



Sedalia School District #200

Level: Elementary

Subject Area: Math

Unit/Grade: Unit 1---Fourth Grade

Essential Questions:

- What is the appropriate degree of precision for this problem?
- In what situations would rounding numbers be useful?
- How does place value support addition and subtraction?

Pacing/ Calendar

Standards

Big Idea

Unit Objectives

Chapter 1
(Aug. 29-
Sept. 12)

Chapter 2
(Sept. 13-
Sept. 30)

22 days

4.NBT.A.2 - Read, write and identify multi-digit whole numbers up to one million using number names, base ten numerals and expanded form

4.NBT.A.3 - Compare two multi-digit numbers using the symbols $>$, $=$ or $<$, and justify the solution

4.NBT.A.4 - Understand that in a multi-digit whole number, a digit represent 10 times what it would represents in the place to its right

4.RA.B.4 - Recognize that a whole number is a multiple of each of its factors and find the multiples for a given whole number

4.RA.B.5 - Determine if a whole number within 100 is composite or prime, and find all factor pairs for whole numbers within 100

4.NBT.A.1- *Round multi-digit whole numbers to any place.*

4.NBT.A.5 - *Demonstrate fluency with addition and subtraction of whole numbers.*

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Chapter 1: Working with Whole Numbers

Chapter 1 is a critical chapter. The chapter focuses on quantities to 100,000, but MLS expects understanding to 1,000,000, which can be added. Note that students are expected to be proficient renaming numbers (1200 is 12 hundreds or 120 tens or 1200 ones). Students use place value chips instead of base ten proportional materials. These are more abstract. Expanded notation and comparing are emphasized with the place value models and charts.

Chapter 2: Estimation and Number Theory

- In chapter 2, students address estimation for finding factor pairs as well as recognizing prime and composite numbers. If students need more help on multiplication facts, use simplifier products to get all these ideas. While least common multiple is not essential yet, this can be introduced at this point even if not all students master it. Estimation should be practiced all year. Front end estimation is introduced as just another way to estimate; can be useful when numbers are large.

Chapter 1: Working with Whole Numbers-

- Write numbers to 100,000 in standard form, word form, and expanded form.
- Compare and order numbers to 100,000.
- Add and subtract whole numbers to 100,000.

Chapter 2: Estimation and Number Theory

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- Round numbers to estimate sums, differences, products, and quotients.
- Find the common factors and greatest common factor of two whole numbers.



Sedalia School District #200

Level: Elementary

Subject Area: Math

Unit/Grade: Unit 2---Fourth Grade

Essential Questions:

- How can I use my knowledge of multiplication and division to solve problems or answer questions?
- Why do I analyze data?
- How do I decide if my approach makes sense?

Pacing/ Calendar

Standards

Big Idea

Unit Objectives

Chapter 3
(Oct. 1-
Oct. 22)

Chapter 4
(Oct. 23-
Nov. 4)

Chapter 5
(Nov. 5-
Nov. 11)

28 days

4.RA.A.1 - Multiply or divide to solve problems involving a multiplicative comparison

4.RA.A.2 - Solve multi-step whole number problems involving the four operations and variables and using estimation to interpret the reasonableness of the answer

4.RA.A.3 - Solve whole number division problems involving variables in which remainders need to be interpreted, and justify the solution

4.DS.A.1 - Create a frequency table and/or line plot to display measurement data

4.DS.A.2 - Solve problems involving addition and subtraction by using information presented in a data display

4.DS.A.3 - Analyze the data in a frequency table, line plot, bar graph or picture graph

4.NBT.A.6- *Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, and justify the solution.*

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Chapter 3: Whole Numbers: Multiplication and Division - Emphasis for chapter 3 is on building from concrete and pictorial and connecting this to how we notate it symbolically. Students will work with base ten blocks, place value chips, and place value charts.

Chapter 4: Tables and Line Graphs - The MLS have three standards that are hit in this chapter. DS.A.1, DS.A.2, DS.A.3. Comparing, analyzing, and classifying thinking skills are applied to see patterns and trends.

Chapter 5: Data and Probability - The expectation of the student is to analyze the data in a frequency table, line plot, bar graph or picture graph to include determining the mode and range.

