In grade 2, instructional time should focus on four critical areas:

1. Extending understanding of base-ten notation (NBT)
2. Building fluency with addition and subtraction (OA, NBT)
3. Using standard units of measure (MD)
4. Describing and analyzing shapes (G)

In a 2nd grade math class you should observe students engaged with at least one math content and practice standard:

**Mathematical Practices**

- Making sense of problems and persevering in solving them
- Reasoning abstractly and quantitatively
- Constructing viable arguments and critiquing the reasoning of others
- Modeling with mathematics
- Using appropriate tools strategically
- Attending to precision
- Looking for and making use of structure
- Looking for and expressing regularity in repeated reasoning

**Content Standards**

**Operations and Algebraic Thinking (OA)**
- Using addition and subtraction within 100 to solve one- and two-step word problems
- Fluently adding and subtracting within 20 using mental strategies
- Working with equal groups of objects to gain foundations for multiplication (sets and arrays)

**Number and Operations in Base Ten (NBT)**
- Comparing two 3-digit numbers using place value (hundreds, tens, ones digits) and symbols (> = <)
- Explaining why addition and subtraction strategies work, using place value and the properties of operations
- Adding and subtracting within 1000 using concrete models, drawings, place value, and/or properties of operations

**Measurement and Data**
- Using appropriate tools when measuring and estimating lengths in standard and metric units
- Representing whole numbers as lengths on a number line, and representing whole-number sums and differences within 100 on a number line diagram
- Knowing the relationships of time, including seconds, minutes, hours, days, weeks, months, and years
- Solving word problems involving dollar bills and coins, using symbols appropriately
- Generating data by measuring lengths, then organizing and recording data on a line plot (dot plot)

**Geometry**
- Describing and draw shapes having specified attributes (angles, faces)
- Partitioning a rectangle into rows and columns of same-size squares and counting to find the total number of them (arrays)

**NOTES**
Mathematics What to Look For

The example below features three Indicators from the Standards of Effective Practice. These Indicators are just a sampling from the full set of Standards and were chosen because they create a sequence: the educator plans a lesson that sets clear and high expectations, the educator then delivers high quality instruction, and finally the educator uses a variety of assessments to see if students understand the material or if re-teaching is necessary. This example highlights teacher and student behaviors aligned to the three Indicators that you can expect to see in a rigorous 2nd grade math classroom.

<table>
<thead>
<tr>
<th>Expectations (Standard II, Indicator E)</th>
<th>What is the teacher doing?</th>
<th>What are the students doing?</th>
</tr>
</thead>
</table>
| Plans and implements lessons that set clear and high expectations and also make knowledge accessible for all students. | • Modeling critical thinking strategies to help establish problem solving and processing expectations  
• Establishing classroom routines that support students to communicate their thinking  
• Representing and relating solution methods orally, visually, and with concrete objects | • Understanding what they will learn in a lesson  
• Persisting when engaging with mathematical tasks  
• Applying mathematical strategies and concepts when engaging with meaningful real-world problems  
• Using everyday and mathematical language to express their mathematical ideas |

<table>
<thead>
<tr>
<th>Instruction (Standard II, Indicator A)</th>
<th>What is the teacher doing?</th>
<th>What are the students doing?</th>
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</thead>
</table>
| Uses instructional practices that reflect high expectations regarding content and quality of effort and work; engage all students; and are personalized to accommodate diverse learning styles, needs, interests, and levels of readiness. | • Explicitly teaching appropriate ways to use symbols  
• Providing students with opportunities to apply their learning and solve problems in collaboration with their peers  
• Providing opportunities and structures for students to communicate their mathematical ideas and thinking with each other | • Discussing with other students how multiple representations of numbers, operations, and shapes relate to each other  
• Noticing patterns in the number system and geometric contexts  
• Explaining how multiple representations of numbers and/or operations relate to one another |

<table>
<thead>
<tr>
<th>Assessment (Standard I, Indicator B)</th>
<th>What is the teacher doing?</th>
<th>What are the students doing?</th>
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</table>
| Uses a variety of informal and formal methods of assessments to measure student learning, growth, and understanding to develop differentiated and enhanced learning experiences and improve future instruction. | • Providing actionable feedback to students about their problem solving processes  
• Conducting frequent checks for student understanding and adjusting instruction accordingly  
• Prompting students to explain their reasoning and listening to their responses to identify misconceptions | • Engaging in challenging learning tasks regardless of learning needs (e.g., linguistic background, disability, academic gifts)  
• Using concrete objects or pictures to explore mathematical concepts and relationships  
• Using exemplars to inform their work |