



About the Revised Edition

As we developed this revised edition of Bridges Intervention, we made several types of changes to the original materials. The first three revisions listed in the following table are found in all nine volumes. The final two revisions also occur throughout the materials, but are particularly relevant and noticeable in Volumes 2, 4, 5, and 7, as noted.

	Bridges Intervention Revised Edition Volumes								
	1	2	3	4	5	6	7	8	9
1 Enhancing teacher questioning to support student sensemaking	√	√	√	√	√	√	√	√	√
2 Promoting positive mathematics identities for all students	√	√	√	√	√	√	√	√	√
3 Improving usability and support for teachers	√	√	√	√	√	√	√	√	√
4 Supporting fact fluency through updated strategy language and sequences of activities		√			√				
5 Incorporating more accessible and inclusive problem contexts				√			√		



Questioning Strategies

Questions to ask students during the Pair It Up, Fives game include:

What did you turn over?

How many more to make 5?

Is it a match?

How do you know?

Is there a combination of 3 numbers that make 5?

Enhancing Teacher Questioning to Support Student Sensemaking

The action steps and sidebars now include explicit support for purposeful teacher questioning. This is a move away from direct instruction to more effectively support student sensemaking. A greater focus on teacher questioning is intended to provide opportunities for all students to access and understand the mathematics of each session. Teacher questions are highlighted through italicized text in the action steps and sample dialogue. Further, sidebars featuring questioning strategies, such as this one from Volume 1, provide banks of questions that teachers can use repeatedly during activities and games to promote students' development of conceptual understanding and procedural fluency.

Promoting Positive Mathematics Identities for All Students

Throughout the volumes, timed activities have been removed from placement assessments, progress monitoring, and session activities. By focusing on fluency instead of memorization, the materials support positive mathematics identities for students by providing time and opportunity for sensemaking and strategy development.

Further, placement assessment and progress monitoring scoring guides have been updated to be more strengths-based; that is, they now focus on what students understand and are able to do. This change is reflected most concretely in the removal of zero-point indicators, which described what students could not yet do instead of indicating what students were doing successfully. An example of a strengths-based progress monitoring guide from Volume 3 is provided here.

Skill Assessed	Scoring
Part 1 Written Progress Monitoring	
1a–b Counts two different sets of base ten pieces and records a 3-digit number to match each set. <i>229, 124</i>	1 pt. (½ a point for each correct response)
2a–d Writes 3-digit numbers in expanded form. <i>600 + 30 + 4; 400 + 20; 200 + 10 + 3; 300 + 6</i>	2 pts. (½ a point for each correct response)
Part 2 Individual Interview	
1 Counts forward by 1s from 786 to 801.	1 pt. Counts fluently across this range.
2 Correctly writes a number given orally. Identifies the digit in the tens place, and tells how much it's worth. <i>385; points to the 8; 8 tens or 80 (either response is acceptable).</i>	1 pt. When given the written number, is able to point to the digit in the 10s place and tell how much it's worth. 2 pts. Completes all parts of the task correctly.
3 Correctly writes a number given orally. Identifies the digit in the hundreds place, and tells how much it's worth. <i>517; points to the 5; 5 hundreds or 500 (either response is acceptable).</i>	1 pt. When given the written number, is able to point to the digit in the 100s place and tell how much it's worth. 2 pts. Completes all parts of the task correctly.
4 Correctly writes a number given orally. Identifies the digit in the ones place, and tells how much it's worth. <i>708; points to the 8; 8 ones or 8 (either response is acceptable).</i>	1 pt. When given the written number, is able to point to the digit in the 1s place and tell how much it's worth. 2 pts. Completes all parts of the task correctly.
TOTAL SCORE	10 pts.

Finally, we have made numerous language changes within the Teachers Guides—removing references to “struggling students” and moving to gender-neutral language—when describing students and student actions. Taken together, these changes promote strengths-based interactions with students, supporting the development of students’ positive mathematics identities.

