

A quick guide for observing classroom content and practice

In a **Kindergarten math** class you should observe students engaged with at least one math content and practice standard:

In
Kindergarten,
instructional
time should
focus on two
critical areas:

1.

Knowing number names and understanding addition as putting together and subtraction as taking apart/from (CC/OA)

2.

Identifying, describing, analyzing, comparing, creating, and composing shapes (G)

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

Counting and Cardinality (CC)

- Counting to 100 by ones and tens
- Writing the numbers from 0 to 20 to represent a number of objects
- Recognizing *one more* and *one less* patterns of counting using objects
- Comparing numbers and groups of objects

Operations and Algebraic Thinking (OA)

- *Decomposing* numbers less than or equal to 10 into pairs in more than one way
- Fluently adding and subtracting within 5

Number and Operations in Base Ten (NBT)

- Working with numbers 11-19 to gain foundations for place value

Measurement and Data (MD)

- Describing measurable attributes such as length and weight and comparing using more and less to describe the difference
- Classifying objects, counting the number of objects in each category, and sorting the categories by count

Geometry (G)

- Identifying and describing shapes, including their position in space
- Analyzing and comparing two and three dimensional shapes in different sizes and orientations
- Composing simple shapes to make larger shapes

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 kindergarten math classroom.

Expectations
(Standard II, Indicator E) Plans and implements lessons that set clear and high expectations and also make knowledge accessible for all students.

What is the teacher doing?

- Clearly communicating the learning objectives for the lesson orally and visually in student-friendly terms
- Creating culturally responsive lessons that engage and sustain student attention
- Modeling critical thinking strategies to help establish problem solving and processing expectations

What are the students doing?

- Using everyday and mathematical language to express their mathematical ideas
- Explaining their thinking when approaching a mathematical problem
- Contextualizing quantities and operations by using manipulatives, images or stories

Instruction
(Standard II, Indicator A) 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.

What is the teacher doing?

- Providing opportunities and structures for students to communicate their mathematical ideas and thinking with each other
- Providing opportunities to look for generalizations among mathematical situations
- Highlighting commonalities, differences, and patterns in student's ideas

What are the students doing?

- Specifically choosing symbols and words to express their mathematical ideas to others
- Working cooperatively on a shared activity
- Discussing with other students how multiple representations of numbers, operations and shapes relate to each other

Assessment
(Standard I, Indicator B) 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.

What is the teacher doing?

- Conducting frequent checks for student understanding and adjusting instruction accordingly
- Prompting students to explain their reasoning and listening to their responses to identify misconceptions and gauge understandings
- Providing exemplars that convey mathematical reasoning and understanding (both teacher and student generated)

What are the students doing?

- Responding to teacher feedback to improve their work
- Demonstrating learning in multiple ways (e.g., conferences, task completion)
- Engaging in challenging learning tasks regardless of learning needs (e.g., linguistic background, disability, academic gifts)