Utah Early Learning

Mathematics — Ages 3–5

Age 3

COUNTING AND CARDINALITY Counting and Cardinality includes the ability to identify numerals by name, count in sequence, use one-to-one correspondence, and describe quantities of objects counted.

1 Count to ten by ones. MATH 3 YR.1.1

2 Recognize that numbers have a known sequence (for example, “1, 2, 3, 4, 5. What comes next?”). MATH 3 YR.1.2

3 Begin to recognize the difference between letters and numbers. MATH 3 YR.1.3

4 Begin to name written numerals 0–5. MATH 3 YR.1.4

5 Begin to develop an understanding of the relationship between some numbers and quantities by using one-to-one correspondence. MATH 3 YR.1.5

6 Begin to point to and count up to five objects. MATH 3 YR.1.6

7 Begin to respond to the question “How many?”. MATH 3 YR.1.7

OPERATIONS AND ALGEBRAIC THINKING Operations and Algebraic Thinking involve identifying and manipulating simple patterns, the understanding of addition as putting together and adding to, and the understanding of subtraction as taking apart and removing from.

1 Identify simple patterns in the environment and begin to duplicate and extend simple patterns (for example, ababab). MATH 3 YR.2.5

MEASUREMENT AND DATA Measurement and Data involve the ability to describe and compare measurable attributes of objects, classify objects, and count the number of objects in each category.

1 Identify and describe measurable attributes (for example, big, small, tall, short). MATH 3 YR.3.1

2 Sort objects into given categories including color, size, shape, etc. MATH 3 YR.3.3

3 With prompting and support, compare the number of objects in each category to identify which groups contain more or less, or are the same. MATH 3 YR.3.4

GEOMETRY Geometry involves the ability to identify, describe, compare, and create shapes.

1 Match, point to, and begin to identify basic shapes by name. MATH 3 YR.4.1

2 With prompting and support, begin to identify attributes of basic two-dimensional shapes (for example, a rectangle has two long sides and two short sides). MATH 3 YR.4.4

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3 Explore shapes using a variety of media (for example, blocks, stickers, play dough/clay, art supplies). MATH 3 YR.4.5

4 Explore combining basic shapes together to represent an object (for example, use a square and a triangle to make a house). MATH 3 YR.4.6

Age 4

COUNTING AND CARDINALITY Counting and Cardinality includes the ability to identify by name, count in sequence, use one-to-one correspondence, and describe quantities of objects counted.

1 Count to 20 by ones. MATH 4 YR.1.1

2 In the sequence of 1–10, identify numbers that come before or after one another. MATH 4 YR.1.2

3 Count a number of objects from 0–10 and begin to associate them with a written numeral. MATH 4 YR.1.3

4 Name written numerals 0–10. MATH 4 YR.1.4

5 Use one-to-one correspondence when counting objects to ten. MATH 4 YR.1.5

6 When counting objects to ten, understand that the last number counted in a set tells how many. MATH 4 YR.1.6

7 Count two sets of objects up to 10 to determine which has more. MATH 4 YR.1.7

OPERATIONS AND ALGEBRAIC THINKING Operations and Algebraic Thinking involve identifying and manipulating simple patterns, the understanding of addition as putting together and adding to, and the understanding of subtraction as taking apart and removing from.

1 Understand and represent addition up to five (adding to or putting together) and subtraction (taking from or taking apart) with concrete objects, fingers, movement, and simple drawings. MATH 4 YR.2.1

2 With prompting and support, solve addition and subtraction word problems created by the teacher using up to five concrete objects to represent the problem (for example, “Bring me three blocks, now bring me two more. How many blocks do we have?”). MATH 4 YR.2.2

3 Take apart numbers less than or equal to five by using objects with different attributes (for example, 5 can be taken apart into sets of 2 blue and 3 yellow or 1 square and 4 circles). MATH 4 YR.2.3

4 Use concrete objects to make sums of 5 using quantities from 0–5. (for example, 0 and 5 make a set of 5, 2 and 3 make a set of 5.) MATH 4 YR.2.4

5 Duplicate, extend, and create simple patterns (for example, abababab). MATH 4 YR.2.5

MEASUREMENT AND DATA Measurement and Data involve the ability to describe and compare measurable attributes of objects, classify objects, and count the number of objects in each category.

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Describe objects using vocabulary specific to measurable attributes (for example, length [long/short], weight [heavy/light], size [big/small], and distance [near/far]). MATH 4 YR.3.1

2 Directly compare two objects using measurable attributes (for example, length [longer/shorter], weight [heavier/lighter], and size [bigger/smaller]). MATH 4 YR.3.2

3 Classify/sort objects into given categories (for example, color, size, shape) by specified attributes. MATH 4 YR.3.3

4 Compare the number of objects in each category to identify which groups contain more or less, or are the same. MATH 4 YR.3.4

GEOMETRY Geometry involves the ability to identify, describe, compare, and create shapes.

1 Describe objects in the environment by using names of shapes and identify the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. MATH 4 YR.4.1

2 Identify and name basic shapes regardless of their size and/or orientation (the way the object is turned or flipped). MATH 4 YR.4.2

3 Begin to explore that shapes can be two-dimensional (flat) or three-dimensional (solid). MATH 4 YR.4.3

4 Describe attributes of basic two-dimensional shapes including size, number of sides, number of corners, etc. MATH 4 YR.4.4

5 Create basic shapes using a variety of media (for example, blocks, stickers, play dough/clay, art supplies). MATH 4 YR.4.5

6 Explore combining basic shapes to create new shapes (for example, two triangles make a rhombus). MATH 4 YR.4.6