What to Look For 2: Understanding and Developing Student Thinking in Multiplicative Reasoning

Chapter 1: A User's Guide to What to Look For 2 Chapter 2: A Different Pathway to Multiplicative Reasoning Chapter 3: What Do Students Need to Know Before Starting the Lessons?

Section 1: The Beginning of the Multiplication and Division Continuum

What to Expect in This Section Key Language for Teachers (Not Needed by Students) Counting Collections Inquiry Promoting the Intensive Quantity and Skip Counting Writing a Multiplication Sentence (Equation) What's Coming Up in the Lessons

Lesson 1: Counting Collections Lesson 2: Working with the Intensive Quantity Lesson 3: Writing the Math Sentence (Equation)

Section 2: Building Fluency with 10× and 2× Facts

What to Expect in This Section Key Language for Teachers (Not Needed by Students) Developing Fluency with 10× Facts Supporting Skip Counting for Students Who Single Count Automatizing 10× Facts as More than a Procedure Understanding the Differences between Additive and Multiplicative Situations Using a Specific Fact Progression to Help Develop Early Fluency Using 10× Facts to Foster Early Understanding of the Commutative Property Shifting to Learning 2× Facts What's Coming Up in the Lessons

Lesson 4: Using Strings to Develop Multiplication of 10Lesson 5: Discovering the Commutative Property of MultiplicationLesson 6: Two Ways to Think About 2× Facts

Section 3: Automatizing $2 \times$ Facts, Solving Word Problems, and Introducing Division

What to Expect in This Section Key Language for Teachers (Not Needed by Students) Automatizing 10×, 0×, 1×, and 2× Facts through Games, Practice, and Self-Assessment of the 2× Facts Promoting Understanding and Fluency with Word Problems Rate Problem Family Introducing Division by Representing It as a Missing Factor What's Coming Up in the Lessons

Lesson 7: Automatizing 2× Facts
Lesson 8: Using 2× Facts
Lesson 9: Introducing Division Represented as a Missing Factor
Lesson 10: Continuing to Work with Division Represented as a Missing Factor

Section 4: Building and Working with the Array

What to Expect in This Section Key Language for Teachers (Not Needed by Students) Introducing Array Problems (Multiplication and Quotative Division) Challenges for Students Modelling the Distributive Property Using the Array Investigating Patterns in Products of 5 and 9 and Automatizing 2× and 5× Facts What's Coming Up in the Lessons

Lesson 11: Introducing the Array

Lesson 12: Problem Solving on the Array and 5× Facts

Lesson 13: Shifting to the Graph Paper "Closed" Array

Lesson 14: Using and Modelling the Distributive Property on the Array

Lesson 14b: Supplementary Practice with 10×, 0×, 1×, 2×, and 5× Facts

Lesson 15: Using the Distributive Property on the Array to Model 9× Facts

Section 5: Connecting Partitive and Quotative Division and Moving Beyond Single Digit Multiplication

What to Expect in This Section Key Language for Teachers (Not Needed by Students) The Connection between Partitive and Quotative Division Writing Word Problems Beyond Single Digit Multiplication What's Coming Up in the Lessons Lesson 16: Exploring the Connection between Partitive and Quotative Division

Lesson 17: Writing Word Problems

Lesson 18: Six Dinner Sid (to be confirmed)

Lesson 19: Multiplication by 100

Lesson 20: Introducing Double Digit Multiplication