### **HISD** Elementary Curriculum and Development INSPIRING TEACHING, IGNITING LITERACY & LEARNING.

#### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 1	<b>27 Days</b> Aug. 23 - Oct. 1,	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days.           2021         Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Mathematical Process Standards Unit planning guides identify Process Standards that align to and support the development of the content standards covered in each unit.	Embedding process standards throughout all units of study supports students' development of mathematical proficiency. Renaissance 360 Screener BOY Aug. 30 – Sept. 24	<ul> <li>Mathematical Process Standards The student uses mathematical processes to acquire and demonstrate mathematical understanding. (B) MATH.4.1A Apply mathematics to problems arising in everyday life, society, and the workplace. (B) MATH.4.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. (B) MATH.4.1C Select tools, including real objects, manipulatives, paper/pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems. (B) MATH.4.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations to organize, record, and communicate mathematical ideas. (B) MATH.4.1F Analyze mathematical relationships to connect and communicate mathematical ideas. (B) MATH.4.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.</li></ul>
Unit 1: Establish Math Routines and Whole Number Place Value Students will establish procedures and routines for daily problem solving and number sense activities. Students will interpret, represent, compare, and order whole numbers using concrete, pictorial, and abstract representations.	6 90-minute lessons Learning Recovery Day Aug. 23 Suggested Pacing: Aug. 24-31	Establish Math Routines and Whole Number Place Value (6 lessons) Number and Operations The student applies mathematical process standards to represent, compare, and order whole numbers and decimals, and understand relationships related to place value. (S) MATH.4.2A Interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left. (B) MATH.4.2B Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals. [Whole Numbers only] (S) MATH.4.2C Compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =.



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#### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cvcle 1	27 Days	The recommended number of lessons is less than the number of days in the grading of accommodate differentiated instruction, extended learning time, and assessment days Complete instructional planning information and support are in the HISD Curriculum do Texas Essential Knowledge and Skills/Student Expectations (TEKS/STHE Student will:	
Unit	Number of Lessons		
Unit 2: Fractions Students will use concrete and pictorial models to represent, decompose, and compare fractions, including those that are greater than one. Students will use a variety of methods including models (e.g., concrete, pictorial, and number line) to determine if two fractions are equivalent, and will use symbols (i.e., >, <, =) to represent the comparison of two fractions.	7 90-minute lessons Suggested Pacing: Sept. 1-10 <i>Labor Day</i> <i>Sept. 6</i>	Fracti Num The s fracti © M. and k © M. fracti recor © M. deno © M. <u>as di</u>	<b>tions</b> (7 lessons) <b>ber and Operations</b> student applies mathematical process standards to represent and generate ons to solve problems. <b>ATH.4.3A</b> Represent a fraction $\frac{a}{b}$ as a sum of fractions $\frac{1}{b}$ , where a b are whole numbers and b > 0, including when a > b. <b>ATH.4.3B</b> Decompose a fraction in more than one way into a sum of ons with the same denominator using concrete and pictorial models and ding results with symbolic representations. <b>ATH.4.3C</b> Determine if two given fractions are equivalent using a variety of ods. <b>ATH.4.3D</b> Compare two fractions with different numerators and different minators and represent the comparison using the symbols >, =, or <. <b>ATH.4.3G</b> Represent <u>fractions</u> and decimals to the tenths or hundredths <u>stances from zero on a number line</u> .
Unit 3: Decimal Place Value Students will interpret, represent, compare, and order decimal numbers using concrete, pictorial, and abstract representations.	6 90-minute lessons Suggested Pacing: Sept. 13-22 Fall Holiday Sept. 16 Teacher Service Day (no students) Sept. 17 Extend Review Assess Reteach Sept. 23	Decin Num The s and c to pla S M. positi ® M. t,000 nume S M. to the	<ul> <li>mal Place Value (6 lessons)</li> <li>ber and Operations</li> <li>student applies mathematical process standards to represent, compare, order whole numbers and decimals, and understand relationships related ace value.</li> <li>ATH.4.2A Interpret the value of each place-value position as 10 times the ion to the right and as one-tenth of the value of the place to its left.</li> <li>ATH.4.2B Represent the value of the digit in whole numbers through 0,000,000 and decimals to the hundredths using expanded notation and erals.</li> <li>ATH.4.2E Represent decimals, including tenths and hundredths, using rete and visual models and money.</li> <li>ATH.4.2F Compare and order decimals using concrete and visual models endered ths.</li> </ul>

