

Diocese of Boise Math Curriculum – Kindergarten

ESSENTIAL QUESTIONS	DOMAINS AND CLUSTERS	KINDERGARTEN MATH SKILLS	VOCABULARY	PRACTICES, RESOURCES & ASSESSMENT													
<p>Sample Questions</p> <p>What are numbers?</p> <p>What is counting and how can it be used</p>	<p>Counting and Cardinality</p> <p>Know number names and count sequence</p> <p>Count to tell the number of objects</p> <p>Understand the relationship between numbers and quantities; connect counting to cardinality</p>	<p align="center">Introduced Skills</p> <table border="1"> <tr><td>Count forward beginning from a given number</td></tr> <tr><td>Read and write numbers from 0 to 20</td></tr> </table> <p align="center">Reviewed Skills</p> <table border="1"> <tr><td>Use models (i.e. number lines, drawings, manipulatives) to</td></tr> <tr><td>Count to 100 by ones and tens</td></tr> <tr><td>Skip count by 2s, 5s, 10s, 100s</td></tr> </table> <p align="center">Introduced Skills</p> <table border="1"> <tr><td>Show that the number of objects is the same regardless of</td></tr> <tr><td>Count to answer “how many”</td></tr> <tr><td>Identify the highest and lowest number</td></tr> <tr><td>Given a number, identify more than, less than, equal to, most,</td></tr> </table> <p align="center">Reviewed Skills</p> <table border="1"> <tr><td>Explain the relationship between numbers and quantities</td></tr> <tr><td>Say the number names in standard order when counting objects</td></tr> <tr><td>Pair objects and number names</td></tr> <tr><td>Explain that the last number name said tells the number of</td></tr> </table>	Count forward beginning from a given number	Read and write numbers from 0 to 20	Use models (i.e. number lines, drawings, manipulatives) to	Count to 100 by ones and tens	Skip count by 2s, 5s, 10s, 100s	Show that the number of objects is the same regardless of	Count to answer “how many”	Identify the highest and lowest number	Given a number, identify more than, less than, equal to, most,	Explain the relationship between numbers and quantities	Say the number names in standard order when counting objects	Pair objects and number names	Explain that the last number name said tells the number of	<p>RIT 156- 170 & Above</p> <ul style="list-style-type: none"> • Count • Number • Counting order • Skip count • 5 frame • 10 frame • Tens • Add/addition • Sum • Subtract • Subtraction • Difference • Half • Tallest • Before • After • Greater than • Less than • Double • Fewest • Longest • Shortest • Total • Before • Between • Dollar sign • Cent sign • Fewer • Hundred • Largest • Less 	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them 2. Reason abstractly and quantitatively 3. Construct viable arguments and critique the reasoning of others 4. Model with mathematics 5. Use appropriate tools strategically 6. Attend to precision 7. Look for and make use of structure
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<p>What is addition?</p> <p>What is subtraction?</p>	<p>Operations and Algebraic Thinking A2</p> <p>Demonstrate addition as putting together and adding to</p> <p>Demonstrate subtraction as taking apart and taking from</p> <p>Work with addition and subtraction equations</p> <p>Generate and analyze patterns and relationships</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;"></td><td>Relate counting to addition (i.e. count on 2 to add 2)</td></tr> <tr><td></td><td>Solve addition word problems</td></tr> <tr><td></td><td>Decompose numbers less than or equal to 10 (i.e. $5=2+3$ and</td></tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;"></td><td>Represent addition with objects, fingers, mental images, drawings, sounds (i.e. claps), acting out situations, verbal</td></tr> <tr><td></td><td>Add within 10 by using objects or drawings</td></tr> <tr><td></td><td>Fluently add within 5</td></tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;"></td><td>Relate counting to subtraction (i.e. count on 2 to take away 2)</td></tr> <tr><td></td><td>Solve subtraction word problems</td></tr> <tr><td></td><td>Subtract within 10 using objects and drawings</td></tr> <tr><td></td><td>Fluently subtract within 5</td></tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;"></td><td>Represent subtraction with objects, fingers, mental images, drawings, sounds (i.e. claps), acting out situations, verbal explanation, expressions or equations</td></tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;"></td><td>Explain the meaning of the equal sign</td></tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px;"></td><td>Generate a number or shape pattern that follows a given rule</td></tr> </table>		Relate counting to addition (i.e. count on 2 to add 2)		Solve addition word problems		Decompose numbers less than or equal to 10 (i.e. $5=2+3$ and		Represent addition with objects, fingers, mental images, drawings, sounds (i.e. claps), acting out situations, verbal		Add within 10 by using objects or drawings		Fluently add within 5		Relate counting to subtraction (i.e. count on 2 to take