Chapter 3: Whole Numbers: Multiplication and Division-

- Use multiple methods to multiply up to 4-digit numbers by a 1-digit numbers, with or without regrouping
- Use multiple methods to divide up to a 4-digit number by a 1-digit number.
- Solve multi-step real-world problem

Chapter 4: Tables and Line Graphs-

- Collect, organize, make, and interpret tables and line graphs

Chapter 5: Data and Probability-

- Find the mean, median, mode and range of a set of data
- Make and interpret line plots



Sedalia School District #200

Level: Elementary

Subject Area: Math

Unit/Grade: Unit 3---Fourth Grade

Essential Questions:

- How do I know if two fractions are equal?
- How do models help me in the understanding of fractions?
- How do whole numbers and fractions relate and compare to one another?

Pacing/ Calendar	Standards	Big Idea	Unit Objectives
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Chapter 6
(Nov. 12-
Dec. 17)

23 days

4.NF.A.2 - Recognize and generate equivalent fractions
4.NF.A.3 - Compare two fractions using the symbols $>$, $=$ or $<$, and justify the solution
4.NF.B.4 - Understand addition and subtraction of fractions as joining/composing and separating/decomposing parts referring to the same whole
4.NF.B.6 - Solve problems involving adding and subtracting fractions and mixed numbers with like denominators
4.NF.B.7 - Apply and extend previous understandings of multiplication to multiply a fraction by a whole number
4.NF.B.8 - Solve problems involving multiplication of a fraction by a whole number

4.NF.B.5 - *Decompose a fraction into a sum of fractions with the same denominator and record each decomposition with an equation and justification*

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Chapter 6: Fractions and Mixed Numbers-
Chapter 6 is a critical chapter! Students need to recognize and generate equivalent fractions fluently. Chapter 6 the concept of equivalent fractions (emphasis on concrete and pictorial). Note that adding and subtracting unlike fractions is not a CCSS for grade 4. However, it is expected that as students are very comfortable generating equivalent fractions, therefore, they will be able to add and subtract simple unlike fractions.

Chapter 6: Fractions and Mixed Numbers

- Find equivalent fractions.
- Subtract and add unlike fractions.
- Draw models to represent fractions and mixed numbers.



Sedalia School District #200

Level: Elementary

Subject Area: Math

Unit/Grade: Unit 4---Fourth Grade

Essential Questions:

- How are decimals a part of the base-ten number system?
- What are the parts, if that's the whole?
- What's the whole if that's the part?

Pacing/ Calendar

Standards

Big Idea

Unit Objectives

Chapter 7
(Dec. 18-
Jan. 23)

Chapter 8
(Jan. 24-
Jan. 30)

20 days

4.NF.C.9 - Use decimal notation for fractions with denominators of 10 or 100
4.NF.C.10 - Understand that fractions and decimals are equivalent representations of the same quantity
4.NF.C.11 - Read, write and identify decimals to the hundredths place using number names, base ten numerals and expanded form
4.NF.C.12 - Compare two decimals to the hundredths place using the symbols $>$, $=$ or $<$, and justify the solution
4.RA.C.6 - Generate a number pattern that follow a given rule
4.RA.C.7 - Use words or mathematical symbols to express a rule for a given pattern
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Chapter 7: Decimals - This is another critical chapter. Extra days have been added in for this chapter. Assigning value to unlabeled marks on the number lines can be a challenge. Use place value chips, decimal place value charts, and base ten blocks within this chapter; again moving from concrete to pictorial to abstract.

Chapter 8: Addition and Subtraction with Decimals - Extra days have been added to chapter 8. Students may struggle with lining up the decimals when adding and subtracting. Use place value chips, decimal place value charts, and base ten blocks within this chapter, again moving from concrete to pictorial to abstract.

Chapter 7: Decimals-

- Recognize, compare, and round decimals.
- Read and write decimals
- Interpret and represent decimal models.

Chapter 8: Addition and Subtraction with Decimals-

- Add and subtract decimals.
- Solve real-world problems involving addition and subtractions of decimals.