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#### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cyclo 1	27 Days	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days
Cycle I	Aug. 23 - Oct. 1,	2021 Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 4: Relate Decimals to Fractions Students will use concrete and pictorials models to relate fractions to decimals and will represent fractions and decimals on a number line and metric ruler.	5 90-minute lessons Suggested Pacing: Sept. 24-30 Extend Review Assess Reteach Oct. 1	Relate Decimals to Fractions       (5 lessons)         Number and Operations       The student applies mathematical process standards to represent, compare, and order whole numbers and decimals, and understand relationships related to place value.         ® MATH.4.2G Relate decimals to fractions that name tenths and hundredths.         © MATH.4.2H Determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line.         Number and Operations         The student applies mathematical process standards to represent and generate fractions to solve problems.         © MATH.4.3G Represent fractions and decimals to the tenths or hundredths as distances from zero on a number line.



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### **HISD** Elementary Curriculum and Development INSPIRING TEACHING, IGNITING LITERACY & LEARNING.

### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 2	<b>29 Days</b> Oct. 5 - Nov. 12,	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. 2, 2021 Complete instructional planning information and support are in the HISD Curriculum documents			
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:			
Mathematical Process Standards Unit planning guides identify Process Standards that align to and support the development of the content standards covered in each unit.	Embedding process standards throughout all units of study supports students' development of mathematical proficiency.	Mathematical Process Standards The student uses mathematical processes to acquire and demonstrate mathematical understanding. (*) MATH.4.1A Apply mathematics to problems arising in everyday life, society, and the workplace. (*) MATH.4.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. (*) MATH.4.1C Select tools, including real objects, manipulatives, paper/pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems. (*) MATH.4.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. (*) MATH.4.1E Create and use representations to organize, record, and communicate mathematical ideas. (*) MATH.4.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.			



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2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 2	29 Days	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days.	
o yolo 🗖	Oct. 5 - Nov. 12,	2021 Complete instructional planning information and support are in the HISD Curriculum docur	
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:	
Unit 5: Addition and Subtraction Problems of Whole Numbers and Decimals Students will establish procedures and routines for daily problem solving and number sense activities. Students will add and subtract whole numbers and decimals using the standard algorithm to solve problems involving money, in real world contexts.	8 90-minute lessons <i>Teacher</i> <i>Service Day</i> <i>Oct. 4</i> <b>Suggested</b> <b>Pacing:</b> Oct. 5-14 <b>Extend</b> <b>Review</b> <b>Assess</b> <b>Reteach</b> Oct. 15	<ul> <li>Addition and Subtraction Problems of Whole Numbers and Decimals         (8 lessons)     </li> <li>Number and Operations         The student applies mathematical process standards to represent, compare, and order whole numbers and decimals, and understand relationships related to place value.     </li> <li>MATH.4.2D Round whole numbers to a given place value through the hundred thousands place.</li> <li>Number and Operations         The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy.     </li> <li>MATH.4.4A Add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.</li> <li>MATH.4.4G Round to the nearest 10, 100 or 1,000 or use compatible numbers to estimate solutions involving whole numbers.</li> <li>Algebraic Reasoning         The student applies mathematical process standards to develop concepts of expressions and equations.     </li> <li>MATH.4.5A Represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity. [Addition and Subtraction only]     </li> <li>Geometry and Measurement         The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement.     </li> <li>MATH.4.8C Solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and <u>money</u> using <u>addition</u>, <u>subtraction</u>, multiplication, or division as appropriate. </li> </ul>	

