

KINDERGARTEN MATH FRAMEWORK

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EXPECTATIONS

MATH TOOLS

To support curriculum implementation, the Common Core recommends the use of certain math tools at each grade level. CAISL implements these recommendations. See link below:
https://www.caislisbon.org/uploaded/Curriculum_links/Math/Manipulatives_K-2.pdf

MENTAL MATH

To reinforce computational fluency, students are expected to practice mental math calculations based on grade level content on a weekly basis.

INFORMATION TECHNOLOGY EXPECTATIONS

Students will be expected to use a variety of digital tools according to grade level expectations stated in CAISL's Research and Information Technology Integration Scope and Sequence.

See link below:

https://www.caislisbon.org/uploaded/Curriculum_links/2019-2020/IT_Skills_Scope_and_Sequence_by_Grade.pdf

PERFORMANCE INDICATORS

MATH PRACTICES

Explanations of Math Practices: By the end of the year students will be expected to problem solve, reason mathematically, and communicate efficiently according to grade level expectations. See link below:

https://www.caislisbon.org/uploaded/Curriculum_links/Math/Math_Practice_Progressions_K-5.pdf

PROBLEM SOLVING

Make sense of problems and persevere in solving them

Look for and make use of structure (Deductive Reasoning)

Look for and express regularity in repeated reasoning (Inductive Reasoning)

MATHEMATICAL REASONING, COMMUNICATION AND MODELING

Reason abstractly and quantitatively

Construct viable arguments and critique the reasoning of others

Model with mathematics

Use appropriate tools strategically

Attend to precision

MATH CONCEPTS

COUNTING AND CARDINALITY

Count to 100 by ones and by tens. DOK 1 E

Count forward beginning from a given number within the known sequence (instead of having to begin at 1). DOK 1, 2 E

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). DOK 1 E

Understand the relationship between numbers and quantities; connect counting to cardinality. DOK 2 E

Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. DOK 2 E

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. DOK 2 E

Compare two numbers between 1 and 10 presented as written numerals. DOK 1, 2 E

OPERATIONS AND ALGEBRAIC THINKING

Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations. DOK 2

Solve addition and subtraction word problems and add and subtract within 10. DOK 2

Decompose numbers less than or equal to 10 into pairs in more than one way. DOK 2, 3

For any number from 1 to 9, find the number that makes 10 when added to the given number.

DOK 2

Fluently add and subtract within 5. DOK 1 E

NUMBER AND OPERATIONS IN BASE TEN

Compose and decompose numbers from 11 to 19 into ten ones and some further ones, and record each composition or decomposition by a drawing or equation. DOK 2

MEASUREMENT AND DATA

Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. DOK 2

Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute and describe the difference. DOK 2

Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. DOK 1, 2

GEOMETRY

Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*. DOK 1, 2 E

Correctly name shapes regardless of their orientations or overall size. DOK 1 E

Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). DOK 1 E

Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and other attributes. DOK 2, 3

Model shapes in the world by building shapes from components and drawing shapes. DOK 2, 3

Compose simple shapes to form larger shapes. DOK 2, 3

FURTHER CURRICULAR EXPECTATIONS

For the Performance Indicator (Counting and Cardinality):

Understand the relationship between numbers and quantities; connect counting to cardinality.

- When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- Understand 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.
- Understand that each successive number name refers to a quantity that is one larger.