YOUR Elementary School
3rd Grade Mathematics Curriculum Overview

Introduction

In Grade 3, the focus of mathematics content will be on four critical areas:

1. **Multiplying and dividing within 100**

   Students will understand different ways of thinking about the meaning of multiplication and division.

   Students will be able to perform multiplication and division problems fluently using a variety of calculation strategies.

   Students will use the relationship between multiplication and division to help them understand and solve problems.

2. **Understanding and "building" fractions**

   Students will use unit fractions to "build" other fractions. For example, to build $\frac{3}{4}$, students can use three pieces that are each $\frac{1}{4}$ in size.

   Students will understand that fractions are relative to the whole unit. For example, if a small bucket is half-way full of paint, and that paint is poured into a large bucket, it might only fill the large bucket one-third of the way full. The fraction that the paint represents changes when the size of the "whole unit" bucket changes.

   Students will master several addition and subtraction strategies so that they can select the best strategy for mental calculations as well as paper and pencil calculations.

3. **Using arrays to find area of rectangles**

   Students will break up rectangles into unit-sized squares to find the area of the rectangle.

   Students will connect area with the concept of multiplication by seeing that rectangles can be broken up into rows of squares.

4. **Describing and analyzing two-dimensional shapes**

   Students will describe and analyze shapes by examining sides and angles.

   Students will define, classify, and compare shapes based upon side and angle observations.

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

- Extend addition, subtraction, and place value understanding from 2nd grade
- Refine addition strategies as lead-up to multiplication concepts

Second Quarter

- Interpret multiplication concepts in a variety of ways and fluently multiply within 100
- Apply properties of multiplication to solve problems

Third Quarter

- Find perimeter and area of rectangles and understand rectangle area as a multiplication problem
- Interpret division concepts in a variety of ways and fluently divide within 100

Fourth Quarter

- Understand and represent fractions in a variety of ways
- Analyze and classify shapes by investigating sides and angles
- Tell time to the nearest minute
- Solve problems involving elapsed time

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.

Have your student practice reading a (non-digital) clock to the nearest minute. Ask what time it will be in 45 minutes or in 3 hours.	**Make a recipe together and talk about fractions of a cup of ingredients.**	**Count together by 2's, 3's, 4's, 5's, 6's, 7's, 8's or 9's. Take turns saying the next number.**
When you find that you need to multiply numbers, talk through how to do the calculation together.	**Play card games and Monopoly.**	**Ask "how to share" questions… How would you share this candy with 2 friends? 3 friends? 5 friends?**
Look at a graph or chart from a news article and talk together about what it means.	**Give your student an allowance or pay them for chores. Talk about pay rates, saving money, and spending money.**	**When you see something tall, ask "How tall do you think that is?" Then discuss your ideas.**
Driving in the car, guess what time it will be when you get where you're going. Track progress along the way & see whose guess is closest.	**Have your student help navigate around town. And be willing to go on an adventure by taking a "wrong" turn every once in awhile.**	**Stack Dixie cups into a pyramid shape, and count how many you can stack. Estimate how many cups it would take to reach the ceiling.**
Play "Guess My Number" – One person thinks of a number 1 to 100 and gives clues (it's odd, it's greater than 42, it is divisible by 9).	**Play "What's Next" – One person starts a counting pattern (like 4, 7, 10, 13…) and the other person guesses the next number in the pattern.**	**Play "Would You Rather" – ask questions like, "Would you rather have this smaller cookie all to yourself or share this bigger cookie with me?"**

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!)