



YOUR Elementary School

2nd Grade Mathematics Curriculum Overview

Introduction

In Grade 2, the focus of mathematics content will be on four critical areas:

1. Extending understanding of our base-ten number system

Students will understand multi-digit numbers (up to 1000), recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (for example, 853 is 8 hundreds + 5 tens + 3 ones).

Students will understand how numbers are related to one another and will be able to use number relationships to solve mathematical problems. For example, students will be able to compare numbers and to count in fives, tens, and hundreds.

2. Building fluency with addition and subtraction

Students will develop fluency with addition and subtraction within 100.

Students will use their understanding of place value and number relationships to add, subtract, and solve mathematical problems using numbers up to 1000.

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. Measuring with standard units – like inches, yards, meters, and centimeters

Students will use rulers and other tools to measure and compare objects.

Students will analyze relationships between measurement units in order to recognize that the smaller the unit, the more units they need to cover a given length.

4. Describing and analyzing shapes

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

Students will combine shapes to make other shapes.

Through building, drawing, and analyzing two- and three-dimensional shapes, students will develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

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 and subtraction strategies from 1st grade
- Investigate place value up to 1000

Second Quarter

- Use several strategies for adding and subtracting 2-digit and 3-digit numbers
- Fluently add and subtract numbers up to 20
- Solve word problems involving addition and subtraction

Third Quarter

- Organize data in line plots, picture graphs, and bar graphs
- Interpret data from graphs in order to answer questions and solve problems
- Estimate and measure lengths of objects using appropriate tools

Fourth Quarter

- Solve problems involving money
- Analyze shapes by investigating sides and angles
- Break shapes up into equal sections or pieces
- Tell time to the nearest five minutes

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.	Make a recipe together and talk about fractions of a cup of ingredients.	Ask your student to guess how many inches long something is and then measure it together to find out.
When you find that you need to add or subtract numbers, talk through how to do the calculation together.	Play “Higher or Lower” – One person thinks of a number from 1 to 100. The other guesses & gets “higher” or “lower” hints along the way.	Play “What’s Next” – One person starts a counting pattern (like 10, 8, 6...) and the other person guesses the next number in the pattern.
Count or sort and compare Halloween candy (or M&Ms or Skittles or Starburst, etc.) before eating.	Make a graph of Halloween candy based on the way you sorted it.	Count together by 2’s, 3’s, 5’s, or 10’s. Take turns saying the next number.
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.	Buy groceries with cash. Have your student be in charge of the money. Count it together.
Play Monopoly or Scrabble or card games.	A regular Hershey bar has 12 pieces. Ask your student how to share it between 2 people. (Or 3. Or 4. Or 6. Or 5.)	Give your student some coins, have them count the value.

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!)