KAP Predictive Interim Cluster Map

- The predictive interim assessments provide an estimate of a student's future performance on Kansas summative assessments. The assessments also allow educators to evaluate students' knowledge and skills in a subject and are designed to inform decisions both at the classroom level and beyond (e.g., at the school or district level). To keep the assessment length short, the total number of items that students respond to are limited. The predictive interim assessments do not support any inferences about performance at standard level because measurement best practice would require substantially more items per standard in order to provide an accurate measure of whether the student knows the content of each standard. However, the predictive interim assessments support the inferences made about clusters at the classroom level and beyond because student responses are aggregated and thus more reliable.

- The cluster map resource documents include the clusters embedded in the 2017 Kansas standards and a table mapping each item on the predictive interim assessments to the cluster and item description. In a cluster map resource document, there are two parts: a cluster key table and a cluster mapping table. The cluster key table includes the cluster code and cluster description as well as its domain, and the cluster mapping table links each item with the cluster it is measuring.

- Teachers could use this resource to identify items measuring the same cluster or domain. Combining this resource with information from the school or district report, teacher also could make inferences about school or district performances on clusters or domains. If the whole school performed better than the state average on the majority of items measuring the same cluster or domain, then the teacher could infer that the students in the school likely understood the knowledge and skills of this cluster or domain. If the whole school performed worse than the state average on the majority of items measuring the same cluster or domain, then the teacher might want to spend more instruction time on this cluster or domain.

- Although there are more items measuring one cluster or domain than one standard, the predictive interim assessment still do not support any inferences made about clusters or domains at student level because the number of items per cluster or domain is still not large enough to provide an accurate measure of whether the student understands the content of each cluster or domain.

KAP Predictive Interim Cluster Map

Mathematics Key

Domain	Cluster	Description
Operations & Algebraic Thinking	5.OA.A	Write and interpret numerical expressions.
Number and Operations in Base Ten	5.NBT.A	Understand the place value system.
	5.NBT.B	Perform operations with multi-digit whole numbers and with decimals to hundredths.
Number and Operations – Fractions	5.NF.A	Use equivalent fractions as a strategy to add and subtract fractions.
	5.NF.B	Apply and extend previous understandings of multiplication and division to multiply and divide fractions. NF.3 N
Measurement & Data	5.MD.A	Convert like measurement units within a given measurement system.
	5.MD.B	Represent and interpret data.
	5.MD.C	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
Geometry	5.G.A	Graph points on the coordinate plane to solve real world and mathematical problems.
	5.G.B	Classify two-dimensional figures into categories based on their properties.
Strategic Thinking and Reasoning	5.STAR.PSM	Problem solving and modeling.
	5.STAR.CR	Communicating Reasoning.

Grade 5 Mathematics: Fall

Item Position	Cluster	Item Description
1	5.OA.A	Describe a numerical expression in words
2	5.NBT.A	Use symbols to compare two decimal numbers
3	5.NBT.A	Determine the power of 10 that is an unknown factor in an equation
4	5.NBT.A	Find the product of a number and a power of 10
5	5.NBT.A	Determine the location of the decimal point when multiplying by a power of 10
6	5.NBT.A	Determine the location of the decimal point when multiplying by a power of 10
7	5.NBT.B	Find the sum of two decimal numbers
8	5.NBT.B	Find the difference between two decimal numbers
9	5.NBT.B	Find the missing value in a subtraction problem involving decimals
10	5.NBT.B	Find the missing value in a subtraction problem involving decimals
11	5.NF.A	Solve a word problem involving the addition and subtraction of fractions
12	5.NF.A	Use a fraction model to represent the addition and subtraction of fractions
13	5.NF.B	Solve a word problem in which a whole number is divided by a unit fraction
14	5.NF.B	Solve a word problem in which a whole number is multiplied by a fraction
15	5.MD.A	Convert a measurement from larger units to smaller units (metric)
16	5.MD.A	Convert a measurement from smaller units to larger units (standard)
17	5.MD.B	Identify the line plot that displays the data given in a table
18	5.G.A	Determine the location on a graph of an ordered pair
19	5.G.B	Classify two-dimensional figures based on their properties
20	5.MD.C	Find the volume of a rectangular prism, given the lengths of the sides
21	5.MD.C	Find the volume of a rectangular prism, given the lengths of the sides
22	5.MD.C	Find the number of unit cubes that can be packed into a rectangular prism
23	5.STAR.PSM	Solve a multistep word problem involving whole numbers and fractions
24	5.STAR.PSM	Solve a multistep word problem involving fractions and elapsed time

Be cautious about any inferences made about a cluster measured by less than 4 items. In this case, inferences are better suited at the domain level.

