# Kindergarten Grade Math

## ELG K.MD.A Describe and compare measurable attributes.

## Vertical Progression:

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| **TS Gold** | **22. Compares and measures.**<br>**8.** Uses measurement words and some standard measurement tools accurately; uses ordinal numbers from first to tenth. |
| **Kindergarten** | **K.MD.A Describe and compare measurable attributes.**<br>○ **K.MD.A.1** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.<br>○ **K.MD.A.2** 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. For example, directly compare the heights of two children and describe one child as taller/shorter. |
| **1st Grade** | **1.MD.A Measure lengths indirectly and by iterating length units.**<br>○ **1.MD.A.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object.<br>○ **1.MD.A.2** 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. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps. |

## Students will demonstrate command of the ELG by:

- Describing several measureable attributes of objects (e.g., length, weight, height) using grade level academic and content language.
- Comparing and describing similarities and differences between two objects using several measureable attributes.
- Describing the degree of difference (more of/less of) between measured objects.

## Vocabulary:

- attributes
- compare
- heavy
- length
- less of
- long
- longer
- measure
- measurable
- more of
- shorter
- taller
- weight

## Sample Instructional/Assessment Tasks:

1) **Standard(s):** K.MD.A.1

**Source:** https://gradekcommoncoremath.wikispaces.hcpss.org/Assessing+KMD1

**Item Prompt:** Comparing and Describing Attributes Part 1

**Setup:**

Choose several blocks to show student(s). These blocks could be taken from the block/building center. They can be made of wood, foam, cardboard, plastic, etc. Assess individual students or small groups of students. Pick one block to describe for students so that students understand the task. Choose a cube to describe (e.g., "All of the sides are the same length."). Ask student to choose a different block and describe it (e.g., "All of the sides are the same length."). Ask student to choose a different block and describe it (e.g., "This block has 2 long sides and 2 shorter sides."). Can the student describe more than one attribute? Does the student only describe the length? Do they consider width or weight? Example, "Is it heavier than the cube" or "If you line up 2 of these blocks, they are the same length as that block."

**Correct Answer:** Students focus on and describe attributes that are measurable (e.g., length, weight). Students compare blocks in terms of an attribute. Students discuss and justify their ideas.

2) **Standard(s):** K.MD.A.2

**Source:** https://gradekcommoncoremath.wikispaces.hcpss.org/Assessing+KMD2

**Item Prompt:** Comparing and Describing Attributes Part 2

**Setup:**

Choose several blocks of different sizes and weights to show student(s). (Wooden, plastic, foam, or cardboard blocks or Cuisenaire rods) Assess individual students or small groups of students. Ask students to compare two blocks of different sizes. Do they compare the blocks in terms of length? If not, suggest it. "Which is longer? Shorter?" Ask students to compare the weight of two different blocks. (Have a balance scale available.) The blocks can be different length blocks, or same length, but made of different material.

**Correct Answer:**

Students use correct terminology of longer/shorter and not bigger/smaller. Students use correct terminology of heavier/lighter? If students are provided two blocks of the same size, but made of different materials, do they understand why they are different weights? Students use the balance scale to compare the weight of the blocks, or they can pick the blocks up and compare the weight in their hands. (Either method is acceptable as long as they can describe it correctly.) Students discuss and justify their ideas?

3) **Standard(s):** K.G.B.6

**Source:** Howard County Public Schools Kindergarten Wikispace.

**Item Prompt:** Composing Shapes

**Setup:** Students will use simple shapes (pattern blocks or blackline master shapes) to form larger shapes. Say, for example, “Join these two rectangles to make a square.” When the student is finished ask, “How do you know this new shape is a square?” “Join these two triangles with full sides touching to make a rectangle? How do you know this is a rectangle?” “What is the name of the new shape you made from composing two simple shapes?” Other examples might include the following:

**1. Use two triangles and make a new shape. Draw what you made.**

**2. Put two squares together and make a new shape. Draw what you made.**

**3. Make a hexagon two different ways. Show your work.**

**Rubric:** Students with a complete understanding of the task will be able to join simple shapes to make the new shape, accurately explain why the new shape is a square (rectangle, etc.), and describe each shape using geometric attributes. Students with a developing understanding of the task might attempt to join the simple shapes to make new shapes without success, create a shape without accurately explaining why the new shape is a square (rectangle, etc.), and/or use non-geometric attributes during the explanation.