

Course Description:

Mathematics 4th Grade (1 of 2) addresses concepts related to place value, operations with whole numbers and decimals, and data. The instruction covers identifying and using place value for calculations and rounding whole numbers; adding, subtracting, multiplying, and dividing multi-digit whole numbers; adding and subtracting decimals; using operations to solve word problems; representing and interpreting data; and applying mathematical processes and understanding to solve word problems.

Course Objectives:

- Interpret and explain the value of each place in a number as 10 times the value to the right and one-tenth the value to the left.
- Read, write, order, plot, compare, and round whole numbers and decimals to the hundredths.
- Add and subtract whole numbers and decimals.
- Round numbers up to the hundred thousands with friendly numbers.
- Calculate multiplication and division facts.
- List all factor pairs for a whole number, from 0 to 144.
- Find if a number from 0 to 144 is a multiple of a single-digit number and if the number is prime, composite, or neither.
- Multiply whole numbers in different ways.
- Multiply and divide to solve word problems involving multiplicative comparison.
- Solve division problems with up to four-digit dividends and one-digit divisors.
- Share and explain math ideas.
- Show a problem using an input-output table and numerical expression.
- Make a whole number or shape pattern that follows a given rule.
- Write an equation to find an unknown number.
- Show multi-step problems with strip diagrams and equation, using a letter to stand for the unknown number.
- Solve multi-step word problems using the four operations.
- Find the mode, median, or range to explain numerical data.
- Use a problem-solving model that has all the following: analyzing given information, figuring out a way to solve the problem, finding the answer, justifying the answer, figuring out if the model was good, and figuring out if the answer was reasonable.
- Make and use things to organize, record, and explain math ideas.

Required Materials:

Required:

- crayons or colored pencils
- paper
- pencils
- printables (see Course Syllabus for link)
- printer and printer paper (for printables)
- ruler

Course Overview:

This course is made up of 12 units. Each unit has five lessons. Lessons are made of up activities that include the following types of learning:

- **Warm-Ups** allow for practice of skills or concepts taught in previous lessons. These are graded activities.
- **Direct Instructions** provide modeling of new skills and concepts. These are not graded activities.
- **Guided Practices** allow for practice of a skill with support. These are graded activities only on a completion basis.
- **Independent Practices** allow for practice of a skill without support. These are graded activities.
- **Checkpoints** test mastery of skills from lessons. These are graded activities.
- **Unit Reviews** allow for practice of skills prior to taking unit exams. These are not graded activities.
- **Unit Exams** test mastery of skills from the unit. These are graded activities.
- **Projects** provide an opportunity for practice of more complex skills across several activities or lessons within a unit. These activities require a final graded submission.