

Figure 2.15

**Mathematical Practices Lesson-Study Planning and Analysis Tool**

Lesson-Design Components	Questions to Consider	Comments
Essential learning standard	What is the essential learning objective for the lesson? How does it connect to the essential learning standards for the unit?	
Assessment (formative, embedded, or summative)	<p>What formative assessment strategies will we employ during the lesson?</p> <p>How will students self-assess their understanding and the understanding of their peers?</p>	
Questioning	<p>What are the assessing questions or prompts we can use to get students unstuck during the lesson?</p> <p>What are the advancing questions we can use to further student understanding?</p> <p>How will we engage students so that <i>all</i> students are required to think about the questions?</p> <p>How will we address a balance of cognitive-demand-level questions?</p>	
Mathematical Practice and process	<p>Which Mathematical Practice and process will students develop?</p> <p>How will they develop it?</p> <p>What evidence will we observe?</p>	

**REPRODUCIBLE**

<p>Beginning-of-class routine</p>	<p>How do we address prior knowledge?</p> <p>How will all students be engaged in the opening activity?</p>	
<p>Activity or task 1: How will students be engaged in understanding the essential learning standards?</p>	<p>What are all the ways the task can be solved?</p> <p>Which of these methods do you think students will use?</p> <p>What misconceptions might students show?</p> <p>What errors might students make?</p>	
<p>Activity or task 2: How will the task develop student sense making and reasoning?</p>	<p>What is our expectation of student engagement for sense making and reasoning?</p> <p>How will we ensure the task is accessible to all students while still maintaining a high cognitive demand?</p> <p>What student-to-student interaction will we employ?</p>	
<p>Activity or task 3: How will the task require student conjectures and communication?</p>	<p>How does the plan address orchestrating the class discussion?</p> <p>Which solution paths do we want shared during the class discussion?</p> <p>In what ways will the order in which solutions are presented help develop students' understanding of the mathematical ideas that are the focus of the lesson?</p>	
<p>Student-led closure</p>	<p>How do students know that they met the learning target for the day?</p> <p>What evidence will we use to determine the level of student learning of the target?</p>	

Source: Adapted from Kanold, T. D. (Ed.), Kanold, T. D., & Larson, M. R. (2012). Common Core mathematics in a PLC at Work, leader's guide, pp. 53–54. Bloomington, IN: Solution Tree Press.