3rd Grade Math
Overview
2024 - 2025

This document is designed to provide parents/guardians/community an overview of the curriculum taught in the FBISD classroom. This document supports families in understanding the learning goals for the course, and how students will demonstrate what they know and are able to do. The overview offers suggestions or possibilities to reinforce learning at home.

Included at the end of this document, you will find:

- A glossary of curriculum components
- The content area instructional model
- Parent resources for this content area

To advance to a particular grading period, click on a link below.

- Grading Period 1
- Grading Period 2
- Grading Period 3
- Grading Period 4

At Home Connections

The following are suggestions for reinforcing literacy/numeracy development at home. These ideas can be used throughout the school year. You will find additional ideas to reinforce learning at home within each unit below.

- *Engage students in problem solving during day-to-day decisions and help them reason through outcomes of decisions*
- *Explain the order or process to completing day-to-day tasks*
- *Encourage students to justify choices made in day-to-day activities*
- *Discuss scenarios involving math in everyday life and determine the operations needed to solve the problem*
- *Play games that require logic and reasoning skills or basic operations.*
  Play Sudoku and other brain-teaser type puzzles

Process Standards

The process standards describe ways in which students are expected to engage in the content. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use knowledge learned efficiently and effectively in daily life.

3.1A apply mathematics to problems arising in everyday life, society, and the workplace
3.1B 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
3.1C select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems
3.1D communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate
3.1E create and use representations to organize, record, and communicate mathematical ideas
3.1F analyze mathematical relationships to connect and communicate mathematical ideas
3.1G display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

Grading Period 1

Unit 1: Whole Numbers – Numeration

Estimated Date Range: 8/8/24 - 8/23/24
Estimated Time Frame: 12 days

Unit Overview: This unit begins with Launching Mathematical Mindsets. Students will engage in activities that support setting up the systems and structures needed to promote mathematical communication and collaboration in a face to face environment. The focus is on students getting used to classroom routines while engaging in math related activities that promote sense making, perseverance, and teamwork. In this unit, students will also develop an understanding of place value up to the hundred thousand through composing and decomposing and expanded form. Students will then use place value understanding to compare and order whole numbers as well as round numbers to the nearest 10, 100, 1,000, or 10,000.

At home connections:

- Use positive affirmations to build students self-confidence.
- Find numbers up to 100,000 in news articles or other scenarios and determine the value of specific digits.
- Comparing and ordering average salaries for jobs a student is interested in.
- Comparing and ordering distances for flights on a dream vacation.

Concepts within Unit #1 **Link to TEKS**	**Success Criteria for this concept**
Concept #1: Launching Mathematical Mindsets	In this concept we are Launching Mathematical Mindsets using You Cubed resources along with supports for setting up Math Workshop in the classroom. The focus is on students getting used to classroom routines while engaging in math related activities that promote sense making, perseverance, and teamwork.
Concept #2: Place Value- Comparing and Ordering 3.2D, 3.2A, 3.2B, 3.2C	• Compose numbers up to 100,000 from variety of representations. • Decompose numbers up to 100,000. • Represent whole numbers using expanded form. • Represent the value of a digit in whole numbers using numerals. • Represent the value of a digit in whole numbers using expanded notation. • Describe the relationships between a digit's location and its value. • Identify consecutive multiples of 10, 100, 1,000, and 10,000. • Represent a number on a number line using consecutive multiples. • Round a number based on its relationship to the benchmark multiples. • Determine if a number is greater than or less than another number. • Compare whole numbers using place value understanding. • Represent the comparison using symbols >, <, and =. • Order whole numbers using place value understanding. • Order whole numbers on a number line.

Unit 2: Addition and Subtraction

Estimated Date Range: 8/26/24 – 9/20/24
Estimated Time Frame: 19 Days

Unit Overview: In this unit, students will make sense of one and two-step addition and subtraction problems by using pictorial models, number lines, and equations. They will then use the place value understanding along with knowledge of properties of operations to solve one- and two-step addition and subtraction problems with fluency using rounding and compatible numbers to estimate solutions. Students will end the unit by applying their knowledge of addition and subtraction to solve problems involving money.

At home connections:

- Practice basic addition and subtraction facts using context in the world around them.
- Use whole numbers to develop a budget for a birthday party.
- Use distances from Houston to other cities in Texas to generate and solve problems related to addition and subtraction.

