Grade K Mathematics Instructional Materials Scoring Rubric

Introduction:

The following Instructional Materials Scoring Rubric for Mathematics is designed to score materials in the following categories:

- Instructional Focus
- Math Practices
- Aspects of Rigor
- Accessibility Features

Scoring:

Each section is to be scored using a 0, 1, or 2. For all sections, except for Rigor, use the following rubric when deciding on the appropriate rating:

- 0: The metric is not present within the material.
- 1: The metric is present within the material. The intent and/or frequency component of the metric is not fully met.
- 2: A rating of 2 indicates the metric is present and all aspects of the metric are fully met.

For Rigor:

- 0: The standard is not instructionally present within the material.
- 1: The standard is instructionally present but does not have an instructional focus on the indicated type of rigor.
- 2: The standard is instructionally present and has a clear instructional focus on the indicated type of rigor.

Note: Some standards appear under multiple aspects of rigor (i.e., Conceptual Understanding, Procedural Fluency, or Application). When scoring these standards, only score the part of the standard relevant to that aspect of rigor, which is identified by a bold, italics, larger font.

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Gateway: The publisher must provide a Tennessee standards alignment guide as a part of the scope and sequence for the material. If this gateway is not met, the materials will not be scored.

Instructional Focus				
	0	**1**	**2**	**Evidence**
Connections to content from prior grades are clearly identified and explicitly related to grade-level work.				
Materials embed a minimum of 3 tasks in every unit. Each task has multiple entry-points and can be solved using a minimum of 2 solution strategies and/or representations.				
Materials give students opportunities to work problems within each lesson. Each problem set: • Covers the full breadth of the standard(s) covered in the lesson • Is aligned to on grade level expectations as identified in the standard(s)				
Teacher resources indicate common student misconceptions in every unit and provide guidance on how to instructionally address the identified misconceptions.				
Materials provide educative supports (e.g., adult level explanations of the standards and strategies) in every lesson for teachers to ensure standards are taught accurately and to the appropriate level of rigor (i.e., conceptual understanding, procedural fluency, and application) as indicated by the standards.				
Materials develop student understanding of multiple representations (i.e., concrete, representational, abstract) for relevant standards which are identified in the state's Instructional Focus Documents.				
Materials include problems and activities in every unit that connect two or more grade level standards in a domain (e.g., K.MD.A.1 and K.MD.A.2).				
Materials include problems and activities in every unit that connect two or more grade level domains. (e.g., K.MD.C.4 and K.CC.B.5a)				
Materials provide opportunities for students to participate in a spiraled review in every unit.				
			Total	

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Mathematical Practices				
Math Practices/Literacy Skills for Math Proficiency	**0**	**1**	**2**	**Evidence**
Materials embed the eight math practice standards in every unit.				
Math practice standards are clearly identified in both teacher and student materials.				
Materials use appropriate math vocabulary which is aligned to the grade level standards.				
Materials support students in discussing and articulating mathematical ideas. Within each lesson students either write or verbally justify their thoughts.				
			Total	

Accessibility Features				
Digital Materials	**0**	**1**	**2**	**Evidence**
All lessons within the materials are available in digital form and include a printable option.				
In every lesson, materials include recommended supports, accommodations, and modifications for Students with Disabilities and English Language Learners that will support their regular and active participation in accessing on grade level material (e.g., modifying vocabulary words within word problems, sentence starters, etc.).				
			Total	

Aspects of Rigor				
Conceptual Understanding: The materials support the intentional development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content standards or clusters.	**0**	**1**	**2**	**Evidence**
K.CC.A.1 Count to 100 by ones, fives, and tens. Count backward from 10.				

