



## Topic F

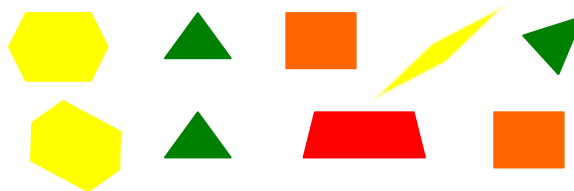
# Working with Numbers 9–10 in Different Configurations

K.CC.3, K.CC.4ab, K.CC.5

<b>Focus Standards:</b>	K.CC.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).
	K.CC.4	Understand the relationship between numbers and quantities; connect counting to cardinality. <ol style="list-style-type: none"> <li>When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.</li> <li>Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.</li> </ol>
	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.
<b>Instructional Days:</b>	6	
<b>Coherence</b>	<b>-Links from:</b>	GPK–M3 Counting to 10
	<b>-Links to:</b>	G1–M1 Sums and Differences to 10

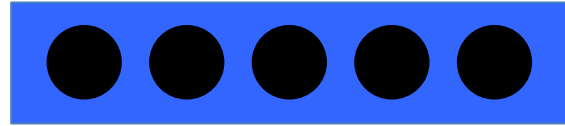
In this module, counting becomes more complex as the numbers get bigger and students learn to be flexible with numbers to 10. Students represent, count, and compare different objects in different configurations.

Lesson 23 begins with organizing and counting 9 varied geometric objects. The importance of the unit of five is stressed once again. Asking the students to place 5 of the 9 pattern blocks on a 5-group mat helps them to utilize the five-unit as they count.



Lesson 24 continues with writing the numeral 9 and counting 9 objects in a circular and scattered configuration printed on paper. Students strategize about how to represent a path through the scattered configuration: “I numbered my objects when I counted so I wouldn’t count the same object twice.”

The next three lessons focus on these same concepts with the number 10. Students write the numeral 10 and count 10 objects in all configurations, using the 5-group mat to highlight the importance of the five-unit. Once all the numbers have been introduced and explored, the focus becomes developing a profound understanding of the numbers to 10.



Armed with this profound understanding of the numbers to 10, the students are ready to act out *result unknown* story problems without equations in Lesson 28 (**K.OA.1**). For example, “Five children were sitting at their desks. Four children come in from outside and sit down at their desks, too. How many children are in the classroom?” At this point students are problem solving by using objects, drawings, or acting only.

### A Teaching Sequence Toward Mastery of Working with Numbers 9–10 in Different Configurations

- Objective 1:** Organize and count 9 varied geometric objects in linear and array (3 threes) configurations. Place objects on 5-group mat. Match with numeral 9. (Lesson 23)
- Objective 2:** Strategize to count 9 objects in circular (around a paper plate) and scattered configurations printed on paper. Write numeral 9. Represent a path through the scatter count with a pencil. Number each object. (Lesson 24)
- Objective 3:** Count 10 objects in linear and array configurations (2 fives). Match with numeral 10. Place on the 5-group mat. Dialogue about 9 and 10. Write numeral 10. (Lessons 25–26)
- Objective 4:** Count 10 objects, and move between all configurations. (Lesson 27)
- Objective 5:** Act out *result unknown* story problems without equations. (Lesson 28)