

ASCEND 4th Grade Math PISD Curriculum: Year at a Glance

<i>Title</i> Big Ideas	Connections Narrative Integration Possibilities	Guiding Questions Enduring Understandings
Unit 1		
<p><i>Place value, multiplication and division</i></p> <ul style="list-style-type: none"> Place value can be used to compare and order numbers. Multiplication and division are inverse operations. Multiplication can be represented in picture, word, and number form to find a total. Division is used when grouping is required. 	•	<ul style="list-style-type: none"> Why is place value important in comparing and ordering numbers through 999,999,999? Can one number be represented in standard, written, and expanded form? How is decimal numeration an extension of whole number numeration? When rounding, how do you know you have determined a reasonable result in problem situations? How do you know whether to multiply or divide in a given situation? What strategies could you use to mentally multiply and divide numbers by 10s and 100s? How can multiplication and division be used to find area and perimeter of an object? Can multiple strategies be used to find products of double digit numbers? Can array models be used to find a product? How are arrays and measuring area related? When can you use multiplication to answer a question? 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?
Unit 2		
<p><i>Problem solving, Estimation, Fractions & Decimals</i></p> <ul style="list-style-type: none"> There are a variety of methods to solve a problem and evaluate the reasonableness of a solution. Problems can be solved by selecting and developing an appropriate problem-solving plan or strategy. A fraction or decimal describes the division of a whole into equal parts and can be interpreted in more than one way. Fractions can be combined and separated using a variety of methods. 	•	<ul style="list-style-type: none"> What strategies can be used to solve this problem? Is there another way to solve this problem? How will the solution look? How can you justify the reasonableness of the solution? 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? How do fractions and decimals relate

ASCEND 4th Grade Math
PISD Curriculum: Year at a Glance

<i>Title</i> Big Ideas	Connections Narrative Integration Possibilities	Guiding Questions Enduring Understandings
		to one another? <ul style="list-style-type: none"> • What are multiple ways to represent one fractional value? • What strategies can be used to compare and order fractions and decimals? • How can different models be used to add and subtract fractions? • How do you determine if a fraction is in its simplest form?
Unit 3		
<i>Statistics, Probability, Measurement</i> <ul style="list-style-type: none"> • Data can be collected and analyzed to determine an answer to a specific question. • Chances of an event occurring can be made by an expression or a prediction. • Measurement systems use units to describe attributes of length, perimeter, area, capacity and mass. 	•	<ul style="list-style-type: none"> • What are some methods used to display collected data? • Which type of graph is most appropriate to represent a given set of data? • What is the probability of a given event? • How can fractions be used to make a prediction of a future event? • How is tiling used to find accurate measurements? • What is the starting point when measuring? • How can you convert units of measurement within the same system?
Unit 4		
<i>Measurement, Geometry, Hands-on Equations</i> <ul style="list-style-type: none"> • Integrate math and science with focus on measurement and temperature. • Measurement requires an understanding of the relationship among units. • Relationships between geometric figures can be described and compared. • Questions can be answered by collecting, representing, and analyzing data. • Compare values and equations to determine equivalency. 	•	<ul style="list-style-type: none"> • How are measurement tools used to describe physical attributes of objects? • What operations and vocabulary are associated with temperature change? • 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? • 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? • How do you identify and graph

ASCEND 4th Grade Math
PISD Curriculum: Year at a Glance

<i>Title</i> Big Ideas	Connections Narrative Integration Possibilities	Guiding Questions Enduring Understandings
		points on a coordinate grid? <ul style="list-style-type: none"> • How can ordered pairs represent a location on a grid map? • How do you plot ordered pairs on multiple quadrants? • How do hands-on equations show algebraic relationships? • Can a solution be solved using more than one method? • How can reasonableness be proven?