Students begin their exploration of measurements, focusing on weight and length. Using strategies they learned for comparing objects, they expand these skills and begin to understand measuring weight and length.

**COMMON CORE STANDARD(S)**

_K.MD.A.1_ Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

**DURATION**

Two 45-minute classroom periods

Engage and Explore, Explain, Elaborate page 1—one 45-minute classroom period

Elaborate page 2, Evaluate—second 45-minute classroom period

**MATERIALS**

1 baggie of 10 various items from the classroom (could be pattern blocks, linking cubes, art supplies, etc.; make sure the items are different shapes, sizes, and colors)

1 set of shape cutouts (various shapes in a variety of colors and sizes, 15–20 in all)

**ENGAGE AND EXPLORE**

Engage students by having a set of various objects that can be taped to the chalkboard, or the white board, scattered all over the board. Explain that you have all these shapes and you want to group them, but you aren’t sure what groups to make.

Ask students to share ideas on how they would group all of the shapes. Sample groupings are color, shape, size.
Start by sorting by color. While you sort, think out loud for students to hear your process. “This shape is red. I put it over here. I want to find another shape that looks just like this red one. Is this the same? [hold a blue shape next to the red] No. This is not the same, it needs its own group for the color blue.” Repeat with all colors, giving students insight on how to think through sorting by color. Constantly ask students if there is another way to think about colors when sorting; share all ideas if they help students efficiently sort by color.

Use the same technique to sort by shape and by size. When discussing size, use the terms bigger and smaller, to build the measurement comparison mindset.

Have students empty their bag of objects onto their desk. Explain that now it is their turn to sort their objects into groups. Encourage students to use the same thinking you verbalized when comparing, if needed, to compare by color, shape, and size. After students have had ample time to sort their items, have them pair up with another student. Ask students to dump their bags out in a pile together, and now sort. If students are anxious about not having the same items, remind them that they can sort however they like. Encourage students to discuss how they plan to sort, and have students take turns sorting into groups.

When pairs are done, discuss with the class how the activity changed when they paired with another student. Ask for pairs to share how they sorted and what their groups looked like once they were done. Have students focus on size comparisons last, to lead into the video introducing measurement. Tell students that they compared objects and sorted them based on color, shape, and size. Today they will learn about comparing objects based on length and weight.

EXPLAIN

WATCH THE GENERATION GENIUS INTRO TO MEASUREMENTS: WEIGHT & LENGTH VIDEO AS A GROUP
Facilitate a conversation using the Discussion Questions.

ELABORATE

Direct students to use their new understanding to complete the practice problem worksheets. Page 1 contains bare mathematical problems to solidify understanding of the process. Page 2 contains application problems for students to apply the process to solve real-world problems.

EVALUATE

Have students gather in groups of 2 or 4 to compare and discuss their answers to the problems. Allow students enough time to communicate with their peers about their process and their thinking. Encourage students to use correct mathematical language when discussing their process. Have each group choose two questions they want more information about, or they want to discuss as a class.

When groups are ready, take questions from students. Encourage groups to answer questions brought up by other groups.

Students can play the online Kahoot! quiz game located below the video. It provides downloadable scores at the end of the quiz game. Alternatively, you can use the paper quiz, or the exit ticket questions. All these resources are located below the video in the assessment section.