Concepts within Unit #2 **Link to TEKS**	**Success Criteria for this concept**

Concept #1: One Step Addition or Subtraction Problems
3.4A, 3.5A, 3.2A, 3.5E, 3.4B
	• Round numbers to the nearest 10 or 100 to estimate solutions.
	• Use compatible numbers to estimate solutions.
	• Represent one-step problems involving addition and subtraction using
	  ○ pictorial representations
	  ○ number lines
	  ○ equations
	• Solve with fluency one-step problems involving addition and subtraction within 1,000 using various strategies.

Concept #2: Two-Step Addition and Subtraction Problems
3.4A, 3.5A, 3.2A, 3.4B
	• Round numbers to the nearest 10 or 100 to estimate solutions.
	• Use compatible numbers to estimate solutions.
	• Represent two-step problems involving addition and subtraction using
	  ○ pictorial representations
	  ○ number lines
	  ○ equations.
	• Solve with fluency two-step problems involving addition and subtraction within 1,000 using various strategies.

Concept #3: Addition and Subtraction with Money & Personal Financial Literacy 3.4C, 3.9A, 3.9B, 3.9C, 3.9D, 3.9E, 3.9F	• Name a coin or bill and their value • Represent the value of collection of coins using the cent symbol and the dollar symbol • Represent the value of a collection of bills using the dollar symbol • Determine the value of a collection of coins and bills and represent the value using the dollar sign • Identify the coins and bills needed to pay for specific items. • Explain the connection between human labor and income. • Describe the relationship between scarcity of resources and how that impacts cost. • Identify costs and benefits of planned and unplanned spending decisions.

	• Explain that credit is used when wants and needs exceeds the ability to pay. • Explain that it is the borrower's responsibility to pay back the lender with interest. • List the reasons to save and explain the benefit of a savings plan (e.g. college savings). • Identify decisions involving income, spending, saving, credit, and charitable giving.
Unit 3: Understanding Multiplication & Division Estimated Date Range: 9/23/24 – 10/29/24 Estimated Time Frame: 21 Days *(11 Days in GP1 and 10 Days in GP2)*	
Unit Overview: In this unit students will connect their understanding of joining equal groups of objects to make sense of multiplication with the basic facts. Students will also develop their understanding of division by relating it to multiplication and their understanding of separating equal groups of objects. Students will understand the meaning of multiplication and division through concrete and pictorial representations that lead to fact fluency. **At home connections:** • Practice skip counting using numbers from 2 to 10 to help with multiplication facts. • Students create their own story problems that would require multiplication or division to solve. • Practice multiplication facts with real world objects. (e.g. How many tires on the 5 cars in front of us?)	
Concepts within Unit #3 **Link to TEKS**	**Success Criteria for this concept**
Concept #1: Understanding Multiplication 3.4G, 3.4F, 3.4D, 3.4E, 3.5C	• Represent multiplication facts using a variety of strategies such as: ○ repeated addition ○ equal-sized groups ○ arrays ○ area models equal jumps on a number line ○ skip counting • Recall multiplication facts and connected division facts up to 10 by 10. • Determine the total number of objects when equal sized groups of objects are combined or arranged in arrays. • Describe multiplication expressions as a comparison (e.g.3 x 24 is 3 times as much as 24).

Grading Period 2

Unit 3: Understanding Multiplication & Division (continued)

Estimated Date Range: 9/23/24 – 10/29/24
Estimated Time Frame: 21 Days *(11 Days in GP1 and 10 Days in GP2)*

Unit Overview: In this unit students will connect their understanding of joining equal groups of objects to make sense of multiplication with the basic facts. Students will also develop their understanding of division by relating it to multiplication and their understanding of separating equal groups of objects. Students will understand the meaning of multiplication and division through concrete and pictorial representations that lead to fact fluency.

At home connections:

- Practice skip counting using numbers from 2 to 10 to help with multiplication facts.
- Students create their own story problems that would require multiplication or division to solve.
- Practice multiplication facts with real world objects. (e.g. How many tires on the 5 cars in front of us?)

Concepts within Unit #3 Link to TEKS	**Success Criteria for this concept**
Concept #2: Understanding Division 3.5D, 3.4I, 3.4J, 3.4H	• Determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or a missing product. • Determine if a number is even or odd using divisibility rules. • Determine a quotient using the relationship between multiplication and division. • Determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally.

