

Rockwall ISD

4th Grade Math Parent Guide

	1 st Grading Period	2 nd Grading Period	3 rd Grading Period	4 th Grading Period
Process TEKS <i>(How we <u>do</u> the math)</i>	<p>A Apply mathematics to problems arising in everyday life, society, & the workplace</p> <p>B Use a problem solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, & evaluating the problem-solving process & the reasonableness of the solution</p> <p>C Select tools, including real objects, manipulatives, paper & pencil, & technology as appropriate, & techniques, including mental math, estimation, & number sense as appropriate, to solve problems</p> <p>D Communicate mathematical ideas, reasoning, & their implications using multiple representations, including symbols, diagrams, graphs, & language as appropriate</p> <p>E Create & use representations to organize, record, & communicate mathematical ideas</p> <p>F Analyze mathematical relationships to connect & communicate mathematical ideas</p> <p>G Display, explain, & justify mathematical ideas & arguments using precise mathematical language in written or oral communication</p>			
Units	<p>Unit 1: <i>Place Value & Operations with Whole Numbers & Decimals</i> 4.2ABCDEFH, 4.4ABDGH, 4.5ABCD, 4.10B</p> <p>Unit 2: <i>Multiplication & Division of Whole Numbers</i> 4.4BCDEFGH, 4.5ABCD, 4.10A</p>	<p>Unit 2: <i>Multiplication & Division of Whole Numbers (continued)</i> 4.4BCDEFGH, 4.5ABCD, 4.10A</p> <p>Unit 3: <i>Fractional & Decimal Relations with Data</i> 4.2EFGH, 4.3ABCDEFG, 4.4A, 4.5B, 4.9AB, 4.10CDE</p>	<p>Unit 3: <i>Fractional & Decimal Relations with Data Representations (continued)</i> 4.2EFGH, 4.3ABCDEFG, 4.4A, 4.5B, 4.9AB, 4.10CDE</p> <p>Unit 4: <i>Measurement Applications</i> 4.5CD, 4.8ABC</p> <p>Unit 5: <i>Deepening Place Value & Operations with Whole Numbers/Decimals</i> 4.2ABEFGH, 4.3G, 4.4A, 4.5A, 4.9AB, 4.10AB</p> <p>Unit 6: <i>Points, Lines, & Angles</i> 4.6ABCD, 4.7ABCDE</p>	<p>Unit 6: <i>Points, Lines, & Angles (continued)</i> 4.6ABCD, 4.7ABCDE</p> <p>Unit 7: <i>Deepening & Spiraling Readiness Standards</i> 4.2ABDEFGH, 4.3ABCDEFG, 4.4BCDEFGH, 4.5AB</p>
Topic Focus	<p>Unit 1: Students will represent the value of whole numbers through the billions place & decimals through hundredths place. They will interpret the value of each place value position, round to the hundred thousands place, & compare & order whole numbers using symbols to the billions place. They will add & subtract whole numbers, represent multi-step problems involving the four operations, & represent problems using an input-output table & numerical expressions. Students will round or use compatible numbers to estimate solutions involving whole numbers. They will use models to determine formulas</p>	<p>Unit 2: (continued)</p> <p>Unit 3: Students will represent, add, subtract, compare, order, & relate decimals & fractions. They will determine & evaluate locations of decimals & fractions on a number line. Students will also represent data marked with whole numbers & fractions, & solve 1- & 2-step problems using data in whole number, fraction, & decimal forms using frequency tables, dot plots, & stem-&-leaf plots. They will represent problems & generate a number pattern following a given rule using input/output tables. Students will also describe the basic purpose of financial institutions, compare the advantages &</p>	<p>Unit 3: (continued)</p> <p>Unit 4: Students will use models to determine formulas for perimeter & area, & solve problems related to perimeter & area where dimensions are whole numbers. They will identify relative sizes of measurement units & convert measurements within the same system, customary & metric. Students will solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, & money using addition, subtraction, multiplication, or division as appropriate.</p> <p>Unit 5: Students will deepen their understanding of place value &</p>	<p>Unit 6: (continued)</p> <p>Unit 7: Students will deepen their knowledge of 4th grade standards as they review & apply all TEKS to problem situations.</p>

& solve problems involving perimeter. Students will multiply up to a four-digit number by a 1-digit number using strategies including the traditional algorithm, mental math, partial products, & the commutative, associative, & distributive properties, & apply these strategies in solving 1- & 2-step contextual situations involving multiplication. Students will also calculate profit.

