Department of Education

Tennessee Instructional Practice Guide (IPG) for Mathematics

Culture of Learning: Create a classroom culture where student agency, mathematical identity, and belonging contribute to students' mathematical success.		
• Students and their teacher demonstrate a joy for learning through positive relationships and strong classroom culture that is responsive to student interests, experiences, and approaches to learning. • Students demonstrate self-management and there is a classroom culture of student choice and autonomy. • Students demonstrate positive dispositions and beliefs about their ability to participate and perform effectively in mathematics and their ability to use mathematics as a problem-solving tool in powerful ways across the contexts of their lives. • Students are engaged in the mathematics of the lesson from start to finish; there is intentionality about how time is used.	**Yes** **No**	
Core Action One: Focus, Coherence, and Rigor at the Center of Instruction		
A. A majority of the lesson is spent on the grade/course-level cluster(s), grade/course-level content standard(s), or part(s) thereof. Mathematical Learning Goal: Standard(s) addressed in this lesson:	**Yes** **No**	
B. The curriculum materials are used as designed to connect developing mathematical ideas to math content within or across grades/courses through the use of tasks, examples, multiple representations, discussion, and instructional techniques.	**Yes** **No**	
C. The curriculum materials are used as designed to intentionally target the aspect(s) of Rigor (conceptual understanding, procedural skill and fluency, application) called for by the standard(s) being addressed in the lesson. Which aspect(s) of Rigor are targeted in the standard(s) addressed in the lesson? Which aspect(s) of Rigor are targeted in the instruction?	**Yes** **No**	
Core Action One Summary: The majority of the mathematics content of the lesson is grounded in materials and the delivery of the lesson meets the intent of grade-level standard(s) and leverages mathematical coherence and the appropriate aspect(s) of rigor to develop student understanding.	**Yes** **No**	
Core Action Two: Teacher Strategies to Develop Math Meaning		
A. The teacher uses a variety of explanations, representations, tasks, examples and/or instructional techniques are used to make the mathematics of the lesson explicit.	Yes Somewhat	Mostly Not Yet
B. The teacher shares multiple students' representations and/or solution methods and connects to students' understanding of the content, reduces student misconceptions, and ensures the mathematics is explicit.	Yes Somewhat	Mostly Not Yet
C. The teacher provides feedback and adjusts the lesson in response to student understanding. Questions and tasks surface misconceptions and opportunities for growth.	Yes Somewhat	Mostly Not Yet
D. The teachers uses internal summaries to pause and ensure understanding making references to student work and using discussions and questions reinforce the concepts of the lesson.	Yes Somewhat	Mostly Not Yet
Core Action Two Summary: The teacher uses instructional strategies to ensure all students progress toward mastery of the mathematical concepts addressed in the lesson.	**Yes** **Somewhat**	**Mostly** **Not Yet**
Core Action Three: Provide all students with opportunities to do mathematical thinking within the lesson. *Some or most of the indicators and student behaviors should be observable in every lesson, though not all will be evident in every lesson.*		
A. The teacher provides opportunities and access for all students to work with and practice grade-level problems and exercises. Students work with and practice grade-level problems and exercises.	Yes Somewhat	Mostly Not Yet
B. The teacher cultivates reasoning and problem solving by supporting students productive struggle. Students reason, make sense of mathematics, and persevere in solving problems in the face of difficulty.	Yes Somewhat	Mostly Not Yet
C. The teacher poses questions and problems that prompt students to explain their thinking in a variety of ways about the content of the lesson. Students share their thinking in a variety of ways about the content of the lesson beyond just stating answers.	Yes Somewhat	Mostly Not Yet
D. The teacher provides opportunities for student conversations where students talk about each other's thinking. Students discuss and ask questions about each other's thinking, in order to clarify or improve their own mathematical understanding, justifications, and explanations.	Yes Somewhat	Mostly Not Yet
E. The teacher connects and develops students' informal and/or home language and mathematical ideas to precise mathematical language and ideas. Students use increasingly precise mathematical language and ideas as they reason and explain their thinking.	Yes Somewhat	Mostly Not Yet
Core Action Three Summary: Students do and share their mathematical thinking within the lesson to develop a deeper understanding of the mathematical concepts addressed in the lesson.	**Yes** **Somewhat**	**Mostly** **Not Yet**