away 2)		Solve subtraction word problems		Subtract within 10 using objects and drawings		Fluently subtract within 5		Represent subtraction with objects, fingers, mental images, drawings, sounds (i.e. claps), acting out situations, verbal explanation, expressions or equations		Explain the meaning of the equal sign		Generate a number or shape pattern that follows a given rule	<ul style="list-style-type: none"> • Fives • Tens • Left • Right • Pattern • Model • Amount • Highest/lowest • Pairs • Number sentence • Digit • Place value • Slide • Flip • Turn • Estimate • Shapes • Circle • Square • Rectangle • Cone • Cube • Cylinder • Above • Below • Behind • In front of • Next to 	<p>Resources for Implementation:</p> <ul style="list-style-type: none"> • Math Centers • Guessing jar • Math journal • Question of the day • Manipulatives • Shapes • Balance scale • Collections of objects e.g. buttons, blocks, colored clips • Personal white boards <p>Assessment</p> <ul style="list-style-type: none"> • Performance Tasks • Teacher Observation • Checklists • Drawings/ Illustrations
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<p>What is base 10 and how can it be used?</p>	<p>Numbers and Operations in Base 10 -A3</p> <p>Extend the counting sequence</p> <p>Compare Numbers</p> <p>Explain and use the place value system</p> <p>Work with numbers 11-19 to gain foundation and place value</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" data-bbox="564 207 1476 261"> <tr> <td data-bbox="564 207 606 261"></td> <td data-bbox="617 207 1476 261">Compare two numbers between 1 and 10</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" data-bbox="564 358 1476 435"> <tr> <td data-bbox="564 358 606 435"></td> <td data-bbox="617 358 1476 435">Explain that the numbers 11-19 are composed of ten ones and one, two, three, four, five, six, seven, eight or nine ones.</td> </tr> </table> <table border="1" data-bbox="564 440 1476 500"> <tr> <td data-bbox="564 440 606 500"></td> <td data-bbox="617 440 1476 500">Compose and decompose numbers from 11 to 19 into ten ones and some further ones</td> </tr> </table> <table border="1" data-bbox="564 505 1476 565"> <tr> <td data-bbox="564 505 606 565"></td> <td data-bbox="617 505 1476 565">Explain that 10 can be thought of as a bundle of ten ones – called a “ten”, 100 as ten tens... etc.</td> </tr> </table> <table border="1" data-bbox="564 570 1476 708"> <tr> <td data-bbox="564 570 606 708"></td> <td data-bbox="617 570 1476 708">Explain that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones), and 100, 200, 300, etc. refer to one, two, three, etc. hundreds</td> </tr> </table>		Compare two numbers between 1 and 10		Explain that the numbers 11-19 are composed of ten ones and one, two, three, four, five, six, seven, eight or nine ones.		Compose and decompose numbers from 11 to 19 into ten ones and some further ones		Explain that 10 can be thought of as a bundle of ten ones – called a “ten”, 100 as ten tens... etc.		Explain that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones), and 100, 200, 300, etc. refer to one, two, three, etc. hundreds	<ul style="list-style-type: none"> • Half • Part • whole • Length • Width • Group • Compare • Temperature • Days of the week (Monday, Tuesday, etc.) • Months of the year (Januarys, February, March. etc.) • Hour • Graph 	
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<p>Why do we divide things into pieces?</p>	<p>Numbers and Operations Fractions – A4</p> <p>Develop understanding of fractions and numbers</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" data-bbox="564 948 1476 1032"> <tr> <td data-bbox="564 948 606 1032"></td> <td data-bbox="617 948 1476 1032">Recognize the division of an object or unit into equal parts: halves</td> </tr> </table>		Recognize the division of an object or unit into equal parts: halves										
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<p>Why do we measure things?</p> <p>How do we measure things?</p> <p>How can objects be classified/grouped?</p> <p>What is time?</p> <p>How do we tell/measure time?</p>	<p>Measurement and Data- B1 Describe and compare measurable attributes</p> <p>Classify objects and count the number of objects in each category/grouping</p> <p>Solve problems using measurement</p> <p>Time - B2 Work with time</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Describe several measurable attributes of objects (i.e. length,</td></tr> <tr><td></td><td>Compare two objects with a measurable attribute in common</td></tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Order three objects by length</td></tr> <tr><td></td><td>Classify objects into given categories</td></tr> <tr><td></td><td>Count and sort the categories of objects</td></tr> <tr><td></td><td>Describe temperature as hot, warm, cold, warmer than,</td></tr> <tr><td></td><td>Associate temperature in degrees Fahrenheit with weather</td></tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Recognize that temperature is measured in