K GRADE

Mathematics Curriculum

Topic E

Represent and Apply Compositions and Decompositions of Teen Numbers

K.CC.5, K.NBT.1, K.CC.1, K.CC.2, K.CC.3, K.CC.4c, K.CC.6, 1.OA.8, 1.NBT.3

Focus Standards:	K.CC.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
	K.NBT.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
Instructional Days:	5	
Coherence -Links from:	GPK–M5	Addition and Subtraction Stories and Counting to 20
-Links to:	G1–M2	Introduction to Place Value Through Addition and Subtraction Within 20

Topic E's Lesson 20 begins as students represent teen number decompositions and compositions by writing addition sentences. In Lesson 21, students make bonds with materials and hide one of the parts for their partners, who must figure out what the hidden part is. The number bond with a hidden part is represented by the teacher as an addition equation with a missing addend—the hidden part (aligns to **1.OA.8**). In Lesson 22, students compare teen numbers by counting and comparing the extra ones. For example, students decompose 12 into 10 and 2, and 16 into 10 and 6. They compare 2 ones and 6 ones to see that 16 is more than 12 using the structure of the 10 ones (MP.7). This is an application of the Kindergarten comparison standards (**K.CC.6**, **K.CC.7**), which move into the Grade 1 comparison standard (**1.NBT.3**).

In Lesson 23, students reason about situations to determine if they are decomposing a teen number as 10 ones and some ones, or composing 10 ones and some ones to *find* a teen number. They analyze the number sentences that best represent each situation (**K.NBT.1**). Throughout the lesson, students draw the number of objects presented in the situation (**K.CC.5**).

The module closes with an exploration in which students count teen quantities and represent them in various ways as the teacher gives the prompt, "Open your mystery bag. Show the number of objects in your bag in different ways using the materials you choose." This exercise also serves as a culminating assessment, allowing the student to demonstrate skill and understanding in applying all the learning gained throughout the module.

A Teaching Sequence Toward Mastery of Representing and Applying Compositions and Decompositions of Teen Numbers
Objective 1: Represent teen number compositions and decompositions as addition sentences. (Lesson 20)
Objective 2: Represent teen number decompositions as 10 ones and some ones, and find a hidden part. (Lesson 21)
Objective 3: Decompose teen numbers as 10 ones and some ones; compare *some ones* to compare the teen numbers. (Lesson 22)
Objective 4: Reason about and represent situations, decomposing teen numbers into 10 ones and some ones and composing 10 ones and some ones into a teen number. (Lesson 23)
Objective 5: Culminating Task—Represent teen number decompositions in various ways. (Lesson 24)