Unit 4: Data Analysis

Estimated Date Range: 10/30/24 - 12/6/24
Estimated Time: 21 Days

Unit Overview: In this unit students will represent data on bar graphs or pictographs with multiple categories and scaled intervals. Students will also explore using frequency tables to organize data and engage with dot plots for the first time. Students will summarize data from a given graph or frequency table in another form of graph.

At home connections:

- Find data based on a topic of interest sort and organize the data into categories.
- Create charts or graphs to represent friends' or family's favorite colors, favorite foods, shoe size etc.
- Generate a frequency table using data and then using the same data generate a bar graphs. Discuss the similarities and differences.

Concepts within Unit #4 Link to TEKS	**Success Criteria for this concept**

Concept #1: Input-Output Tables
3.5E, 3.5D
	• Represent real-world relationships using
	  ○ number pairs in a table
	  ○ verbal descriptions
	• Find the unknown whole number in a multiplication or division equation when the unknown is a missing product or a missing factor

Concept #2: Data Analysis
3.8B, 3.8A
	• Solve one- and two-step problems using data with scaled intervals using
	  ○ frequency tables
	  ○ dot plots
	  ○ pictographs
	  ○ bar graphs
	• Create charts and graphs with multiple categories
	  ○ frequency tables
	  ○ dot plots
	  ○ pictographs
	  ○ bar graphs

Unit 5: Geometry & Measurement

Estimated Date Range: 12/9/24 - 2/4/25

Estimated Time Frame: 28 Days *(10 Days in GP2 and 18 Days in GP3)*

Unit Overview: In this unit students will measure time, area, perimeter, liquid capacity and weight. While measuring time, students will use addition and subtraction skills to determine elapsed time. To measure area and perimeter, students will first review various two- and three-dimensional figures so that these objects or pictures of objects can be measured. Student will also solve problems to determine liquid capacity and/or weight of objects or pictures of objects using metric and customary units.

At home connections:

- Describe shapes using geometric language
- Identify 2D and 3D figures in the real world

Concepts within Unit #5 **Link to TEKS**	**Success Criteria for this concept**

Concept #1: Classify and Sort
3.6A, 3.6B
	• Classifies and sorts two-dimensional shapes using formal geometric language.
	• Uses attributes to describe various regular and irregular quadrilaterals.
	  ○ rhombus
	  ○ parallelogram
	  ○ trapezoid
	  ○ rectangle
	  ○ square
	• Identifies examples of quadrilaterals that do not belong to the groups listed above.
	• Classify and sort three-dimensional figures (e.g. of three-dimensional figures: cones, cylinders, spheres, triangular prisms, rectangular prism, and cubes)
	  ○ number of edges
	  ○ number of vertices
	  ○ number of faces
	  ○ types of faces

Concept #2: Liquid Capacity and Weight
3.7D, 3.7E
	• Determine liquid volume (capacity) or weight using
	  ○ units
	  ○ tools

	• Determine when it is liquid volume (capacity) or weight.
	• Determine when it is appropriate to use measurements of liquid volume (capacity) or weight.
	• Determine liquid volume (capacity) or weight using
	  ○ units
	  ○ tools

Grading Period 3

Unit 5: Geometry & Measurement (continued)

Estimated Date Range: 12/9/24 - 2/4/25

Estimated Time Frame: 28 Days *(10 Days in GP2 and 18 Days in GP3)*

Unit Overview: In this unit students will measure time, area, perimeter, liquid capacity and weight. While measuring time, students will use addition and subtraction skills to determine elapsed time. To measure area and perimeter, students will first review various two- and three-dimensional figures so that these objects or pictures of objects can be measured. Student will also solve problems to determine liquid capacity and/or weight of objects or pictures of objects using metric and customary units.

At home connections:

- Determine elapsed time between specified daily events. (e.g. Determine the time spent going to the movies and eating lunch.)
- Determine what time you need to leave the house when given driving time and time of arrival.

Concepts within Unit #5 Link to TEKS	Success Criteria for this concept

Concept #3: Time
3.4A, 3.7C
	• Determine the solutions to problems involving addition and subtraction of time intervals in minutes using (e.g. A 15-minute event plus a 30-minute event equals 45 minutes)
	  ○ pictorial models
	  ○ tools

Concept #4: Area and Perimeter 3.7B, 3.6C, 3.6D, 3.6B	• Determines the perimeter of a polygon with a missing length when given perimeter and remaining side lengths in problems. • Determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row. • Decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area.

