Central Connecticut State University | MATHEMATICS | 1

WHAT TO LOOK FOR

A quick guide for observing classroom content and practice

In **grade 1**, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20 (OA)

2. Developing understanding of whole number relationships and place value, including grouping in tens and ones (NBT)

3. Developing understanding of linear measurement and measuring lengths as iterating length units (MD)

4. Reasoning about attributes of, and composing and decomposing geometric shapes (G)

In a **1st 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)

- Representing and solving problems involving addition and subtraction to find an unknown number
- Adding and subtracting within 20, using strategies of *counting on* and *making ten*
- Working with addition and subtraction equations (*number sentences*)

Geometry (G)

- Composing and decomposing plane or solid figures to explore *properties*
- Partitioning rectangles and circles into two or four equal shares (*halves* and *fourths*)

Measurement and Data (MD)

- Measuring lengths indirectly and by iterating same-size length units
- Telling and writing time in hours and half-hours
- Representing, organizing, and interpreting data
- Identifying values, comparative values, and equivalent values of coins

Number and Operations in Base Ten (NBT)

- Identifying patterns of skip counting starting at any number
- Understanding place value to the hundreds place
- Identifying patterns of *10 more* and *10 less than* using strategies based on place value.

NOTES

WHAT TO LOOK FOR | Structured Observation Guide

MATH 1

Mathematics What to Look For The example below features three Indicators from the CT Common Core of Teaching 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 1st-grade math classroom.

Domain 1 — Classroom Environment, Student Engagement and Commitment to Learning

What is the teacher doing?

- Clearly communicating the learning objectives for the lesson orally and visually in student-friendly terms
- Focusing attention on newly learned mathematical language (e.g., linguistic complexity, conventions, and vocabulary)
- Representing and relating solution methods orally, visually, and with concrete objects

What are the students doing?

- 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
- Explaining their thinking when approaching a mathematical problem

Domain 2 — Planning for Active Learning

What is the teacher doing?

- Creating a culture of being careful and precise
- 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

What are the students doing?

- Working cooperatively on a shared activity
- 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

Domain 3 — Instruction for Active Learning

What is the teacher doing?

- Providing actionable feedback to students about their problem solving processes
- Using multiple formative approaches to assess students (e.g., conferences, task completion)
- Conducting frequent checks for student understanding and adjusting instruction accordingly

What are the students doing?

- Engaging in challenging learning tasks regardless of learning needs (e.g., linguistic background, disability, a
- cademic gifts)
- Using concrete objects or pictures to explore mathematical concepts and relationships
- Using exemplars to inform their work

Connections to Theory and/ or Research

*This document is based on the CT Core Standards Classroom "Look Fors" and the MA Curriculum Observation Guide .