Standards for Mathematical Practice in Every Lesson

The Standards for Mathematical Practice (SMPs) are embedded within the instructional design of Ready® Classroom Mathematics. Through a dedicated focus on mathematical discourse, the program blends content and practice standards seamlessly into instruction, ensuring that children continually engage in developing the habits of the Mathematical Practices. Although all SMPs are included throughout instruction, practices receiving focused emphasis at different points during lessons are highlighted.

Embedded SMPs within Lessons

In addition to SMPs 1, 2, 3, 4, 5, and 6, which are integrated into the instructional routine, the Teacher’s Guide includes additional opportunities for children to develop the habits of mind described by the Standards for Mathematical Practice. The Table of Contents indicates all of the Embedded Standards for Mathematical Practice for each lesson (both the integrated SMPs and the specific SMPs highlighted within the lesson).

The CCSS Focus in the Lesson Overview includes the Standards for Mathematical Practice addressed in each lesson. In the Student Worktext, the Learning Target also highlights the SMPs that are included in the lesson.
Deepen Understanding

Deepen Understanding features appear in the Teacher’s Guide for every Strategy lesson. They highlight SMP connections to the lesson’s mathematical concepts by offering questions and support for conversation and understanding. Found at point-of-use, the Deepen Understanding does not reflect the only Mathematical Practice being addressed in the lesson, but rather one particular SMP that is highlighted at a given moment.

Discourse Questions

Throughout the Teacher’s Guide, discourse questions appear with possible responses to help support whole class discussion. Ask/Listen for suggestions appear in all sessions. The Ask questions may connect to an SMP when it is appropriate, or responses may relate to an SMP. As children share their responses to these questions, they may critique approaches and solutions, make connections among different models and representations, or draw conclusions based on their observations.

Structure and Reasoning

Whether children are thinking about conceptual ideas, working on procedural processes, or applying their learning to real-world problems, they will have opportunities to find structure and construct reasoning throughout every lesson. As children make connections between multiple strategies, they may make use of structure (SMP 7) as they find patterns and use relationships to solve particular problems. Children may also use repeated reasoning (SMP 8) as they construct and explore general methods for procedural processes. SMPs 7 and 8 may be particularly emphasized in selected problems throughout the lesson. As children look for patterns and discover general methods, they always consider the reasonableness of their work.
SMPs Integrated in *Try-Discuss-Connect* Instructional Routine

Ready® Classroom Mathematics infuses SMPs 1, 2, 3, 4, 5, and 6 into every lesson through the *Try-Discuss-Connect* instructional routine (found in the Explore and Develop sessions of Strategy lessons, with a modified routine used in Understand lessons). Also featured within the instructional routine, children may engage with SMPs 7 and 8 as they find patterns, use relationships, and construct general methods.

The first part of the *Try-Discuss-Connect* instructional routine is *Try It*, where children make sense of a problem and then use strategies of their choice to think through the problem. In *Discuss It*, children share their thinking with a partner, which teachers use to guide the whole-class discussion. Finally, in *Connect It*, children solve new problems, make connections between strategies and representations, and reflect on their learning.

*Try It* begins with a version of the Three Reads routine:

- For the first “read” of a scene, children begin to make sense of the problem (*SMP 1*) by sharing words or phrases that describe the context of the problem. For a more traditional problem, the teacher reads the problem aloud and children answer what the problem is about. In both cases, the teacher guides them to attend to precision (*SMP 6*) of mathematical language and communication.
- For the second “read,” the teacher reads the problem aloud. Children discuss what is being asked.
- For the third “read,” children confirm what they will do. Children identify important information, make sense of the meanings of quantities, and discuss relationships between quantities in the problem, reasoning abstractly as they do this (*SMP 2*).

*Try It* continues as children work individually to represent and explain their thinking about the problem as they model important quantities and relationships (*SMP 4*) concretely or visually. Children have access to tools and manipulatives to represent the problem, and they make strategic decisions about how to use the tool(s) (*SMP 5*).

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**Try-Discuss-Connect Routine**

<table>
<thead>
<tr>
<th>Try</th>
<th>Discuss</th>
<th>Connect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make sense of the problem</td>
<td>Share your thinking with a partner</td>
<td>Make connections and reflect on what you have learned</td>
</tr>
<tr>
<td>Solve and support your thinking</td>
<td>Compare strategies</td>
<td>Apply your thinking to a new problem</td>
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</tbody>
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**Focuses on SMPs 1, 2, 4, 5, and 6**

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**Math Toolkit**

- number cubes
- two-color counters
- crayons
Focuses on SMPs 2, 3, and 6

**Discuss It** begins as children explain what they see in a scene or share strategies to solve problems. Partners listen to and respectfully critique each other’s reasoning (SMP 3). To promote and support partner conversations, the teacher prompts children with questions for discussion and guides children to attend to greater precision (SMP 6) in their mathematics communication, language, and vocabulary. During this time, the teacher is listening in to peer conversations and reviewing strategies, identifying which three or four strategies to discuss with the whole class in the next part of Discuss It.

**Discuss It** continues as children share their thinking with the class. The teacher facilitates this portion of the lesson by sequencing the strategies identified for whole class conversation during the partner discussion. As children/pairs share their different approaches, they reason abstractly and quantitatively (SMP 2) as the teacher prompts multiple children to understand the explanations through restating and rephrasing (SMP 3). All children reason abstractly and quantitatively (SMP 2) as they find similarities, differences, and connections among the strategies they have discussed and relate them to the problems they are solving.

Focuses on SMPs 2, 4, and 5

**Connect It** begins with children working independently or in pairs to further strengthen the connections between the strategies they discussed. As children think through these problems, they connect the quantitative, concrete/representational approaches to a more abstract understanding (SMP 2). Teachers guide children in a whole-class discussion, summarizing critical concepts.

Children apply what they have learned throughout the session to new problems. For each problem, children determine which strategies they feel are appropriate, and they model and solve (SMP 4) using pictures, diagrams, or mathematical representations. Children may also use mathematical tools and manipulatives (SMP 5) to support their understanding.