

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.

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| <b>Expectations</b><br>(Standard II, Indicator E)                                                                                                                                                                                                                                                                                                                                                                                                              | Plans and implements lessons that set clear and high expectations and also make knowledge accessible for all students.                                                                                                                                                                                                                                                               |
| <div> <b>What is the teacher doing?</b> <ul style="list-style-type: none"> <li>Clearly communicating the learning objectives for the lesson orally and visually in student-friendly terms</li> <li>Creating culturally responsive lessons that engage and sustain student attention</li> <li>Modeling critical thinking strategies to help establish problem solving and processing expectations</li> </ul> </div>                                             | <div> <b>What are the students doing?</b> <ul style="list-style-type: none"> <li>Using everyday and mathematical language to express their mathematical ideas</li> <li>Explaining their thinking when approaching a mathematical problem</li> <li>Contextualizing quantities and operations by using manipulatives, images or stories</li> </ul> </div>                              |
| <b>Instruction</b><br>(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.                                                                                                                                           |
| <div> <b>What is the teacher doing?</b> <ul style="list-style-type: none"> <li>Providing opportunities and structures for students to communicate their mathematical ideas and thinking with each other</li> <li>Providing opportunities to look for generalizations among mathematical situations</li> <li>Highlighting commonalities, differences, and patterns in student's ideas</li> </ul> </div>                                                         | <div> <b>What are the students doing?</b> <ul style="list-style-type: none"> <li>Specifically choosing symbols and words to express their mathematical ideas to others</li> <li>Working cooperatively on a shared activity</li> <li>Discussing with other students how multiple representations of numbers, operations and shapes relate to each other</li> </ul> </div>             |
| <b>Assessment</b><br>(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.                                                                                                                                                                      |
| <div> <b>What is the teacher doing?</b> <ul style="list-style-type: none"> <li>Conducting frequent checks for student understanding and adjusting instruction accordingly</li> <li>Prompting students to explain their reasoning and listening to their responses to identify misconceptions and gauge understandings</li> <li>Providing exemplars that convey mathematical reasoning and understanding (both teacher and student generated)</li> </ul> </div> | <div> <b>What are the students doing?</b> <ul style="list-style-type: none"> <li>Responding to teacher feedback to improve their work</li> <li>Demonstrating learning in multiple ways (e.g., conferences, task completion)</li> <li>Engaging in challenging learning tasks regardless of learning needs (e.g., linguistic background, disability, academic gifts)</li> </ul> </div> |