



Topic F

Working with Numbers 9–10 in Different Configurations

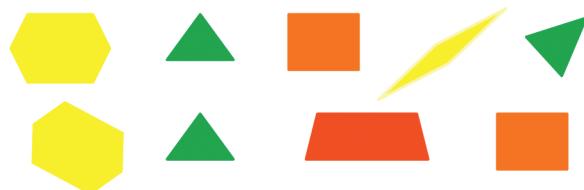
K.2A, K.2B, K.2C, K.2D, K.2E

Focus Standards:	K.2A	Count forward and backward to at least 20 with and without objects.
	K.2B	Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures.
	K.2C	Count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order.
	K.2D	Recognize instantly the quantity of a small group of objects in organized and random arrangements.
	K.2E	Generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20.
Instructional Days:	6	
Coherence -Links from:	GPK–M3	Counting to 10
-Links to:	G1–M1	Sums and Differences to 10

In this topic, 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.3A**). 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)