

The Five Mathematical Practices

<u>When it Happens</u>		<u>Practice</u>	<u>Alignment to Danielson</u>
Practices that take place while planning for instruction. (optimally during math team meeting)		Practice 0: Setting goals and selecting tasks During math meetings, specifying learning goals and choosing a low floor/high-ceiling task that aligns with those goals	1A
		Practice 1: Anticipating student responses During math meetings, exploring how you expect students to solve the low floor/high-ceiling task and preparing questions to ask them about their thinking	1A, 1E
Practices that take place during instruction but are considered while planning.	Students work collaboratively	Practice 2: Monitoring student work Looking closely as students work on the low floor/high-ceiling task and asking questions to assess their understanding and move their thinking forward	3B, 3C, 3D
	As you move from small group work to whole class discussion	Practice 3: Selecting student solutions Choosing solutions for students to share that highlight key mathematical ideas that will help you achieve lesson goals	3D
		Practice 4: Sequencing student solutions Determining the order in which to share solutions to create a coherent storyline for the lesson	3D
	Whole class discussion	Practice 5: Connecting student solutions Identifying connections among student solutions and to the goals of the lesson that you want to bring out during discussion	3B, 3C, 3D

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1. **Anticipating** (aligned to  Danielson 1A, 1E, SMP 4)
 - Do the problem yourself.
 - What are students likely to produce?
 - Which problems will most likely be the most useful in addressing the mathematics?
2. **Monitoring** (aligned to  Danielson 3B, 3C, 3D, SMP 3)
 - Listen, observe, and identify key strategies.
 - Keep track of approaches.
 - Ask questions of students to get them back on track or to think more deeply.
3. **Selecting** (aligned to  Danielson 3D, SMP 1)
 - CRUCIAL: What do you want students to highlight?
 - Purposefully select those that will advance mathematical ideas.
4. **Sequencing** (aligned to  Danielson 3D, SMP 3)
 - In what order do you want to present the student work samples?
 - Do you want the most common? Present misconceptions first?
 - How will students share their work? SmartBoard? Elmo?
5. **Connecting** (aligned to  Danielson 3B, 3C, 3D, SMP 3, 4)
 - Craft questions to make the mathematics visible.
 - Compare and contrast 2 or 3 students' work; what are the mathematical relationships?
 - What do parts of students' work represent in the original problem? The solution? Work done in the past?