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### 2021-2022 Scope and Sequence

2021-2022 Scope and Sequenc

Mathematics – Grade 4

Cycle 2	<b>29 Days</b> Oct. 5 - Nov. 12,	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days.2021Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 6: Addition and Subtraction of Fractions Students will use concrete objects, pictorial models, and properties of operations to represent and solve addition and subtraction of fractions with equal denominators.	5 90-minute lessons Suggested Pacing: Oct. 18-22 Extend Review Assess Reteach Oct. 25	Addition and Subtraction of Fractions(5 lessons)Number and OperationsThe student applies mathematical process standards to represent and generate fractions to solve problems.(*) MATH.4.3E Represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations.(*) MATH.4.3F Evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, $\frac{1}{4}$ , $\frac{1}{2}$ , $\frac{3}{4}$ , and 1, referring to the same whole.
Unit 7: Multiplication Problem Solving Students will use estimation, strategies, and algorithms, including the standard algorithm, to solve whole number multiplication problems.	6 90-minute lessons Suggested Pacing: Oct. 26 – Nov. 2 Snapshot 1 Suggested Window: Oct. 25-29 See Outline for TEKS Details	<ul> <li>Multiplication Problem Solving (6 lessons)</li> <li>Number and Operations The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. (© MATH.4.4B Determine products of a number and 10 or 100 using properties of operations and place value understandings. (© MATH.4.4C Represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 x 15. (© MATH.4.4D Use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties. (© MATH.4.4H Solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.</li></ul>

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### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 2	29 Days		The recommended number of lessons is less than the number of days in the grading cycle to
Cycle Z	Oct. 5 - Nov. 12,	2021	Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Texas Lessons The s		s Essential Knowledge and Skills/Student Expectations (TEKS/SEs) student will:
Unit 8: Division Problem Solving Students will use strategies and algorithms, including the standard algorithm, to solve whole number division problems.	7 90-minute lessons Suggested Pacing: Nov. 3-11 Extend Review Assess Reteach Nov. 12	Divis Divis Numl The s strate differe S M/ divide S M/ to div S M/ numb R M/ R M/ R M/	ion Problem Solving (7 lessons) ber and Operations tudent applies mathematical process standards to develop and use gies and methods for whole number computations and decimal sums and ences in order to solve problems with efficiency and accuracy. ATH.4.4E Represent the quotient of up to a four-digit whole number ed by a one-digit whole number using arrays, area models, or equations. ATH.4.4F Use <u>strategies</u> and algorithms, including the standard algorithm, ide up to a four-digit dividend by a one-digit divisor. ATH.4.4G Round to the nearest 10, 100 or 1,000 or use compatible wers to estimate solutions involving whole numbers. ATH.4.4H Solve with fluency one- and two-step problems involving
		multip	blication and <b>division</b> , <b>including interpreting remainders</b>



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2021-2022 Scope and Sequence

