PROJECT M²
Mentoring Young Mathematicians

Level K

Correlation to the Common Core State Standards

Kendall Hunt

k12.kendallhunt.com | 1-800-542-6657

PROJECT M² Mentoring Young Mathematicians

Level K

Correlation to the Common Core State Standards

Sizing Up The Lily Pad Space Station: Measuring with the Frogonauts

Lesson	Common Core State Standards
Unit Introduction Lesson	**K.MD 1.** Describe measurable attributes of objects, such as length or weight. Describe several measureable attributes of a single object.
Chapter 1 Lesson 1	**K.MD 1.** Describe measureable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. **K.MD 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. **1.MD 1.** Order three objects by length; compare the lengths of two objects indirectly by using a third object.
Chapter 1 Lesson 2	**K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality. **K.CC.5** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1 - 20 count out that many objects. **K.CC.6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. **K.CC.7** Compare two numbers between 1 and 10 presented as written numerals. **K.MD 1.** Describe measureable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. **K.MD 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. **K.MD 3.** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. **1.MD 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. **2.MD 2.** Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

©2016 Kendall Hunt Publishing Company

Lesson	Common Core State Standards
Chapter 2 Lesson 1	**K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality. **K.CC.5** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1 - 20 count out that many objects. **K.CC.6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. **K.CC.7** Compare two numbers between 1 and 10 presented as written numerals. **K.MD 1.** Describe measureable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. **1.MD 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. **2.MD 2.** Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
Chapter 2 Lesson 2	**K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality. **K.CC.5** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1 - 20 count out that many objects. **K.CC.6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. **K.CC.7** Compare two numbers between 1 and 10 presented as written numerals. **1.MD 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. *(Activities focus on area rather than length.)* **2.MD 2.** Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. *(Activities focus on area rather than length.)* **3.MD.5** Recognize area as an attribute of plane figures and understand concepts of area measurement. **3.MD 6.** Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
Chapter 3 Lesson 1	**K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality. **K.CC.5** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1 - 20 count out that many objects.

Kendall Hunt Publishing Company ©2016

Lesson	Common Core State Standards
Chapter 3 Lesson 1 Continued	**K.CC.6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. **K.CC.7** Compare two numbers between 1 and 10 presented as written numerals. **K.MD 1.** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. *This lesson includes volume, a grade 3 standard.* **K.MD 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. **1.MD 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. *(Activities focus on volume rather than length.)*
Chapter 3 Lesson 2	**K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality. **K.CC.5** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1 - 20 count out that many objects. **K.CC.6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. **K.CC.7** Compare two numbers between 1 and 10 presented as written numerals. **K.MD 1.** Describe measureable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. *Students use cups to measure volume/capacity of different sized containers. Volume is a grade 3 standard.* **K.MD 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.
Exploring Shapes in Space: Geometry with the Frogonauts	
Unit Introduction Lesson	**K.G.4** Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). **K.G.5** Model shapes in the world by building shapes from components and drawing shapes.
Chapter 1 Lesson 1	**K.G.2** Correctly name shapes regardless of their orientations or overall size. **K.G.3** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid). **K.G.4** Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). **K.G.5** Model shapes in the world by building shapes from components and drawing shapes. **K.G.6** Compose simple shapes to form larger shapes.

Kendall Hunt Publishing Company ©2016

Lesson	Common Core State Standards
Chapter 1 Lesson 1 Continued	**K.MD.3** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. **1.G.2** Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shapes. **1.MD.4** Organize, represent, and interpret data with up to three categories.
Chapter 1 Lesson 2	**K.G.1** Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. **K.G.2** Correctly name shapes regardless of their orientations or overall size. **K.G.3** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid). **K.G.4** Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). **K.G.5** Model shapes in the world by building shapes from components and drawing shapes. **1.G.1** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. **2.G.1** Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
Chapter 2 Lesson 1	**K.G.1** Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to **K.G.2** Correctly name shapes regardless of their orientations or overall size. **K.G.3** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). **K.G.4** Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).
Chapter 2 Lesson 2	**K.G.1** Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to **K.G.2** Correctly name shapes regardless of their orientations or overall size. **K.G.4** Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).
Chapter 3 Lesson 1	**K.G.1** Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. **K.G.2** Correctly name shapes regardless of their orientations or overall size. **K.G.3** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid). **K.G.4** Analyze and compare two- and three- dimensional shapes, in different sizes and orientations,

Kendall Hunt Publishing Company ©2016

Lesson	Common Core State Standards
Chapter 3 Lesson 1 Continued	using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). **K.G.5** Model shapes in the world by building shapes from components and drawing shapes. **K.G.6** Compose simple shapes to form larger shapes. **1.G.1** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. **1.G.2** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape. *(Activities focus on two-dimensional shapes.)*
Chapter 3 Lesson 2	**K.G.1** Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to **K.G.2** Correctly name shapes regardless of their orientations or overall size. **K.G.3** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid). **K.G.4** Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). **K.G.5** Model shapes in the world by building shapes from components and drawing shapes. **K.G.6** Compose simple shapes to form larger shapes. **1.G.1** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. **1.G.2** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape. *(Activities focus on two-dimensional shapes.)*

Kendall Hunt Publishing Company ©2016