degrees</td></tr> <tr><td></td><td>Identify temperatures in degrees Celsius and Fahrenheit</td></tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Recognize a clock face</td></tr> <tr><td></td><td>Illustrate a clock face</td></tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" style="width: 100%;"> <tr><td style="width: 20px;"></td><td>Describe orientation in time: today, yesterday, tomorrow, morning (AM), afternoon (PM)</td></tr> <tr><td></td><td>Locate dates on a calendar</td></tr> <tr><td></td><td>Indicate days of the week and months of the year</td></tr> </table>		Describe several measurable attributes of objects (i.e. length,		Compare two objects with a measurable attribute in common		Order three objects by length		Classify objects into given categories		Count and sort the categories of objects		Describe temperature as hot, warm, cold, warmer than,		Associate temperature in degrees Fahrenheit with weather		Recognize that temperature is measured in degrees		Identify temperatures in degrees Celsius and Fahrenheit		Recognize a clock face		Illustrate a clock face		Describe orientation in time: today, yesterday, tomorrow, morning (AM), afternoon (PM)		Locate dates on a calendar		Indicate days of the week and months of the year		
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<p>When should we use a graph?</p> <p>What are solid objects?</p> <p>How are plane and solid objects different?</p> <p>How do you describe a 3-dimesnisonal shape?</p>	<p>Data</p> <p>Represent and interpret data</p> <p>Geometry</p> <p>Reason with shapes and their attributes</p> <p>Identify and describe shapes, squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres</p> <p>Analyze, compare, create, and compare shapes.</p>	<p style="text-align: center;">Introduced Skills</p> <table border="1" data-bbox="575 240 1482 467"> <tr> <td data-bbox="575 240 621 289"></td> <td data-bbox="621 240 1482 289">Show data with a picture graph and a bar graph</td> </tr> <tr> <td data-bbox="575 289 621 370"></td> <td data-bbox="621 289 1482 370">Solve simple put-together, take-apart and compare problems using information presented in a graph</td> </tr> <tr> <td data-bbox="575 370 621 467"></td> <td data-bbox="621 370 1482 467">Solve one- and two-step “how many more” and “how many less” problems using information presented in a graph</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" data-bbox="575 604 1482 841"> <tr> <td data-bbox="575 604 621 646"></td> <td data-bbox="621 604 1482 646">Describe objects in the environment using names of shapes</td> </tr> <tr> <td data-bbox="575 646 621 743"></td> <td data-bbox="621 646 1482 743">Correctly name shapes regardless of orientation or size (square, circle, triangle, rectangle, hexagon, cube, cone, cylinder, sphere)</td> </tr> <tr> <td data-bbox="575 743 621 792"></td> <td data-bbox="621 743 1482 792">Identify shapes as two-dimensional</td> </tr> <tr> <td data-bbox="575 792 621 841"></td> <td data-bbox="621 792 1482 841">Identify shapes as three-dimensional</td> </tr> </table> <p style="text-align: center;">Reviewed Skills</p> <table border="1" data-bbox="575 919 1482 993"> <tr> <td data-bbox="575 919 621 993"></td> <td data-bbox="621 919 1482 993">Describe the relative positions of objects (i.e. above, below, beside, in front of, behind, next to)</td> </tr> </table> <p style="text-align: center;">Introduced Skills</p> <table border="1" data-bbox="575 1062 1482 1269"> <tr> <td data-bbox="575 1062 621 1101"></td> <td data-bbox="621 1062 1482 1101">Analyze and compare two- and three-dimensional shapes</td> </tr> <tr> <td data-bbox="575 1101 621 1140"></td> <td data-bbox="621 1101 1482 1140">Build and draw shapes to possess defining attributes</td> </tr> <tr> <td data-bbox="575 1140 621 1205"></td> <td data-bbox="621 1140 1482 1205">Use informal language to describe similarities, different parts and other attributes of shapes</td> </tr> <tr> <td data-bbox="575 1205 621 1269"></td> <td data-bbox="621 1205 1482 1269">Model shapes in the world by building and drawing shapes</td> </tr> </table>		Show data with a picture graph and a bar graph		Solve simple put-together, take-apart and compare problems using information presented in a graph		Solve one- and two-step “how many more” and “how many less” problems using information presented in a graph		Describe objects in the environment using names of shapes		Correctly name shapes regardless of orientation or size (square, circle, triangle, rectangle, hexagon, cube, cone, cylinder, sphere)		Identify shapes as two-dimensional		Identify shapes as three-dimensional		Describe the relative positions of objects (i.e. above, below, beside, in front of, behind, next to)		Analyze and compare two- and three-dimensional shapes		Build and draw shapes to possess defining attributes		Use informal language to describe similarities, different parts and other attributes of shapes		Model shapes in the world by building and drawing shapes		
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