Grade PK • Module 4

Comparison of Length, Weight, Capacity, and Numbers to 5

OVERVIEW

In the first half of this module, students identify measurable attributes of objects in terms of length, weight, and capacity. Children make their bodies *tall* like a tree and hold up a finger to show *short* like a blade of grass. The scope in which they consider objects is stretched by introducing words such as *small, big, short, tall, empty, full, heavy, and light* so that students have the vocabulary needed to describe objects (**PK.MD.1**).

Topic A explores length using the words *tall* and *short*. Students recognize the importance of aligning endpoints to compare the lengths of two objects: "Susie isn't really taller than the teacher; it just looks that way because she is standing on a chair!" Children then compare lengths of various objects to the length of a linking cube stick using *longer than*, *shorter than*, and *about the same as* statements. By using a linking cube stick, children are indirectly exposed to the notion that there can be no gaps or overlaps between units of measure. They might also casually notice that each unit of measure is equal or the same.

Topics B and C cover weight and volume, respectively. In each topic, vocabulary is introduced to give students the language needed to articulate their comparisons. In Topic B, students first state which objects are heavy and light, progressing to using *heavier than*, *lighter than,* and *about the same as* statements (**PK.MD.1**). Finally, students learn to use a balance scale to verify some of their comparisons. To mimic the scale, students hold their arms straight out from their sides, with an object in each hand, and tip the arm down that is holding the heavier object while lifting up the other arm.

Topic C compares capacity (i.e., volume) by introducing different-sized containers for students to pour sand and water. As they explore, students respond to the questions, "Which container holds more? Which container holds less?" As in Topics A and B, children progress to using the language of comparison, *more than*, *less than*, and *about the same as*—for example, "The blue container holds *more than* the red container." The first half of this module culminates with students finding objects that match using length, weight, and volume comparison statements—for example, "The pink eraser is *lighter than* the wooden block."

The comparison of length, weight, and capacity naturally leads to discussions about quantity and number. Topic D's three lessons focus on identifying first and last in quantities up to 5 and 10 in different configurations (**PK.CC.6**): scattered (2 –5), linear (2–10), and circular (2–10). Measurement is connected to quantity as students reason *if there are enough* in Topic E. For example, students match teddy bear counters to chairs to see that "There are not enough chairs!" Later in the topic, students match the bears to movie theater seats to observe that there are enough seats, with some extras.

In Modules 1 and 3, students worked extensively to develop an understanding of numbers to 10. Topic F now bridges this work with number and measurement comparisons (first half of Module 1) to *more than*, *less than*, and *the same as* statements as students compare sets using matching and counting strategies (**PK.CC.5**). In Topic F lessons, students listen to story situations and compare 2 sets of 5 or fewer objects, making statements to describe them—for example, "There are *fewer* cups *than* straws."

Comparing concrete sets leads to comparing quantities and abstract numbers in Topic G—for example, "3 is less than 5." Students make *greater than, less than,* or *equal to* statements, matching the numeral to the set, and verifying with materials, such as linking cube towers (**PK.CC.5**).

In Module 4, fluency activities focus on two core goals: touching and counting quantities to 10 and rote counting to 20. Students decompose quantities up to 5 in preparation for simple addition and subtraction stories. Also, numeral formation activities anticipate writing numerals in Module 5.