

Table 2.1:
Elements of an Effective Mathematics Classroom Lesson Design

	Probing Questions for Effective Lesson Design	Reflection
1. Lesson Context: Learning Targets Procedural Fluency and Conceptual Understanding Balancing	What is the learning target for the lesson? How does it connect to the bigger focus of the unit?	
	What evidence will be used to determine the level of student learning of the target?	
	Are conceptual understanding and procedural fluency appropriately balanced?	
	How will you formatively assess student conceptual understanding of the mathematics concepts <i>and</i> of the procedural skill?	
	What meaningful application or model can you use?	
	Which CCSS Mathematical Practices will be emphasized during this lesson?	
2. Lesson Process: High-Cognitive-Demand Tasks Planning Student Discourse and Engagement	What tasks will be used that create an a-ha student moment and leave “mathematical residue” (insights into the mathematical structure of concepts) regardless of content type at a high-cognitive-demand level?	
	How will you ensure the task is accessible to all students while still maintaining a high cognitive demand for students?	
	What strategic mathematical tools will be used during the lesson?	

	Probing Questions for Effective Lesson Design	Reflection
2. Lesson Process: High-Cognitive-Demand Tasks <i>(continued)</i>	How will each lesson <i>example</i> be presented and sequenced to build mathematical reasoning connected to prior student knowledge?	
	What are the assessing and advancing questions you might ask during guided, independent, or group practice? What are anticipated student responses to the examples or tasks?	
	How might technology and student attention to precision play a role in the student lesson experience?	
3. Introduction, Daily Review, and Closure	What activity will be used to immediately engage students at the beginning of the class period?	
	How can the daily review be used to provide brief, meaningful feedback on homework? (Five minutes maximum)	
	How will the students summarize the lesson learning targets and the key vocabulary words?	
4. Homework	How does the homework assignment provide variety and meaning to the students—including long-term review and questions—that balance procedural fluency with conceptual understanding?	