Mathematics – Grade 4

	30 Days		The recommended number of lessons is less than the number of days in the grading cycle to
Cycle 3	Nov. 15, 2021 Jan. 14, 2022	-	accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SE The student will:	
Mathematical Process Standards Unit planning guides identify Process Standards that align to and support the development of the content standards covered in each unit.	Embedding process standards throughout all units of study supports students' development of mathematical proficiency.	Mati The math ® M and ® M infor the s reas ® M estin @ M com ® M com ® M usin	<ul> <li>hematical Process Standards</li> <li>student uses mathematical processes to acquire and demonstrate hematical understanding.</li> <li>ATH.4.1A Apply mathematics to problems arising in everyday life, society, the workplace.</li> <li>IATH.4.1B Use a problem-solving model that incorporates analyzing given mation, formulating a plan or strategy, determining a solution, justifying solution, and evaluating the problem-solving process and the onableness of the solution.</li> <li>IATH.4.1C Select tools, including real objects, manipulatives, paper/pencil, technology as appropriate, and techniques, including mental math, nation, and number sense as appropriate, to solve problems.</li> <li>IATH.4.1D Communicate mathematical ideas, reasoning, and their ications using multiple representations, including symbols, diagrams, hs, and language as appropriate.</li> <li>IATH.4.1E Create and use representations to organize, record, and municate mathematical ideas.</li> <li>IATH.4.1F Analyze mathematical relationships to connect and municate mathematical ideas.</li> <li>IATH.4.1G Display, explain, and justify mathematical ideas and arguments g precise mathematical language in written or oral communication.</li> </ul>
Unit 9: Multiplication and Division Problem Solving Students will solve with fluency one- and two-step multiplication and division problems, including interpreting remainders.	5 90-minute lessons Suggested Pacing: Nov. 15-19 <i>Thanksgiving</i> <i>Break</i> <i>Nov. 22-26</i>	Mult Num The strat and ® M multi Alge Expr ® M with for th	<ul> <li>tiplication and Division Problem Solving (5 lessons)</li> <li>tiplication and Division Problem Solving (5 lessons)</li> <li>student applies mathematical process standards to develop and use egies and methods for whole number computations and decimal sums differences in order to solve problems with efficiency and accuracy. IATH.4.4H Solve with fluency one- and two-step problems involving iplication and division, including interpreting remainders.</li> <li>ebraic Reasoning</li> <li>student applies mathematical process standards to develop concepts of essions and equations.</li> <li>IATH.4.5A Represent multi-step problems involving the four operations whole numbers using strip diagrams and equations with a letter standing he unknown quantity.</li> </ul>

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2021-2022 Scope and Sequence

Mathematics – Grade 4

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Cycle 2	SU Days	The recommended number of lessons is less than the number of days in the grading cycle to
Cycle 3	Jan. 14, 2021	Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 10: Area and Perimeter Students will use models to determine formulas and will solve problems involving perimeter and area of rectangles.	7 90-minute lessons Suggested Pacing: Nov. 29 – Dec. 7 Extend Review Assess Reteach Dec. 8-17 District-Level <u>Assessment</u> Suggested Window: Dec. 6-17 See Blueprint for TEKS Details Winter Break Dec. 20-31	Area and Perimeter (7 lessons) Algebraic Reasoning The student applies mathematical process standards to develop concepts of expressions and equations. MATH.4.5C Use models to determine the formulas for the perimeter of a rectangle (I + w + I + w or 2I + 2w), including the special form for perimeter of a square (4s) and the area of a rectangle (I x w). (© MATH.4.5D Solve problems related to perimeter and area of rectangles where dimensions are whole numbers.
Unit 11: Geometry Students will analyze geometric attributes of two- dimensional figures in order to develop generalizations about their properties.	9 90-minute lessons <u>Part 1</u> Suggested Pacing: Jan. 3-4	Part 1: Lines, Rays, and Angles (2 lessons) Geometry and Measurement The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties. (S) MATH.4.6A Identify points, lines, line segments, rays, angles, and perpendicular and parallel lines.

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2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 3	<b>30 Days</b> Nov. 15, 2021 - Jan. 14, 2022		The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Texa Lessons The		as Essential Knowledge and Skills/Student Expectations (TEKS/SEs) student will:
Unit 11: Geometry Students will analyze geometric attributes of two- dimensional figures in order to develop generalizations about their properties.	Part 2 Suggested Pacing: Jan. 5-11	Part (5 le Geo The attrik © M obtu ® M abse angle	2: Classify Two-Dimensional Figures ssons) metry and Measurement student applies mathematical process standards to analyze geometric butes in order to develop generalizations about their properties. ATH.4.6C Apply knowledge of right angles to identify acute, right, and se triangles. ATH.4.6D Classify two-dimensional figures based on the presence or ence of parallel or perpendicular lines or the presence or absence of es of a specified size.
Part 3 Suggested Pacing: Jan. 12-13 Extend Review Assess Reteach Jan. 14		Part Geo The attrik © M for a	3: Symmetry (2 lessons) metry and Measurement student applies mathematical process standards to analyze geometric butes in order to develop generalizations about their properties. ATH.4.6B Identify and draw one or more lines of symmetry, if they exist, two-dimensional figure.



