



Math Curriculum

Children's House - Kindergarten

2.1 Numbers and Operations.

Expectations for Students

(A) Counting & Cardinality

CC.2.1 K.A.1 Know number names and write and recite the count sequence.

- Count to 100.
- Count forward beginning from a given number within a known sequence (instead of having to begin at 1).
- Recognize Numerals 0 - 100.
- Represent a number of objects with a written numeral 0–100.
- Connect the quantity to a written symbol
- Recognize the written word to the symbol.
- Ability to self correct quantity and symbol.
- Ability to count by 2's, 5's, and 10's to 100.

CC.2.1 K.A.2 Apply one-to-one correspondence to count the number of objects.

- Use one-to-one correspondence when counting to 20.
- Understand each successive number name refers to a quantity that is one larger when added to the given number.
- Solve addition and subtraction word problems, and add and subtract within 10, by using objects or drawings to represent the problems.
- Use concrete materials to linear count to 1- 1,000.
- Ability to self correct.

CC.2.1 K.A.3 Apply the concept of magnitude to compare numbers and quantities.

- Identify whether the number of objects or number symbols in one group is greater than, less than, or equal to the number of objects or number symbols in another group.
- Use clear and precise language when describing greater than, less than, and equal to.
- Identify and understand odd and even using concrete objects.

(B) Numbers & Operations in Base Ten

CC.2.1 K.B.1 Use place-value to compose and decompose numbers.

- Compose and decompose numbers by units, tens, hundreds, and thousands by using objects or number symbols.
- Use clear and precise language to describe place value.
- Continually check work by asking questions for the understanding of composed numbers.

2.2 Algebraic Concepts

Expectations for Students

(A) Operations and Algebraic Thinking

CC.2.2 K.A.1 Extend the concepts of putting together and taking apart to add, multiply, subtract, and divide.

- Represent addition, multiplication, subtraction, and division using concrete materials.
- Find the number that makes 10, for any number from 1 to 9, when added to the given number.
- Solve addition, multiplication, and subtraction word problems, and add, multiply, and subtract by using objects.
- Begin to discern a pattern or structure in equations of addition, multiplication, and subtraction.
- Use a variety of concrete materials to solve addition, multiplication, subtraction, and division mathematical equations.

2.3 Geometry

Expectations for Students

(A) Geometry

CC.2.3 K.A.1 Identify and describe two and three dimensional shapes.

- Identify shapes as two-dimensional or three-dimensional.
- Name shapes regardless of their orientations or overall size.
- Use simple shapes to compose larger shapes.
- Compare two representations side-by side and explain their connections.
- Use clear and precise language in discussions with others and in own reasoning.

CC. 2.3 K.A.2 Analyze, compare, create, and compose two- and three dimensional shapes.

- Describe objects in the environment using names of shapes.
- Describe the relative positions of objects using appropriate terms. (e.g., above, below, beside, in front, behind, next to)
- 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.
- Model shapes in the world by building shapes.
- Use clear and precise language when describing two and three dimensional shapes.

2.4 Measurement, Data, and Probability

Expectations for Students

(A) Measurement and Data

CC.2.4 K.A.1 Describe and compare attributes of length, area, weight, and capacity of everyday objects.

- Describe measurable attributes of objects. (e.g., length, weight, area, or capacity)
- Describe several measurable attributes of a single object.
- Compare two objects with a measurable attribute in common.
- Use a variety of concrete tools (eg, ruler, yard stick, tape measurer), to measure attributes.

CC.2.4 K.A.4 Classify objects and count the number of objects in each category.

- Classify up to 20 objects into categories using one attribute.
 - Display the number of objects in each category.
 - Count and compare the quantities of each category.
 - Describe the difference.
- Ask questions about similarities and differences.

Mathematical Habits of the Mind

Make sense of problems and persevere in solving them

Model with mathematics

Use appropriate tools

Look for and make use of structure

Activities and Experiences

Provide a variety of concrete materials.

Provide and incorporate opportunities to count, read, and write numbers.

Demonstrate solving addition, multiplication, subtraction, and division problems using concrete materials.

Model the connection of the quantity to the written symbol.

Model and incorporate appropriate proper language and vocabulary.

Provide a variety of concrete materials to explore and create shapes.

Materials and Resources

Red and blue number rods

Sandpaper numbers

Spindle boxes

Cards and counters

Memory game of numbers

Golden bead material

Teen board

Ten board

Hundred board

Bead stair

Bead cabinet

Stamp game

Colored beads

Addition and subtraction strip boards

Addition, multiplication, and subtraction

Finger boards

Small and large bead frames

Multiplication bead box

Multiplication and division bead boards

Positive and negative snake game

Geometric cabinet

Geometric solids

Triangle construction boxes

Nomenclature cards for materials

Assessments

Observation

Montessori checklist

Albanesi A assessment