

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 with Whole Numbers to 1,000,000,000 & Introducing Decimal Place Value</i> 4.2ABCD, 4.4D</p> <p>Unit 2: <i>Fluency with Addition & Subtraction of Whole Numbers with Algorithms</i> 4.2D, 4.4AG, 4.5ABCD, 4.10B</p> <p>Unit 3: <i>Fluency with Whole Number Multiplication & Division</i> 4.4BCDEFGH, 4.5ABCD, 4.10A</p>	<p>Unit 3: <i>Fluency with Whole Number Multiplication & Division (continued)</i> 4.4BCDEFGH, 4.5ABCD, 4.10A</p> <p>Unit 4: <i>Data Representations with Whole Numbers</i> 4.5B, 4.9AB, 4.10E</p> <p>Unit 5: <i>Fractional Relationships & Decimal Connections</i> 4.2EFGH, 4.3ABCDEFG, 4.4A, 4.9A, 4.10CD</p>	<p>Unit 5: <i>Fractional Relationships & Decimal Connections (continued)</i> 4.2EFGH, 4.3ABCDEFG, 4.4A, 4.9A, 4.10CD</p> <p>Unit 6: <i>Contextual Measurement & Data Analysis with Fractions/Decimals</i> 4.5CD, 4.8ABC</p> <p>Unit 7: <i>Geometry-Points, Lines, & Identifying Angles</i> 4.6ABCD</p>	<p>Unit 7: <i>Geometry-Points, Lines, & Identifying Angles (continued)</i> 4.6ABCD</p> <p>Unit 8: <i>Measuring Angles</i> 4.7ABCDE</p> <p>Unit 9: <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 10: <i>Deepening & Spiraling Readiness Standards</i> 4.2BG, 4.3DE, 4.4AH, 4.5ABD, 4.6D, 4.7C, 4.8C, 4.9A, 4.10ABE</p> <p>Unit 11: <i>Applications of Mathematical Concepts</i> Apply all 4th grade standards to ensure mastery of grade level content</p>
Topic Focus	<p>Unit 1: Students will represent the value of whole numbers through the billions place & decimals through the hundredths place. Students 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.</p> <p>Unit 2: Students will add & subtract whole numbers, represent multi-step problems involving the four operations, & represent problems using an input-output</p>	<p>Unit 3: (continued)</p> <p>Unit 4: Students will represent problems using input/output tables. Students will represent data & solve problems using frequency tables, dot plots, & stem-&-leaf plots. Students will also describe the basic purpose of financial institutions.</p> <p>Unit 5: Students will represent, add, subtract, compare, order & relate decimals & fractions. Students will determine & evaluate locations of decimals & fractions on a number line.</p>	<p>Unit 5: (continued)</p> <p>Unit 6: Students will use models & solve problems related to perimeter & area. Students will identify relative sizes of measurement units & convert measurements within the same system. Students will solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, & money.</p> <p>Unit 7: Students will identify points, lines, line segments, rays, acute angles, right angles, obtuse angles, perpendicular lines & parallel lines.</p>	<p>Unit 8: Students will measure & draw angles using a protractor. Students will illustrate that angles are measured in degrees & are part of a circle. Students will determine the measure of an unknown angle formed by two non-overlapping adjacent angles.</p> <p>Unit 9: Students will deepen their understanding of place value & operations with whole numbers, decimals & fractions.</p> <p>Unit 10: Students will review & deepen their understanding of all 4th grade</p>

table & numerical expressions. Students will round or use compatible numbers to estimate solutions involving whole numbers. Students will use models to determine formulas & solve problems involving perimeter. Students will also calculate profit.

Unit 3: Students will use strategies & algorithms to determine and represent products & quotients of whole numbers including solving one & two step problems. Students will represent problems using an input-output table & numerical expressions. Students will use models to determine formulas & solve problems involving area. Students will also distinguish between fixed & variable expenses.

Students will also represent data & problem solve with decimals &/or fractions.

Students will identify and draw one or more lines of symmetry. Students will classify 2D figures based on presence & absence of parallel lines or angles.

standards in preparation for the STAAR test.
Unit 11: Students will apply all 4th grade standards to ensure mastery of grade level content.

Suggestions for Parental Involvement/Support

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

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 and pennies to hundredths.

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

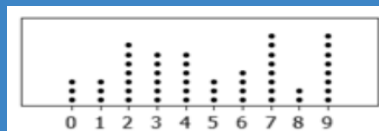
Create word problems and/or solve real word problems using addition and subtraction. (Use grocery store ads to plan cost of a meal.)

Estimate sums and differences then solve to find actual sums and differences. (Estimate total of cost of meal at restaurant then compare with bill.)

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

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

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



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

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

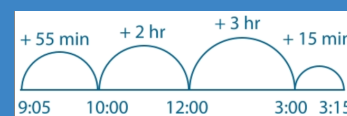
Discuss fractions used in recipes. What would happen if you doubled the recipe?

Decimals - Add and subtract whole and decimal numbers. (Given a budget (\$100,00), allow students to plan a wish list.)

Fractions - Use measuring cups to find equivalent fractions. ($\frac{1}{4} = \frac{2}{8}$)

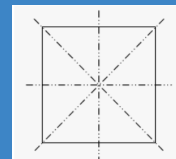
Measurement - Measure and identify length, mass and liquid volume of objects using customary and metric units of measurement.

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 and angles in the real world. Use maps to explore types of lines. (parallel, perpendicular, and 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 and solve world problems using addition, subtraction, multiplication and 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?)
(The cost to rent tables, including tax and delivery, is \$16 per table. How much will Mrs. Smith pay to rent the tables she needs for the wedding reception?)

	<p>Multiplication - Practice multiplication facts (0-12)</p> <p>Find examples of multiplication in the real world. (Four three point shots in basketball is worth twelve points)</p> <p>Measure the length and width of various objects and determine area. ($A = l \times w$)</p>	<p>Useful tools: grocery store ads, catalogs, sports statistics</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>			