Mathematics Curriculum

Topic E

The Commutative Property of Addition and the Equal Sign

1.OA.3, 1.OA.7

Focus Standard:	1.OA.3	Apply properties of operations as strategies to add and subtract. *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*
	1.OA.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 − 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*
Instructional Days:	4	
Coherence -Links from:	GK–M4	Number Pairs, Addition and Subtraction to 10
-Links to:	G2–M4	Addition and Subtraction Within 200 with Word Problems to 100

Topic E leads students to a very intentional understanding and application of the equal sign and the commutative property of addition (**1.OA.3** and **1.OA.7**). Lessons 17 and 18 ask students to use pictorial representations (pictures and 5-groups) to write expressions and to demonstrate that they are equivalent by using the equal sign.

This work with the equal sign precedes the lessons on commutativity in order to allow students to construct true number sentences such as 4 + 3 = 3 + 4 without misunderstanding the equal sign to mean that the numbers are the same. Students understand that when added together, two numbers make the same total, regardless of whether one of the numbers appears first or second in equations and expressions.

The topic ends with Lesson 20, where students directly apply their understanding of commutativity by starting with the larger quantity and counting on (a Level 2 strategy) as a matter of efficiency, "I can count on 2 from 7 when I solve 2 + 7!"

A Teaching Sequence Toward Mastery of the Commutative Property of Addition and the Equal Sign
Objective 1: Understand the meaning of the equal sign by pairing equivalent expressions and constructing true number sentences.   **(Lessons 17–18)**
Objective 2: Represent the same story scenario with addends repositioned (the commutative property). **(Lesson 19)**
Objective 3: Apply the commutative property to *count on* from a larger addend. **(Lesson 20)**