YOUR Elementary School
Kindergarten Mathematics Curriculum Overview

Introduction

In Kindergarten, the focus of mathematics content will be on two critical areas:

1. **Representing and comparing numbers**

   Students will fluently use and understand several different representations of numbers, including words ("three"), symbols ("3"), and quantities in pictures (three dots on a die or three dogs in a picture)

   Students will compare numbers, both in picture form and in symbol form.

   Students will use objects to show putting together (to find the total) and taking apart (to separate numbers into parts).

   Students will count objects to tell how many there are, and then also be able to tell how many there would be if, for example, one more were added or one were taken away.

2. **Describing shapes and space**

   Students will describe objects around them using geometric vocabulary.

   Students will identify and describe 2-dimensional shapes such as circles, triangles, squares, rectangles, and hexagons.

   Students will identify and describe 3-dimensional shapes such as cubes, cones, cylinders, and spheres.

   Students will use and understand position words (for example, "in front of," "behind," "next to," "above," "below," etc.) to describe locations.

Quarterly Overview

While many of the mathematics topics are related and will be integrated throughout the school year, mathematics lesson topics will generally follow the schedule outlined below:

First Quarter

- Orally count up to 100
- Sort and count objects
- Use position words to describe locations of objects
- Recognizd and analyzd 2-dimensional shapes

Second Quarter

- Recognize number symbols
- Compare numbers

Third Quarter

- Write number symbols
- Solve addition and subtraction word problems
- Compose and decompose teens into tens and ones

Fourth Quarter

- Fluently add and subtract up to 5
- Recognize and analyze 3-dimensional shapes

Eight Mathematical Practices

Mathematics class is about much more than just "getting the right answer." The goal is not to turn students into human computers. Rather, the goal is to help shape students (eventually) into fully-functioning adults who can think critically, communicate effectively, use resources wisely, and problem-solve creatively. The eight Mathematical Practices are "habits of mind" that help students form a deep understanding of mathematics concepts, but also extend far beyond the walls of the math classroom.

Therefore, in our math class, your student will have many opportunities to:

1. Be a good problem-solver, and not give up when something doesn't work perfectly the first time.
2. Think about problems in lots of different ways.
3. Communicate effectively to show and explain their thinking and learn from the way others think.
4. Understand how the concepts they learn relate to the world around them.
5. Use mathematical tools skillfully and wisely to help in the problem-solving process.
6. Pay attention to important details, but also keep the big picture in mind.
7. Analyze complicated problems and break them down into simpler parts.
8. Identify helpful patterns and find effective shortcuts to be more efficient in problem-solving.

Students who enjoy and are successful in mathematics are those who embrace being creative problem-solvers and who approach mathematics with a sense of curiosity and adventure.

How to Support Student Learning at Home

You can help your student by reinforcing mathematical concepts at home. Sometimes that might mean going through flash cards for a few minutes a day, but the best mathematical support happens by highlighting the math that is already around you.

Play games that use dice. Have your student count the number on each die whenever someone rolls.	**Play games that use spinners with numbers. Have your student tell what number each spin lands on.**	**Play card games.**
Play WAR (card game). Have your student compare the numbers on the cards in order to decide who wins each play.	**Ask your student to help you by counting things that you "need." (Could you please count out 13 paperclips for me?)**	**Ask your student to help with simple calculations. (How many plates are on the table? How many more do we need?)**
Count Halloween candy (or M&Ms or Skittles or Starburst, etc.) before eating.	**Sort Halloween candy into groups (by color or type or number of pieces in the package, etc.)**	**Make a graph of Halloween candy based on the way you sorted it.**
Stack Dixie cups into a pyramid shape, and count how many you can stack.	**Count together by 1's or 2's. Take turns saying the next number.**	**Play a game of Memory.**
Play "Copycat" – One person says a string of numbers & the other repeats them (or says them backwards).	**Play "Higher or Lower" – One person thinks of a number from 1 to 10. The other guesses & gets "higher" or "lower" hints along the way.**	**Have your child cut a cookie (or tell you where to cut it) in order to share it fairly.**

Be relaxed and positive in these interactions, and your student will learn to relax and think positively about mathematics. Don't put too much emphasis on speed or correct answers. Instead, ask questions about how they thought about the topic and share your thoughts. Try to think about things in different ways. (And don't be surprised if you start to enjoy doing math with them too!)