

## Math Observation Tool

This Math Observation Tool is adapted from TNTP's Math Instructional Walkthrough Tool. It articulates the vision for skillful mathematics teaching and learning, grounded in research about how students best learn to become mathematical thinkers. Purposes include: 1) preparing lessons; 2) reflecting on instructional practices; 3) developing professional learning on standards-aligned practice; and 4) providing feedback on classroom practice.

A. CULTURE OF LEARNING	B. CONTENT	C. PRACTICES	D. STUDENT OWNERSHIP
Are all students engaged in the work from start to finish?	Does the lesson reach the depth of grade-level standards in terms of <b>focus, coherence</b> , and <b>rigor</b> ?	Does the lesson employ instructional practices that allow all students to learn the content of the lesson?	Do students exhibit key <b>mathematical practices</b> while engaging with the content of the lesson?

A. CULTURE OF LEARNING: Are all students engaged in the work from start to finish?					
A1. Students complete instructional tasks, volunteer responses, and/or ask appropriate questions.		<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
A2. Students follow behavioral expectations and directions.		<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
A3. Students execute transitions, routines, and procedures in an orderly and efficient manner.		<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
A4. Students are engaged in the work of the lesson from start to finish; there is a sense of urgency about how time is used.		<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
A5. Students and their teacher demonstrate a joy for learning through positive relationships and strong classroom culture.		<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
A. CULTURE OF LEARNING RATING: Overall, are all students engaged in the work from start to finish?					
<b>Not Yet</b> <50% of students	<b>Somewhat</b> 50-74% of students	<b>Mostly</b> 75-89% of students	<b>Yes</b> 90-100% of students		

**B. CONTENT: Does the lesson reach the depth of grade-level standards in terms of focus, coherence, and rigor?**

<b>B1.</b> Focus: The lesson focuses on the grade-level cluster(s), grade-level content standard(s), or part(s) thereof.	<i>Not Yet</i>	Yes
<b>B2.</b> Coherence: The lesson appropriately connects mathematical concepts within and/or across grades as appropriate, reflecting the coherence in the standards.	<i>Not Yet</i>	Yes
<b>B3.</b> Rigor: The lesson intentionally targets the aspect(s) of rigor (conceptual understanding, procedural skill and fluency, application) called for by the standard(s) being addressed.	<i>Not Yet</i>	Yes

**B. CONTENT RATING:**  
Overall, does the lesson reach the depth of grade-level standards in terms of focus, coherence, and rigor?

<b>Not Yet</b>	<b>Yes</b>
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**C. PRACTICES: Does the lesson employ instructional practices that allow all students to learn the content of the lesson?**

<b>C1.</b> The teacher makes mathematics explicit by using accurate explanations, representations, and/or examples beyond just showing students how to get the answer.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	Yes
<b>C2.</b> The teacher provides opportunities for all students to work with and practice grade/course -level problems and tasks with appropriate numbers and number types.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	Yes
<b>C3.</b> The teacher strengthens all students' understanding of the content by strategically sharing students' representations and/or solution methods.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	Yes
<b>C4.</b> The teacher deliberately poses questions/tasks that make students' understanding (including misconceptions) visible and adapts the lesson to support understanding.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	Yes
<b>C5.</b> The teacher facilitates the summary of the mathematics with references to student work and discussion in order to reinforce the focus of the lesson.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	Yes

**C. PRACTICES RATING:**

Overall, does the lesson employ instructional practices that allow all students to learn the content of the lesson?

<b>Not Yet</b> <i>&lt;50% of the time</i>	<b>Somewhat</b> <i>50-74% of the time</i>	<b>Mostly</b> <i>75-89% of the time</i>	<b>Yes</b> <i>90-100% of the time</i>
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**D. STUDENT OWNERSHIP: Do students exhibit key mathematical practices while engaging with the content of the lesson?**

<b>D1.</b> Students do the majority of the work of the lesson.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
<b>D2.</b> Students use reasoning and problem-solving skills to persevere through difficulty. When teachers provide support, students still own the complex thinking.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
<b>D3.</b> Students use appropriate tools strategically when solving problems.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
<b>D4.</b> Students explain and justify their thinking using precise mathematical language in writing and during discussions.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>
<b>D5.</b> Students talk about and ask questions about each other's thinking in order to clarify or improve their own mathematical understanding.	<i>Not Yet</i>	<i>Somewhat</i>	<i>Mostly</i>	<i>Yes</i>

**D. STUDENT OWNERSHIP RATING:**

Overall, do students exhibit key mathematical practices while engaging with the content of the lesson?

<b>Not Yet</b> <i>&lt;50% of students</i>	<b>Somewhat</b> <i>50-74% of students</i>	<b>Mostly</b> <i>75-89% of students</i>	<b>Yes</b> <i>90-100% of students</i>
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