

#### Vertical Progression:

<b>Kindergarten</b>	<p><b>K.MD.A Describe and compare measurable attributes.</b></p> <ul style="list-style-type: none"> <li>○ <b>K.MD.A.2</b> Directly compare two objects, with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter.</i></li> </ul>
<b>1<sup>st</sup> Grade</b>	<p><b>1.MD.A Measure lengths indirectly and by iterating length units.</b></p> <ul style="list-style-type: none"> <li>○ <b>1.MD.A.1</b> Order three objects by length; compare the length of two objects indirectly by using a third object.</li> <li>○ <b>1.MD.A.2</b> Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></li> </ul>
<b>2<sup>nd</sup> Grade</b>	<p><b>2.MD.B Relate addition and subtraction to length.</b></p> <ul style="list-style-type: none"> <li>○ <b>2.MD.B.5</b> Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</li> <li>○ <b>2MD.B.6</b> Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</li> </ul>
<b>3<sup>rd</sup> Grade</b>	<p><b>3.MD.A Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.</b></p> <ul style="list-style-type: none"> <li>○ <b>3.MD.A.2</b> Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.</li> </ul> <p><b>3.MD.B Represent and interpret data.</b></p> <ul style="list-style-type: none"> <li>○ <b>3.MD.B.4</b> Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.</li> </ul>

#### Students will demonstrate command of the ELG by:

- Solving problems involving addition and subtraction using drawings and equations with symbols to represent unknowns.
- Selecting and using appropriate tools, such as rulers, yardsticks, meter sticks, and measuring tapes to measure objects by length.
- Using addition and subtraction within 100 to solve word problems involving lengths that are given in the same unit.
- Creating a number line with whole number intervals (equal spacing).
- Representing whole numbers on a number line.
- Finding sums and differences within 100 using a number line.

#### Vocabulary:

- centimeter
- equation
- foot
- inch
- length
- meter
- yard

#### Sample Instructional/Assessment Tasks:

##### 1) Standard(s): 2.MD.B.5

Source: [www.k-5mathteachingresources.com/support-files/length-word-problems.pdf](http://www.k-5mathteachingresources.com/support-files/length-word-problems.pdf)

##### Item Prompt:

- A snake was 35 inches long. Now it is 57 inches long. How much did the snake grow?
- A ribbon was 50 cm long. After I cut some off, 37 cm was left. How much did I cut off?
- A baby giraffe was 36 cm tall. Another young giraffe was 100 cm tall. How much shorter was the baby giraffe?

##### Correct Answer(s):

- The snake grew 22 inches.
- 13 cm of ribbon was cut off.
- The baby giraffe is 64 cm shorter than the other young giraffe.

##### 2) Standard(s): 2.MD.B.6

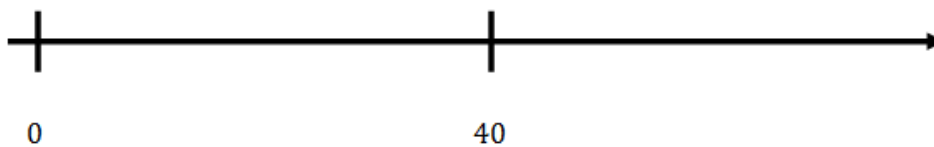
Source: Howard County Public Schools

##### Item Prompt:

Show students a number line with 0 marked on the left hand side and 40 put in the middle of the number line with the rest of the number line drawn with an arrow.

Ask students to place 83, 20, and 30 on the number line.

Students explain why they placed the numbers where they did. Explanations can be oral or in written form.



##### Correct Answer(s):

Student explanations will vary. Explanations must be clearly communicated and logical.