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#### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 4	27 Days	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Mathematical Process Standards Unit planning guides identify Process Standards that align to and support the development of the content standards covered in each unit.	Embedding process standards throughout all units of study supports students' development of mathematical proficiency. Renaissance 360 Screener MOY Jan. 14 – Feb. 18	<ul> <li>Mathematical Process Standards The student uses mathematical processes to acquire and demonstrate mathematical understanding. Imathematical understanding a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Imathematical understanding a plan or strategy. determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Imathematical understanding a plan or strategy. determining a solution, justifying the solution. Imathematical understanding a plan or strategy. determining a solution, justifying the solution. Imathematical understanding a plan or strategy. determining a solution, justifying the solution. Imathematical understanding a plan or strategy. determining a solution, justifying the solution. Imathematical understanding a plan or strategy. determining a solut</li></ul>
Unit 12: Angle Problem Solving Students will solve problems involving measuring and constructing angles with a given measure less than or equal to 180°.	7 90-minute lessons <i>MLK Jr. Day</i> <i>Jan. 17</i> <i>Teacher Prep</i> <i>Day</i> ( <i>no students</i> ) <i>Jan. 18</i> <b>Suggested</b> <b>Pacing:</b> Jan. 19-27 <b>Extend</b> <b>Review</b> <b>Assess</b> <b>Reteach</b> Jan 28-31	<ul> <li>Angle Problem Solving (7 lessons)</li> <li>Geometry and Measurement The student applies mathematical process standards to solve problems involving angles less than or equal to 180 degrees. MATH.4.7A Illustrate the measure of an angle as the part of a circle whose center is at the vertex of the angle that is "cut out" by the rays of the angle. Angle measures are limited to whole numbers. MATH.4.7B Illustrate degrees as the units used to measure an angle, where 1/360 of any circle is one degree and an angle that "cuts" n/360 out of any circle whose center is at the angle's vertex has a measure of n degrees. Angle measures are limited to whole numbers. (*) MATH.4.7C Determine the approximate measures of angles in degrees to the nearest whole number using a protractor. (*) MATH.4.7D Draw an angle with a given measure. (*) MATH.4.7E Determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures.</li></ul>

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#### 2021-2022 Scope and Sequence

Mathematics – Grade 4

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Cycle 4	<b>27 Days</b> Jan. 19 - Feb. 25	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. 2022 Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 13: Patterns in a Table Students will represent problems and develop concepts of expressions by using an input- output table to generate a numerical pattern that follows a given rule.	7 90-minute lessons Suggested Pacing: Feb. 1-9 Extend Review Assess Reteach Feb. 10-11	<ul> <li>Patterns in a Table (7 lessons)</li> <li>Number and Operations The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. (s) MATH.4.4B Determine products of a number and 10 or 100 using properties of operations and place value understandings. Algebraic Reasoning The student applies mathematical process standards to develop concepts of expressions and equations. (s) MATH.4.5B Represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence.</li></ul>
Unit 14: Length Students will solve problems including the conversion of units of measure for a given attribute within the same system involving measurements of length in both the customary and metric measurement systems.	5 90-minute lessons Suggested Pacing: Feb. 14-18 Teacher Service Day (no students) Feb. 21 Extend Review Assess Reteach Feb. 22-25	<ul> <li>Length (5 lessons)</li> <li>Algebraic Reasoning The student applies mathematical process standards to develop concepts of expressions and equations. (® MATH.4.5B Represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence. Geometry and Measurement The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement. (® MATH.4.8A Identify relative sizes of measurement units within the customary and metric systems. (® MATH.4.8B Convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table. (® MATH.4.8C Solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate</li></ul>



