**New York State Common Core** 



## **Mathematics Curriculum**



## Topic D Subtraction from Numbers to 8

## K.OA.1, K.OA.2, K.OA.3

Focus Stand	lards:	K.OA.1	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problem. This applies wherever drawings are mentioned in the Standards.)
		K.OA.2	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
		K.OA.3	Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ).
Instructional Days:		6	
Coherence	-Links from:	GPK-M5	Addition and Subtraction Stories and Counting to 20
	-Links to:	G1-M1	Sums and Differences to 10

Topic D introduces formal subtraction concepts including writing and solving expressions and equations. Lesson 19 begins at the concrete level with students acting out *take away* stories and working at the pictorial level crossing off to see what remains.

In Lesson 20, the concrete objects and pictorial representations are tied to or matched to the representative subtraction expression or equation using the minus sign with no unknown. As in Topic C, this progression helps students move from concrete processes to reasoning abstractly and quantitatively (**MP.2**).

In Lesson 21, students solve subtraction story problems using concrete and pictorial representations and write the corresponding equation. As with addition, it is important that students understand what each numeral in the equation represents from

the story situation.

Lessons 22–24 focus on decompositions of 6, 7, and 8, which are recorded as equations. These equations are described in the progressions as *take from with result* 



*unknown* situations (C – B = \_\_\_\_). These three lessons explore the decompositions of 6, 7, and 8 by breaking off a part, hiding a part, and crossing off a part. "There were 7 bears sleeping in a cave. 4 bears left to go fishing. How many bears are still in the cave?"



Subtraction from Numbers to 8



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A Teaching Sequence Toward Mastery of Subtraction from Numbers to 8				
Objective 1:	Use objects and drawings to find <i>how many are left</i> . (Lesson 19)			
Objective 2:	Solve <i>take from with result unknown</i> expressions and equations using the minus sign with no unknown. (Lesson 20)			
Objective 3:	Represent subtraction story problems using objects, drawings, expressions, and equations. (Lesson 21)			
Objective 4:	Decompose the number 6 using 5-group drawings by breaking off or removing a part, and record each decomposition with a drawing and subtraction equation. (Lesson 22)			
Objective 5:	Decompose the number 7 using 5-group drawings by hiding a part, and record each decomposition with a drawing and subtraction equation. (Lesson 23)			
Objective 6:	Decompose the number 8 using 5-group drawings and crossing off a part, and record each decomposition with a drawing and subtraction equation. (Lesson 24)			