Unit 2: Students will use place value strategies & algorithms to represent & solve for products & quotients of whole numbers, including solving one & two step problems. They will represent problems using an input-output table & numerical expressions. Students will use models to determine formulas & solve problems involving area. They will also distinguish between fixed & variable expenses.

disadvantages or saving options, & describe how to allocate weekly allowance among spending, saving, & sharing.

operations with whole numbers, decimals & fractions. They will represent & solve multistep problems involving the four operations.

Unit 6: Students will identify points, lines, line segments, rays, acute angles, right angles, obtuse angles, perpendicular lines, & parallel lines. They will identify & draw one or more lines of symmetry for 2-dimensional figures, & classify figures based on the presence or absence of parallel lines or angles of a specified size. Students will measure & draw angles using a protractor. They will illustrate that angles are measured in degrees & are part of a circle. They will determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures. The work in Unit 6 is foundational for Geometry & Precalculus in later years.

Suggestions for Parental Involvement/Support

Place Value - Roll dice to create ten-digit numbers. Practice reading, comparing & ordering numbers.

Addition/Subtraction - Practice adding & subtracting six-digit numbers.

Create word problems &/or solve real word problems using addition & subtraction. (Use grocery store ads to plan the cost of a meal.)

Estimate sums & differences before solving to find actual sums & differences. (Estimate the total cost of a meal at a restaurant, then compare with the actual bill.)

Measure the length & width of various objects & determine perimeter. ($P = 2 \times l + 2 \times w$)

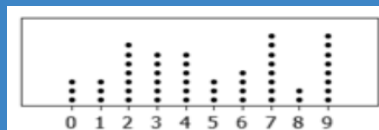
Multiplication - Practice multiplication facts (0-12)

Find examples of multiplication in the real world. (Four three point

Place Value-Discuss the purpose of decimals. (Decimals separate the whole from the part.) Identify decimals in the real world. Use prior knowledge of money to explain decimals. Relate whole numbers to dollars, tenths to dimes, & pennies to hundredths.

Division - Find real world examples of division. (Sharing Halloween candy equally between three siblings)

Data Analysis - Survey friends to collect data & create frequency tables & dot plots.

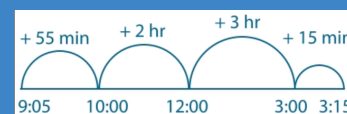


Baseball Team Runs Per Inning	
Number of Runs	Frequency
0	4
1	3
2	1
3	1

Fractions - Use measuring cups to find equivalent fractions. ($\frac{2}{4} = \frac{1}{2}$)

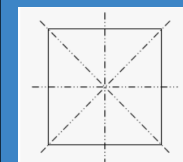
Measurement - Measure & identify length, mass & liquid volume of objects using customary & metric units of measurement.

Calculate elapsed time using a number line. (The movie starts at 7:00. It lasts 1 hour and 35 minutes. What time will the movie end?)



Geometry - Identify lines & angles in the real world. Use maps to explore types of lines. (parallel, perpendicular, & intersecting)

Find lines of symmetry.
[Lines of Symmetry](#)



Measuring Angles - Determine whether angles are less than, equal to, or greater than 90 degrees.

[Measuring Angles Video](#)

Problem Solving - Create & solve world problems using addition, subtraction, multiplication, & division
(ex..Mrs. Smith needs to rent tables for 327 guests who will attend her daughter's wedding reception. If Mrs. Smith seats 9 guests at each table, how many tables should she rent to seat all the guests?)

	<p>shots in basketball is worth twelve points.)</p> <p>Measure the length & width of various objects & determine area. (A= l x w)</p>	<p>Fractions - Cut food into fractions - Add the fractional parts, i.e., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{4}{4}$ or 1 whole</p> <p>Discuss fractions used in recipes. What would happen if you doubled the recipe?</p> <p>Decimals - Add & subtract whole & decimal numbers. (Given a budget (\$100,00), allow students to plan a wish list.)</p> <p>Useful tools: grocery store ads, catalogs, sports statistics</p>		<p><i>(The cost to rent tables, including tax & delivery, is \$16 per table. How much will Mrs. Smith pay to rent the tables she needs for the wedding reception?)</i></p>
<p>General Resources</p>	<p>Khan Academy: https://www.khanacademy.org/math</p> <p>Math 4 Texas: https://www.math4texas.org/</p> <p>Imagine Math & Imagine Math Facts: Login through Google Dashboard</p> <p>Graham Fletcher Progression Videos: https://gfletchy.com/progression-videos/</p> <p>Bedtime Math : http://bedtimemath.org/</p> <p>Interactive Math Glossary: https://www.texasgateway.org/resource/interactive-math-glossary</p> <p>Virtual Manipulatives & Strategy Charts: 4 Math Manipulatives Page</p>			