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#### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle F	33 Days	The recommended number of lessons is less than the number of days in the grading cycle to
Cycle 5	Feb. 28 - Apr. 22	2022 Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Mathematical Process Standards Unit planning guides identify Process Standards that align to and support the development of the content standards covered in each unit.	Embedding process standards throughout all units of study supports students' development of mathematical proficiency.	<ul> <li>Mathematical Process Standards The student uses mathematical processes to acquire and demonstrate mathematical understanding. </li> <li>MATH.4.1A Apply mathematics to problems arising in everyday life, society, and the workplace.</li> <li>MATH.4.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. </li> <li>MATH.4.1C Select tools, including real objects, manipulatives, paper/pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems. MATH.4.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations including symbols, diagrams, graphs, and language as appropriate. MATH.4.1E Create and use representations to organize, record, and communicate mathematical ideas. MATH.4.1F Analyze mathematical relationships to connect and communicate mathematical ideas. MATH.4.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.</li></ul>
Unit 15: Capacity, Liquid Volume, Weight, and Mass Students will solve problems including the conversion of units of measure for a given attribute within the same system involving measurements of capacity, liquid volume, weight, and mass in both the customary and metric measurement systems.	6 90-minute lessons Suggested Pacing: Feb. 28 – Mar. 7 Suggested Window: Feb. 28 – Mar. 4 See Outline for TEKS Details	<ul> <li>Capacity, Liquid Volume, Weight, and Mass (6 lessons)</li> <li>Algebraic Reasoning The student applies mathematical process standards to develop concepts of expressions and equations. (*) MATH.4.5B Represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence. Geometry and Measurement The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement. (*) MATH.4.8A Identify relative sizes of measurement units within the customary and metric systems. (*) MATH.4.8B Convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table. (*) MATH.4.8C Solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate.</li></ul>



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2021-2022 Scope and Sequence

Mathematics – Grade 4

	22 Dave	The recommended number of lessons is less than the number of days in the grading cycle to	
Cycle 5	Feb. 28 - Apr. 22	accommodate differentiated instruction, extended learning time, and assessment days. 2, 2022 Complete instructional planning information and support are in the HISD Curriculum documents	
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:	
Unit 16: Time Students will use strategies and tools (e.g., analog and digital clocks) to solve problems involving intervals of time.	6 90-minute lessons Suggested Pacing: Mar. 8-22 Spring Break Mar. 14-18	<ul> <li><u>Time</u> (6 lessons)</li> <li><u>Geometry and Measurement</u> The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement. <b>S MATH.4.8B</b> Convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table. <b>B MATH.4.8C</b> Solve problems that deal with measurements of length, <u>intervals of time</u>, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate. </li> </ul>	
Unit 17: Data Problem Solving Students will collect, organize, display, and interpret data on a frequency table, dot plot, or stem- and-leaf plot, and solve problems using the data.	9 90-minute lessons <u>Part 1</u> Suggested Pacing: Mar. 23-25 Chávez-Huerta Day Mar. 28	<ul> <li>Part 1: Frequency Tables (3 lessons)</li> <li>Data Analysis The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. <b>® MATH.4.9A</b> Represent data on a <u>frequency table</u>, dot plot, or stem-and-leaf plot marked with whole numbers and fractions. <b>® MATH.4.9B</b> Solve one- and two-step problems using data in whole number, decimal, and fraction form in a <u>frequency table</u>, dot plot, or stem-and-leaf plot.</li></ul>	
	Part 2 Suggested Pacing: Mar. 29 – Apr. 5 Extend Review Assess Reteach Apr. 6-7 <u>STAAR- Released</u> Assessment Suggested Window: Apr. 4-22 2021 Released Assessment	<ul> <li>Part 2: Dot and Stem-and-Leaf Plots (6 lessons)</li> <li>Data Analysis The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. (*) MATH.4.9A Represent data on a frequency table, <u>dot plot</u>, or <u>stem-and-leaf plot</u> marked with whole numbers and fractions. (*) MATH.4.9B Solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, <u>dot plot</u>, or <u>stem-and-leaf plot</u>.</li></ul>	