Sedalia School District #200

Level: Elementary

Subject Area: Math

Unit/Grade: Unit 5---Fourth Grade

Essential Questions:

- How can mathematics be used to measure, model, and calculate change?
- How are spatial relationships, including, shape and dimensions, used to draw, construct, model and represent real situations or solve problems?
- What are ways to category shapes?

Pacing/ Calendar	Standards	Big Idea	Unit Objectives
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Chapter 9
(Jan. 31-
Feb. 19)

4.GM.B.4 - Identify and estimate angles and their measure

4.GM.B.5 - Draw and measure angles in whole-number degrees using a protractor

4.GM.A.1 - Draw and identify points, lines, line segments, rays, angles, perpendicular lines and parallel lines

4.GM.A.2 - Classify two-dimensional shapes by their sides and/or angles

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Chapter 10
(Feb. 20-
Mar. 3)

Chapter 11
(Mar. 4-
Mar. 13)

28 days

Chapter 9: Angles - For this chapter, students will need additional practice measuring angles with protractors. Measuring angles is a MLS. Emphasize that an angle is 1/360 of a circle, a measure of turn. This chapter can be completed in fewer days,

Chapter 10: Perpendicular and Parallel Line Segments - Calls on students to draw and recognize parallel and perpendicular lines. This is a short chapter and can be completed fairly quickly. While not explicitly MLS, it does help with subsequent chapters.

Chapter 11: Squares and Rectangles - MLS calls on students to classify shapes by properties of their lines and angles. In this chapter, students work with squares and rectangles, and find unknown angle and side measures of squares and rectangles to develop their logical thinking. MLS includes triangles in this discussion and they can be added to the lesson.

Chapter 9: Angles-

- Estimate and measure angles with a protractor.
- Solve real-world problems by finding unknown angle measures.

Chapter 10: Perpendicular and Parallel Line Segments-

- Draw perpendicular and parallel line segments.
- Identify horizontal and vertical lines.

Chapter 11: Squares and Rectangles-

- Understand and apply properties of squares and rectangles.
- Find unknown side lengths of squares and rectangles.



Sedalia School District #200

Level: Elementary

Subject Area: Math

Unit/Grade: Unit 6---Fourth Grade

Essential Questions:

- What degree of precision is needed in measurement?
- What type of problem is this, area or perimeter?
- What tools should I use here to be more efficient and effective?

Pacing/ Calendar	Standards	Big Idea	Unit Objectives
Chapter 13 (Mar. 23- Apr. 9) Chapter 12 (Apr. 14- Apr. 22) Chapter 14 ONLY OPENER and 14.1 (Apr. 23- Apr. 27) MAP Testing Chapter 14 REST OF CHAPTER (May 11- May 21) 24 days	4.GM.C.7 - Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects and money 4.GM.C.8 - Apply the area and perimeter formulas for rectangles to solve problems 4.GM.C.6 - <i>Know relative sizes of measurement units within one system of units; Convert measurements in a larger unit in terms of a smaller unit</i> 4.GM.A.3 - <i>Construct lines of symmetry for a two-dimensional figure</i> Missouri Learning Standards Show Me Standards	Chapter 12: Conversion of Measurement - Chapter 12 is a critical chapter. Do chapter opener, 12.1-12.2. The problem solving in both 12.3 and 12.4 can be challenging, but it is an excellent vehicle for students to see that problem solving involving visualization is very important. Chapter 13: Area and Perimeter - This is another important chapter. Before starting, you may want to read through grade 3, chapter 19 to see what skills are expected for entry into this chapter, and to plan accordingly. Know that both 13.3 and 13.4 may be difficult for your students. Chapter 14: Symmetry - Note that the MLS only addresses line symmetry for grade 4. Rotational symmetry will be a completely new skill that students can be exposed to, but do not need to master. Line symmetry needs to be covered before MAP testing. Lesson 14.1 (2 days) is needed before MAP testing.	Chapter 12: Conversion of Measurement- • Understand the relative sizes or measurement units. • Convert metric and customary units of length, weight, mass, and volume. • Use the four operations to solve real-world measurement problems. Chapter 13: Area and Perimeter- • Find the area and perimeter of squares and rectangles. • Solve real-world situations using area and perimeter. Chapter 14: Symmetry- • Identify a line of symmetry. • Create symmetric patterns.