

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.

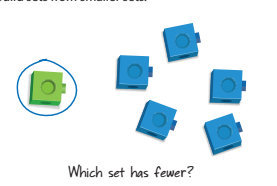

Standards for Mathematical Practice (SMP)

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

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.

Unit 1 Numbers 0-5 Counting, Writing, and Comparing	
Unit Planning	
Learning Progression.....	1a
Connect Language Development to Mathematics	1c
ELL Language Expectations.....	1c
Professional Learning: <i>Supporting Math and Academic Vocabulary Development</i>	1d
Math Background	1e
Building Understanding of Numbers Through 5.....	1e
Standards for Mathematical Practice in Every Lesson	1i
Unit 1 Themes	
Counting is an important mathematical skill. Knowing how to count a group of objects lets children know how many are in that group.	
Children say one number for each object in a group when they count.	
Children can use what they know about counting to build sets from smaller sets.	
	
Unit Opener	1
Build Your Vocabulary	2
Lesson 1 Understand Counting	3a
K.CC.A.3, K.CC.B.4a, K.CC.B.4b, K.CC.B.5	
Focus: M SMP 1, 2, 3, 4, 5, 6	
Lesson 2 Count and Write to 5	19a
K.CC.A.3, K.CC.B.4a, K.CC.B.4b, K.CC.B.5, K.CC.A.1, K.CC.B.4c	
Focus: M SMP 1, 2, 3, 4, 5, 6	
Lesson 3 Numbers 0 to 5	39a
K.CC.A.3, K.CC.B.4c, K.CC.B.5, K.CC.A.1	
Focus: M SMP 1, 2, 3, 4, 5, 6, 8	
Lesson 4 Compare Within 5	59a
K.CC.A.3, K.CC.C.6, K.CC.C.7	
Focus: M SMP 1, 2, 3, 4, 5, 6	
Lesson 5 Make 3, 4, and 5	79a
K.OA.A.3, K.OA.A.1, K.OA.A.2, K.OA.A.5, K.CC.A.3, K.CC.B.4c, K.CC.B.5	
Focus: M SMP 1, 2, 3, 4, 5, 6, 7	
Unit Review	100
Unit Game	100
Literacy Connection	101
Unit Assessment	102a
	
Standards in boldface indicate the standards covered by the majority of the lesson content. See page B9 for correlation tables that provide more details about Major Focus lessons.	
M = Lessons that have a major focus in the Common Core State Standards	
S = Lessons that have a supporting focus in the Common Core State Standards	
A = Lessons that have an additional focus in the Common Core State Standards	

Lesson 1 Understand Counting

K.CC.A.3, K.CC.B.4a, K.CC.B.4b, K.CC.B.4c, K.CC.B.5

Focus: M SMP 1, 2, 3, 4, 5, 6

Lesson 2 Count and Write to 5

K.CC.A.3, K.CC.B.4a, K.CC.B.4b, K.CC.B.5, K.CC.A.1, K.CC.B.4c

Focus: M SMP 1, 2, 3, 4, 5, 6

Lesson 3 Numbers 0 to 5

K.CC.A.3, K.CC.B.4c, K.CC.B.5, K.CC.A.1

Focus: M SMP 1, 2, 3, 4, 5, 6, 8

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.

Deepen Understanding Counting

SMP 8 Use repeated reasoning.

When all problems have been discussed, challenge children to think about the repeated pattern in counting.

Ask As you count out objects such as counters or cubes, what do you do?

Listen for I count out one at a time. I move one object as I count it.

Ask When you count objects into a group, what is happening to the number of objects as you count them?

Listen for The number of objects is more each time I count. There is one more each time.

Generalize Prompt children to identify that as they count, the next number is one more than the previous number.

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.

Support Whole Class Discussion

Invite children to show their cube trains and explain how they built them. Discuss what they did first and how they checked their work.


Ask What do you notice about all of the 4-cube trains?

Listen for They match the blue one on the page. We used 4 cubes to make them. They are the same size because the train always has 4 cubes.

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.

LESSON 21 **Refine** Adding Within 10 SESSION 4

Apply It With partners, children should place 8 counters of one color and 1 counter of another color on the 10-frame to show $8 + 1 = 9$ and $1 + 8 = 9$.  Math Toolkit
• two-color counters

$8 + 1 = 9$ and $1 + 8 = 9$

Encourage children to explore turn-around facts with 10-frames. Give children 9 two-color counters each. Have them work in pairs. Ask one partner to model $8 + 1 = 9$ with counters on the 10-frame while the other models $1 + 8 = 9$. Have children write both equations.

Discuss It Look at the two equations you have written. What is the same, and what is different?

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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**).

Try-Discuss-Connect Routine

Try

Make sense of the problem
Solve and support your thinking

Discuss

Share your thinking with a partner
Compare strategies

Connect

Make connections and reflect on what you have learned
Apply your thinking to a new problem



Math Toolkit

- number cubes
- two-color counters
- crayons

DISCUSS IT



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.

Discuss It

How did you use the cubes to model the subtraction story? What does each part of the equation show?

CONNECT IT



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.

LESSON 30 DEVELOP SESSION 3 ● ● ● ●

Connect It

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

24	25	26
34	44	54
60	70	90
81	90	91
90	99	100

Discuss It Have children circle the numbers that complete the hundred chart. Count aloud by ones until you get to the first box with a colored border. Together, determine the missing number and which one to circle. Count on together from 24 until you reach the next box.

Discuss It What patterns can you find in the hundred chart?

598 Lesson 30 Count to 100 by Ones ©Curriculum Associates, LLC Copying is not permitted.