Grade 5 Mathematics: Winter

Item Position	Cluster	Item Description
1	5.OA.A	Evaluate numerical expressions with parentheses
2	5.NBT.A	Determine the location of the decimal point when multiplying by a power of 10
3	5.NBT.A	Use symbols to compare two decimal numbers
4	5.NBT.B	Find the unknown factor in a multiplication problem involving decimals
5	5.NBT.B	Write an expression using place value understanding to subtract two decimal numbers
6	5.NBT.B	Find the unknown factor in a multiplication problem involving decimals
7	5.NF.A	Solve a word problem involving the addition of fractions
8	5.NF.A	Write an equation to represent the addition and subtraction of fractions
9	5.NF.A	Write an equation to represent the addition and subtraction of fractions
10	5.NF.A	Find the missing value in a subtraction problem involving fractions
11	5.NF.B	Divide a whole number by a unit fraction
12	5.NF.B	Solve a word problem involving division and interpretation of a fractional quotient
13	5.NF.B	Divide a whole number by a unit fraction
14	5.NF.B	Solve a word problem by multiplying a whole number by a unit fraction
15	5.NF.B	Solve a word problem by dividing a whole number by a unit fraction
16	5.MD.A	Convert a measurement from smaller units to larger units (standard)
17	5.MD.B	Use the data displayed in a line plot to find the sum of fractional amounts
18	5.MD.B	Identify the line plot that displays the data given in a table
19	5.MD.C	Find the number of unit cubes that can be packed into a rectangular prism
20	5.MD.C	Find the total volume of two rectangular prisms given the lengths of the sides
21	5.STAR.PSM	Solve a multistep word problem involving fractions
22	5.STAR.PSM	Solve a multistep word problem involving whole numbers and fractions
23	5.STAR.CR	Solve a multistep word problem involving whole numbers and fractions
24	5.STAR.PSM	Solve a multistep word problem involving fractions and elapsed time

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Grade 5 Mathematics: Spring

Item Position	Cluster	Item Description
1	5.NBT.A	Write the decimal form of a number expressed in unit form
2	5.NBT.A	Determine the value of an unknown number given two rounded values of the number
3	5.NBT.B	Write an expression using place value understanding to multiply two decimal numbers
4	5.NBT.B	Write an expression using place value understanding to add two decimal numbers
5	5.NF.A	Solve a word problem involving the subtraction of fractions
6	5.NF.A	Solve a word problem involving the subtraction of fractions
7	5.NF.A	Write an equation to represent the addition and subtraction of fractions
8	5.NF.B	Identify a situation represented as the quotient of a fraction and a whole number
9	5.NF.B	Represent an equation with an unknown quotient as a product with an unknown factor
10	5.MD.A	Convert the weight of an object into larger and smaller units (metric)
11	5.MD.A	Convert time in minutes to time in hours
12	5.MD.A	Identify the steps to convert a measurement from smaller units to larger units (metric)
13	5.MD.B	Interpret the information displayed in a line plot
14	5.MD.B	Create a line plot from data displayed in a table
15	5.G.A	Identify the list of ordered pairs shown on a coordinate grid
16	5.G.B	Classify two-dimensional figures based on their properties
17	5.MD.C	Find the total volume of two rectangular prisms given the lengths of the sides
18	5.MD.C	Use the volume and dimensions of a rectangular prism to write an equation
19	5.MD.C	Find the area of the base of a rectangular prism given the volume and the height
20	5.STAR.CR	Identify the relational symbol that compares two expressions involving powers of 10
21	5.STAR.CR	Choose the operation to complete an inequality involving fractions
22	5.STAR.CR	Use data in a table to solve problems involving operations with fractions
23	5.STAR.PSM	Solve a multistep word problem involving fractions and money
24	5.STAR.PSM	Solve a multistep word problem involving fractions and conversion of time

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