K.CC.A.3 Write numbers from 0 to 20. ***Represent a quantity of objects with a written number 0-20.***				
K.CC.A.4 Recognize, describe, extend, and create patterns and explain a simple rule for a pattern using concrete materials. Analyze the structure of the repeating pattern by identifying the unit (core) of the pattern.				
K.CC.B.5 Understand the relationship between numbers and quantities; connect counting to cardinality.				
K.CC.B.5b Recognize that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.				
K.CC.B.5c Recognize that each successive number name refers to a quantity that is one greater and each previous number is one less.				
K.CC.C.7 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.OA.A.1 Represent addition and subtraction with objects, fingers, drawings, acting out situations, verbal explanations, expressions, or equations.				
K.OA.A.3 Decompose numbers less than or equal to 10 into addend pairs in more than one way (*e.g., 5 = 2 + 3 and 5 = 4 + 1*) by using objects or drawings. Record each decomposition using a drawing or writing an equation.				
K.NBT.A.1 Compose and decompose numbers from 11 to 19 into a group of ten ones and some more ones by using objects or drawings (*e.g., 18 equals 10 + 8*). Record the composition or decomposition using a drawing or by writing an equation.				
K.MD.A.1 Describe the measurable attributes of an object, such as length (long/short), height (tall/short), or weight (heavy/light).				
K.MD.B.3 Identify the penny, nickel, dime, and quarter based on their attributes (size and color) and recognize the value of each.				
K.MD.C.4 Sort a collection of objects into a given category, with 10 or fewer in each category. Compare the categories by group size.				
K.G.A.1 Describe objects in the environment using names of shapes and solids (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). Describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, between, and next to.				

K.G.A.3 Identify shapes/solids (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres) as two-dimensional or three-dimensional.				
K.G.B.4 Describe similarities and differences between two- and three-dimensional shapes/solids, in different sizes and orientations.				
K.G.B.6 Compose a figure using simple shapes/solids and identify smaller shapes/solids within the figure.				
Procedural Skill and Fluency: The materials provide intentional opportunities for students to develop procedural skills and fluencies, especially where called for in specific content standards or clusters	**0**	**1**	**2**	**Evidence**
K.CC.A.1 Count to 100 by ones, fives, and tens. Count backward from 10.				
K.CC.A.2 Count forward by ones beginning from any given number within the known sequence (instead of having to begin at 1).				
K.CC.A.3 ***Write numbers from 0 to 20***. Represent a quantity of objects with a written number 0-20.				
K.CC.B.5a When counting objects 1-20, say the number names in the standard order, using one-to-one correspondence.				
K.CC.B.6 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, a circle, or as many as 10 things in a scattered configuration. ***Given a number from 1-20, count out that many objects.***				
K.OA.A.4 Find the number that makes 10, when added to any given number, from 1 to 9 using objects or drawings. Record the answer using a drawing or writing an equation.				
K.OA.A.5 Use mental strategies flexibly to develop fluency in addition and subtraction within 10.				
K.MD.B.3 Identify the penny, nickel, dime, and quarter based on their attributes (size and color) and recognize the value of each.				
K.MD.C.4 Sort a collection of objects into a given category, with 10 or fewer in each category. Compare the categories by group size.				
K.G.A.2 Correctly name shapes and solids (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres) regardless of their orientations or overall size.				
Applications: The materials support the intentional development of students' ability to utilize mathematical concepts and skills in engaging applications, especially where called for in specific content standards or clusters.				

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K.CC.B.6 ***Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, a circle, or as many as 10 things in a scattered configuration.*** Given a number from 1-20, count out that many objects.	**0**	**1**	**2**	**Evidence**
K.CC.C.8 Compare two given numbers up to 10, when written as numerals, using the terms greater than, less than, or equal to. (Students need not use comparison symbols here.)				
K.OA.A.2 Add and subtract within 10 to solve contextual problems with result/total unknown involving situations of add to, take from, and put together/take apart. Use objects, drawings, or equations to represent the problem.				
K.MD.A.2 Directly compare two objects with a measurable attribute in common, to describe which object has more of/less of the attribute. For example, directly compare the heights of two children and describe one child as taller/shorter.				
K.G.B.5 Model shapes/solids in the world by building or drawing them.				
Total				