Math (MATH)

Spatial Thinking 1

Child shows increasing understanding of objects in relation to each other and how objects move in space

1 Spatial Thinking 1

Responding

E Responds physically to experiences in their immediate environment EARLIER

L Explores, responds to,and acts on objects, people, or own body movements through space LATER

Exploring

E Explores the relationship between self and objects or people in space EARLIER

L Uses trial and error to make discoveries about spatial relationships or movement of self or objects through space LATER

Building

E Takes into account spatial relationships and physical properties when exploring possibilities of fitting objects together EARLIER

M Demonstrates understanding of objects in relation to each other or their own body MIDDLE

L Demonstrates understanding of objects in relation to multiple spatial cues LATER

Integrating

E Demonstrates understanding of how an object moves in space (i.e., how objects move, rotate, turn, flip, or slide to move to a new place) EARLIER

M Demonstrates understanding about how objects can be moved and combined with other objects to create a new object that they specify in advance MIDDLE

L Creates a two-dimensional or threedimensional representation of the patterns or relationships between objects LATER

Classification 2

Child shows increasing ability to sort objects into groups according to attributes, qualities, fea or

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2 Classification 2

Responding

E Attends to people, objects, or events EARLIER

L Interacts differently with familiar people and objects than with unfamiliar people and objects LATER

Exploring

E Associates a person or object with another person or object, based on a similarity or relationship between them EARLIER

L Demonstrates understanding of the similarities of a group of objects based on one attribute orthe relationship between them LATER

Building

E Sorts objects into two groups based on one attribute, but not always accurately EARLIER

M Sorts objects accurately into more than two groups based on one attribute MIDDLE

L Sorts objects into two or more groups based on one attribute, then puts all the objects together and re-sorts the entire collection based on a different attribute LATER

Integrating

E Sorts objects into groups based on at least two attributes, sometimes sorting by one attribute and then subdividing those groups based on a second attribute EARLIER

M Sorts objects into categories by attributesthat are not immediately observable (i.e.,other than size, color, and shape) and describes the resulting categorical groups MIDDLE

L Sorts objects to gather and organize information, compares the groups of objects, and interprets the information LATER

Number and Counting 3

3 Number and Counting 3

Child shows developing understanding of number and quantity

Responding

E Notices people orobjects nearby in the environment EARLIER

L Explores one object at a time LATER

Exploring

E Attends to quantity in different situations EARLIER

L Uses number words, signs, or gestures to communicate about small quantities LATER

Building

E Demonstrates one of the following within quantities of 20: EARLIER

1 correctly uses the number sequence

2 uses one-to-one correspondence

3 uses cardinality

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M Demonstrates two ofthe following within quantities of 20: MIDDLE

1 correctly uses the number sequence

2 uses one-to-one correspondence

3 uses cardinality

L Demonstrates all three of the following within quantities of 20: LATER

1 correctly uses the number sequence

2 uses one-to-one correspondence

3 uses cardinality

Integrating

E Demonstrates all three of the following quantities with more than 20: EARLIER

1 correctly uses the number sequence

2 uses one-to-one correspondence

3 uses cardinality

M Demonstrates understanding that numbers up to 100 are composed of tens and additional ones MIDDLE

L Decomposes numbers greater than 20 into different combinations of ones, fives, and 10's LATER

Number Operations 4

4 Number Operations 4

Child shows increasing ability to add and subtract small quantities of objects

Exploring

E Demonstrates awareness of changes in quantity EARLIER

L Recognizes that single objects can be put together in groups oftwo LATER

Building

E Demonstrates understanding of quantities up to five EARLIER

M Adds to or subtracts (takes away) from quantities in familiar contexts, without determining the total quantity MIDDLE

L Solves addition and subtraction problems up to five in familiar contexts LATER

Integrating

E Solves addition and subtraction problems up to 10 in familiar contexts EARLIER

M Decomposes (breaks apart) a quantity up to 20 in more than one way MIDDLE

L Solves addition and subtraction problems up to 20 LATER

Measurement 5

5 Measurement 5

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Child shows increasing understanding of measurable properties such as size, length, weight, and capacity (volume), and how to quantify those properties

Exploring

E Explores measurable properties of objects (e.g.,size, length, weight, capacity) EARLIER

L Demonstrates awareness of the dimension of size as relevant to completing a task LATER

Building

E Describes objects in terms of measurable properties EARLIER

M Identifies differences in size, length, weight, or capacity between two objects, using comparative words (e.g., "bigger,""smaller") MIDDLE

L Orders three or more objects according to measurable properties LATER

Integrating

E Measures properties using nonstandard or standard units though units may overlap or have gaps EARLIER

M Compares two objects with a measurable property in common to see which object has"more of" or "less of" the property, and describes the difference MIDDLE

L Demonstrates understanding that a measurable property can change value depending on the unit (e.g., it will take more inches than feet to measure the samething) LATER