



## Math Curriculum

### Children's House - Pre Kindergarten

#### 2.1 Numbers and Operations

##### Expectations for Students

##### **(A) Counting & Cardinality**

CC.2.1 PK.A.1 Know number names and the count sequence.

- Name numerals up to 100 +.
- Rote count up to 100 +.
- Match a numeral to a set of 0–10 objects.
- Represent a number of objects with a written numeral 0–10.
- Differentiate numerals from letters.
- Counts on when a specific number is provided.

CC.2.1 PK.A.2 Count to tell the number of objects.

- Use one-to-one correspondence when counting to 10.
- State the total number of objects counted, demonstrating understanding that the last number named tells the number of objects counted.
- Use counting and numbers as part of play and as a means for determining quantity.

CC.2.1 PK.A.3 Compare numbers.

- Create sets of objects with same and different amounts.
- Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group up to 10.
- Compare two numbers between 1 and 100 when presented as written numerals.
- Practice use of mathematical vocabulary to compare numbers of objects

#### 2.2 Algebraic Concepts

##### Expectations for Students

##### **(A) Operations and Algebraic Thinking**

CC.2.2 PK.A.1 Understand addition as putting together and adding to, multiplication is another way to add, and understand subtraction as taking apart and taking from.

- Represent addition, multiplication, and subtraction with concrete materials.
- Classify objects by same attributes.

## 2.3 Geometry

### Expectations for Students

#### **(A) Geometry**

CC.2.3 K.A.1 Identify and describe shapes.

- Describe objects in the environment using names of shapes.
- Recognize and describe the attributes of geometric figures.
- Describe the relative positions of objects using terms such as above, below, beside, in front of, behind, and next to.
- Identify shapes as two-dimensional (lying in a plane, “flat”) or three dimensional (solid)

CC.2.3 PK.A.2 Analyze, compare, create, and compose shapes.

- 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 from components and drawing shapes.
- Use geoboards to create shapes with rubber bands.
- Use simple shapes to compose larger shapes.

## 2.4 Measurement, Data, and Probability

### Expectations for Students

#### **(A) Measurement and Data**

CC.2.4 PK.A.1 Describe and compare measurable attributes of length and weights of everyday objects.

- Recognize attributes of objects that can be measured.
- Measure objects using non-standard items. (e.g., hands, shoes, yarn, blocks)
- Practice use of standard measurement tools.
- Practice using measurement vocabulary.
- Sort and order by one attribute.
- Use ordinal number words to describe the position of objects (first, second, last).
- Compare two objects with a measurable attribute in common to see which object has “more of”/“less of” the attribute and describe the difference

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

- Classify up to 10 objects using one attribute into categories.
- Display the number of objects in each category.
- Count and compare the quantities of each category to describe which category has “more of”/“less of” the attribute.

### 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 bead boards

Positive and negative snake game

Geometric cabinet

Geometric solids

Triangle construction boxes

Nomenclature cards for the appropriate materials

### Assessment

Observation

Montessori checklist