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### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cyclo 5 33 Days			The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days
Cycle J	Feb. 28 - Apr. 22, 2022		Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texa The s	s Essential Knowledge and Skills/Student Expectations (TEKS/SEs) student will:
Unit 18: Personal Financial Literacy Students will understand how financial information, such as taxes, income, methods of payments, financial records, and budgets, can be used to help people manage their financial resources effectively.	5 90-minute lessons Suggested Pacing: Apr. 8-14 Spring Holiday Apr. 15 Extend Review Assess Reteach Apr. 18-22 <u>STAAR- Released</u> <u>Assessment</u> Suggested Window: Apr. 4-22 2021 Released Assessment	Perso Perso The s resou (§ M/ MATI savin (§ M/ keepi	<ul> <li>bonal Financial Literacy (5 lessons)</li> <li>bonal Financial Literacy</li> <li>botal expenses</li> <li>botal expense</li></ul>



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### **HISD** Elementary Curriculum and Development INSPIRING TEACHING, IGNITING LITERACY & LEARNING.

#### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 6	<b>31 Days</b> Apr. 25 - June 7,	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Mathematical Process Standards Unit planning guides identify Process Standards that align to and support the development of the content standards covered in each unit.	Embedding process standards throughout all units of study supports students' development of mathematical proficiency. Renaissance 360 Screener EOY Apr. 28 – June 1	<ul> <li>Mathematical Process Standards The student uses mathematical processes to acquire and demonstrate mathematical understanding. Image: The student uses mathematical processes to acquire and demonstrate mathematical understanding. Image: The student uses mathematical processes to acquire and demonstrate mathematical understanding. Image: The student uses mathematics to problems arising in everyday life, society, and the workplace. Image: The student uses a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Image: The solution of the solution of the problem solving process and the reasonableness of the solution. Image: The solution of the solution of the solution of the solution. Image: The solution of the solution of the solution of the solution. Image: The solution of the solution of the solution of the solution. Image: The solution of the solution of the solution of the solution of the solution. Image: The solution of the solution of the solution of the solution. Image: The solution of the solution of the solution of the solution of the solution. Image: The solution of the solution of the solution of the solution of the solution. Image: The solution of the solution of</li></ul>
Unit 19: Cumulative Review Students will receive differentiated instruction based on areas of need according to assessment data.	10 90-minute lessons Suggested Pacing: Apr. 25 – May 6 Extend Review Assess Reteach May 9-12 <u>STAAR</u> Math May 10	Cumulative Review (10 lessons) MATH.4.1A–MATH.4.10E During this unit, teachers will gather individual student data from various campus and district-level assessments administered during the academic year. Teachers will review student progress tracking records to determine individual student areas of need to be addressed during the cumulative review. Students should be placed in small groups according to student expectations and receive immediate feedback during the re-teaching of lessons. Teachers will model various problem-solving strategies to allow students to choose the strategy they are most comfortable with and, thereafter, replicate independently.

