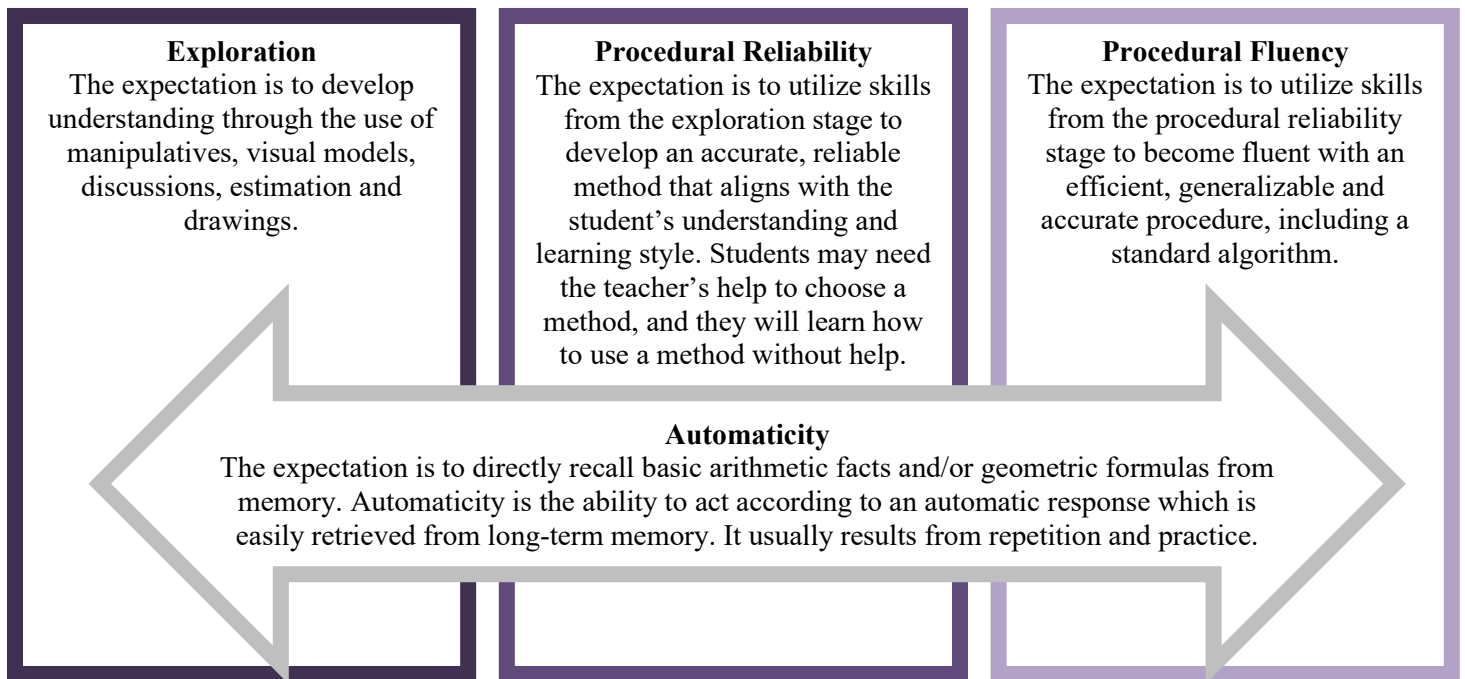
By helping to develop your student's mathematical thinking and reasoning skills, you will prepare them to become a confident, independent and successful individual.





## 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 new skills and concepts.



In Grade 2, students are expected to add two whole numbers, with sums up to 20, and their related subtraction facts with automaticity. Automaticity is usually the result of repetition and practice and should not focus on speed.

For example, determine the sum of 12 and 5. Students may look at the place value and determine  $2 + 5 = 7$ . Then, add  $10 + 7$  to get 17 without the use of manipulatives or drawings.

For example, determine the difference between 18 and 5. Students may look at the ones place and know  $8 - 5 = 3$  and 0 tens are being subtracted. So, the answer is 1 ten and 3 ones, or 13.

Students will build on their recall of sums to 20 and related differences, to develop procedural reliability with addition and subtraction of two-digit numbers, with sums up to 100 and subtraction of numbers less than 100.

For example,  $25 + 54$  may be solved as  $5 + 4 = 9$  and  $20 + 50 = 70$ , therefore,  $70 + 9 = 79$ .

For example, determine the difference between 76 and 24. Students may use a number line starting at 76 and count back to 26. Starting at the ones place,  $6 - 4 = 2$  so they would hop from 76 to 72. Then, 7 tens minus 2 tens equals 5 tens or 50. They would make 5 hops of ten and land on 22 (the difference).

