

4th Grade Math
PISD Curriculum: Year at a Glance

Bundle	<i>Title</i> Big Ideas/Enduring Understandings	Guiding Questions
1	<p><i>Place Value</i></p> <p>Place value can be used to compare and order numbers.</p>	<p>Why is place value important in comparing and ordering numbers through 999,999,999?</p> <p>Can one number be represented in standard, written, and expanded form?</p> <p>How is decimal numeration an extension of whole number numeration?</p> <p>When rounding, how do you know you have determined a reasonable result in problem situations?</p>
2	<p><i>Place Value Continued/ Measurement</i></p> <p>Addition and subtraction can be used to solve problems involving whole numbers and decimals.</p> <p>Measurement can be used to impose order on objects and events and requires an understanding of the relationship between units.</p>	<p>How are adding or subtracting multi-digit decimals similar to adding or subtracting multi-digit whole numbers?</p> <p>How do you know whether to add or subtract in a given situation?</p> <p>How is measuring increasing and decreasing temperatures on a thermometer like adding and subtracting on a number line?</p> <p>How can you find the perimeter of any polygon?</p> <p>Why is it important to be able to read a thermometer and interpret the temperature?</p> <p>How do you choose which measurement tool (metric/customary) is appropriate to use?</p>
3	<p><i>Multiplication Arrays</i></p> <p>Multiplication can be represented in picture, word, and number form to find a total.</p>	<p>Can array models be used to find a product?</p> <p>How are arrays and measuring area related?</p> <p>When can you use multiplication to answer a question?</p>
4	<p><i>Multiplication continued/ Division</i></p> <p>Multiplication and division are inverse operations.</p>	<p>How do you know whether to multiply or divide in a given situation?</p> <p>What strategies could you use to mentally multiply and divide numbers by 10s and 100s?</p> <p>Can multiple strategies be used to find products of double digit numbers?</p>

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		How can multiplication and division be used to find area and perimeter of an object?
5	<i>Division</i> Division is used when grouping is required. The number of weight or mass units can be determined by reading a measuring tool.	What are various strategies for solving problems involving division (one digit and three digit dividend)? What is a remainder and how does it affect your answer? How do you check your answers in division? Why is it important to be able to estimate and measure weight and mass? What are the customary and metric units for weight and mass?
6	<i>Division/Multiplication Cont./ Measurement</i> Relationships can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways.	How do you decide which operation to use when describing the relationship between two sets of related data (input/output boxes)? How would you find and use a rule to determine the missing number in a data table, including tables with non-consecutive numbers? What is the difference between weight and mass?
7	<i>Fractions and Decimals</i> There is a need to be able to identify, read, write, and compare numbers beyond whole numbers.	What is the relationship between a fraction and decimal as represented on a number line or in a pictorial model? How could you use a pictorial model to represent both a mixed number and an improper fraction? How can parts of a whole be useful in measuring length?
8	<i>Volume, Elapsed Time, Measurement Conversions</i> Measurement requires an understanding of the relationship among units.	What does volume measure and how do you find it? What information do you need to determine elapsed time, start time, or end time? How do you determine relationships that enable you to convert between units of length, weight/mass, capacity, and time?

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9	<i>Graphing, Probability, and Geometry</i> Relationships between geometric figures can be described and compared. Questions can be answered by collecting, representing, and analyzing data.	What angles are formed by each set of lines? Can lines be both intersecting and perpendicular? How do you differentiate between angles? What are ways collected data can be represented? What strategies will help you determine all possible combinations in a problem situation?
10	<i>Geometry Continued/Fourth Grade Math Timeline</i> Geometric figures can be described, compared, and transformed using symmetry and congruence.	How do you differentiate between transformations? How can you determine if a figure has symmetry? What are the attributes of a two-dimensional or three-dimensional shape?
11	<i>Review for TAKS/ Geometry/Relationships</i> Problems can be solved by selecting and developing an appropriate problem-solving plan or strategy.	How do you know if your answer is reasonable? Is there more than one way to solve a problem? How do you determine the best problem solving strategy?
12	<i>Plotting Coordinates/Problem Solving</i> Ordered pairs of whole numbers can be used to locate and name points on a grid.	How do you identify and graph points on a coordinate grid? How can ordered pairs represent a location on a grid map? How do you plot ordered pairs on multiple quadrants?