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### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cycle 6	<b>31 Days</b> Apr. 25 - June 7,	The recommended number of lessons is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 20: Multiplication and Division Review Students will develop and use strategies and algorithms to solve whole number multiplication and division problems.	5 90-minute lessons Suggested Pacing: May 13-19	<ul> <li>Multiplication and Division Review (5 lessons)</li> <li>Number and Operations The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. (S) MATH.4.4D Use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties. (S) MATH.4.4F Use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor. (S) MATH.4.4G Round to the nearest 10, 100 or 1,000 or use compatible numbers to estimate solutions involving whole numbers. (S) MATH.4.4H Solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.</li></ul>
Unit 21: Decimal Place Value Review Students will interpret, represent, compare, and order decimals using concrete, pictorial, and abstract representations and will extend their place value understanding to the thousandths.	5 90-minute lessons Suggested Pacing: May 20-26	<ul> <li>Decimal Place Value Review (5 lessons)</li> <li>Number and Operations The student applies mathematical process standards to represent, compare, and order whole numbers and decimals, and understand relationships related to place value. (*) MATH.4.2B Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals. (*) MATH.4.2E Represent decimals, including tenths and hundredths, using concrete and visual models and money. (*) MATH.4.2F Compare and order decimals using concrete and visual models to the hundredths.</li></ul>



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### 2021-2022 Scope and Sequence

Mathematics – Grade 4

Cyclo 6	31 Days	The recommended number of lessons is less than the number of days in the gra	
Cycle 0	Apr. 25 - June 7,	2022	Complete instructional planning information and support are in the HISD Curriculum documents.
Unit	Number of Lessons	Texa The s	s Essential Knowledge and Skills/Student Expectations (TEKS/SEs) student will:
Unit 22: Addition and Subtraction Review Students will add and subtract whole numbers and decimals using the standard algorithm to solve problems in real world contexts involving money and perimeter. Students will interpret data on a frequency table, dot plot, or stem- and-leaf plot, and solve problems	4 90-minute lessons Suggested Pacing: May 27 – June 2 Memorial Day May 30	Addii Numi The s strate differd ® M/ hundi Geon The s custo meas ® M/ where Data The s collec @ M/	<ul> <li>tion and Subtraction Review (4 lessons)</li> <li>ber and Operations</li> <li>student applies mathematical process standards to develop and use egies and methods for whole number computations and decimal sums and ences in order to solve problems with efficiency and accuracy.</li> <li>ATH.4.4A Add and subtract whole numbers and decimals to the redths place using the standard algorithm.</li> <li>netry and Measurement</li> <li>student applies mathematical process standards to select appropriate mary and metric units, strategies, and tools to solve problems involving surement.</li> <li>ATH.4.5D Solve problems related to perimeter and area of rectangles e dimensions are whole numbers</li> <li>Analysis</li> <li>student applies mathematical process standards to solve problems by cting, organizing, displaying, and interpreting data.</li> <li>ATH 4.9B Solve one- and two-sten problems using data in whole number</li> </ul>
using the data.		decin	nal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot.
Unit 23: Fractions Review Students will use concrete and pictorial models to represent, decompose, and compare fractions, including those that are greater than one. Students will use a variety of methods including models (e.g., concrete, pictorial, and number line) to determine if two fractions are equivalent, and will use symbols (i.e., >, <, =) to represent the comparison of two fractions.	3 90-minute lessons Suggested Pacing: June 3-7 Teacher Prep Day (no students) June 8	Fraction Numi The s fraction (and b) (and b) (	<b>tions Review</b> (3 lessons) <b>ber and Operations</b> student applies mathematical process standards to represent and generate ons to solve problems. <b>ATH.4.3A</b> Represent a fraction $\frac{a}{b}$ as a sum of fractions $\frac{1}{b}$ , where a b are whole numbers and b > 0, including when a > b. <b>ATH.4.3B</b> Decompose a fraction in more than one way into a sum of ons with the same denominator using concrete and pictorial models and ding results with symbolic representations. <b>ATH.4.3C</b> Determine if two given fractions are equivalent using a variety of ods. <b>ATH.4.3D</b> Compare two fractions with different numerators and different minators and represent the comparison using the symbols >, =, or <. <b>ATH.4.3G</b> Represent <u>fractions</u> and decimals to the tenths or hundredths <u>stances from zero on a number line</u> .

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