Improving Usability and Support for Teachers

The revised materials are designed so that any educator—from experienced teachers to new paraprofessionals—can quickly identify key instructional goals for instruction as well as questions to ask students that focus on those goals. Further, additional just-in-time support has been added for educators in the form of additional Teacher Note sidebars, such as the examples from Volume 4 shown at right. They provide information so that teachers can anticipate students’ thinking and use of models, identify areas of potential challenge, and provide additional support for students.

Supporting Fact Fluency

Language, strategy names, and activity sequences have been updated to reflect current research, in support of students’ development of fact fluency. In making these changes, we drew specifically on the work of Bay-Williams and Kling (2019). Volumes 2 and 5 have been organized around the development of foundational facts, followed by a focus on derived fact strategies. These changes are intended to develop students’ accuracy, flexibility, and efficiency with facts, which are the defining characteristics of fluency (NCTM, 2014). In Volume 2, this was accomplished through revisions to the language and the focus of some activities. In Volume 5, a reordering of the sequence of modules was required; in fact, it is the only volume in which the sequencing of content has changed from the original materials. The lists of modules from Volumes 2 and 5 (below) illustrate the progression of the volumes from foundational facts to derived fact strategies.

Volume 2 Modules	Volume 5 Modules
Structuring Five Structuring Ten	Equal Groups of Two, Five & Ten Doubles ($\times 2$ Facts) Tens & Half Ten Facts
Part-Part-Whole Doubles & Halves Near Doubles Ten & More, Pretend-a-Ten Pretend-a-Ten	Doubling with Fours & Eights Add a Group with Threes & Sixes Subtract a Group with Nines
Early Subtraction Strategies Subtraction Strategies: Up to Ten Fact Families, Fact Strategies	Multiplication & Strategies Division Experiments Array Model for Division Multiplication & Division Fact Families

Teacher Note

For the first problem, students may start with 9 on their number rack and bring over the amount on the bottom that will make 16 on the left side of the number rack. Or they may begin with 16 on the left side of their number rack and move 9 back to the right to see how many are left. Ask them to share their strategies and comment on how they are the same and different.

Teacher Note

Dividing the whole into parts may be challenging for some students who are uncomfortable with estimating. Ask them to decide which part is larger and to draw the line to demonstrate an understanding of which part is larger and which is smaller.

Teacher Note

Some students will benefit from having a number line or hundreds chart to help visualize the beginning number and the “two less” number. This might be available in the room, or the student may need one to touch.

Incorporating More Accessible and Inclusive Problem Contexts

The contexts of some problem situations have been modified to be more equitable and inclusive, particularly in terms of gender and socioeconomic class. In Volume 7, Module 8, for example, the original materials include a series of sessions previously focused on children raising hundreds of dollars to fund their travel to summer camp. These have been revised to a more inclusive context: students raising funds for a school trip. In Volume 4, Module 7, problem situations that involved categorizing and sorting boys and girls have been modified to focus on categorizing and sorting according to other characteristics:

There were 32 children playing basketball at the park. There were 6 more children playing soccer than playing basketball. How many children were playing soccer?

28 children played on the slide. 12 more children played on the swings than on the slide. How many children played on the swings?

The focus is now on the activities in which the children are engaged, rather than the gender of the children.

Conclusion

The changes made in this revised edition of Bridges Intervention enhance teacher questioning, support student sensemaking, promote positive math identities, improve usability, support fact fluency, and provide more accessible and inclusive problem contexts. Although the number of changes to the scope and sequence were minimized, significant improvements were made to the content throughout the volumes to support implementation of more equitable and effective teaching and learning.

References

Bay-Williams, J., & Kling, G. (2019). *Math fact fluency: 60+ games and assessment tools to support learning and retention*. Alexandria, VA: Association for Supervision and Curriculum Development.

NCTM (2014). *Procedural fluency in mathematics: A position of the National Council of Teachers of Mathematics*. Reston, VA: National Council of Teachers of Mathematics.