Unit 6: Applying Multiplication and Division (Two-Step and Multi-Digit)

Estimated Date Range: 2/5/25 – 3/7/25

Estimated Time Frame: 20 Days

Unit Overview: In this unit students will represent and solve one-and two-step multiplication and division word problems using different strategies. They will represent problems using array, strip diagrams and equations. They will solve problems in a variety of ways such as mental math, partial products, and different place value strategies. Students will also use properties of multiplication and the standard algorithm to multiply a two-digit number by a one-digit number.

At home connections:

- Practice skip counting using numbers from 2 to 10 to help with multiplication facts.
- Students create their own story problems that would require multiplication or division to solve.
- Practice multiplication facts with real world objects. (e.g. How many tires on the 5 cars in front of us?)

Concepts within Unit #6 Link to TEKS	Success Criteria for this concept
Concept #1: Strategies for Multiplying and Dividing with Larger Numbers 3.4G, 3.4K, 3.4E, 3.4F	• Multiply a two-digit number by a one-digit number using strategies ○ mental math ○ partial products ○ operation properties ○ place value strategies standard algorithm • Represent and solve one- and two-step multiplication and division problems within 100 using ○ arrays ○ strip diagrams ○ equations
Concept #2: Multi-Step Multiplication and Division Problems 3.4K, 3.5B, 3.4G, 3.4F, 3.4I, 3.5D	• Multiply a two-digit number by a one-digit number using strategies ○ mental math ○ partial products ○ operation properties ○ place value strategies ○ standard algorithm • Solve one-step and two-step problems involving multiplication and division within 100 using strategies with ○ objects ○ arrays area models ○ equal groups ○ properties of operations ○ recall of facts • Represent and solve one- and two-step multiplication and division problems within 100 using ○ arrays ○ strip diagrams ○ equations

Grading Period 4

Unit 7: Fractions

Estimated Date Range: 3/17/25 - 4/17/25

Estimated Time Frame: 23 Days

Unit Overview: In this unit, students will represent fractions in various ways, including objects and pictorial representations such as strip diagrams and number lines. Students will also practice comparing fractions, determining the sum of the unit fractions, and solving problems that involve sharing with two or more people.

At home connections:

- Find situations or objects around the house that represent fractions. (e.g. splitting an apple into eights)

- Partition shapes to represent fractions. (e.g. cut or fold a sheet of paper to create fractions)
- Compare visual models of fractions (e.g. compare two sheets of paper that has been cut into halves and fourths)

Concepts within Unit #7 Link to TEKS	**Success Criteria for this concept**

Concept #1: Understanding Fractions
3.3D, 3.3A, 3.3B, 3.3C, 3.3E, 3.7A
	• Compose and decompose fractions into unit fractions.
	• Represent fractions greater than zero and less than or equal to one (with denominators 2, 3, 4, 6, and 8) using
	  ○ objects
	  ○ pictorial representations
	  ○ strip diagrams
	  ○ number lines
	• Explain the unit fraction as one part of the whole that has been divided into equal parts.
	(e.g. ¾ = ¼ + ¼ + ¼)
	• Solve problems involving partitioning among two or more recipients using pictorial representations of fractions
	  ○ partitioning an object
	  ○ partitioning a set of objects
	  ○ using pictorial representations of fractions
	  ○ using denominators of 2, 3, 4, 6, and 8
	  ○ between 0 and 1
	  ○ beyond one whole
	• Represent equivalent fractions using a variety of objects and pictorial representations.
	• Represents equivalent fractions with denominators of 2, 3, 4, 6, and 8
	  ○ using a variety of objects
	  ○ using a variety of pictorial models (including number lines)
	  ○ and justify how two fractions are equivalent using the model

Concept #2: Comparing Fractions
3.3H, 3.3D, 3.3A, 3.3B, 3.6E, 3.3F, 3.3G
	• Compares two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using
	  ○ symbols
	  ○ words
	  ○ Objects
	  ○ Pictorial model

Unit 8: Essential Understanding of 3rd Grade

Estimated Date Range: 4/22/25 - 5/29/25
Estimated Time: 27 Days

Unit Overview: In this unit students will review and combine the problem-solving process and skills to solve multi-step multiplication and division. They will continue to practice solving and representing the actions of the word problems in various ways. Students will also need to demonstrate proficiency with multiplying a two-digit number by a one-digit number.

At home connections:

- Practice skip counting using numbers from 2 to 10 to help with multiplication facts.
- Students create their own story problems that would require multiplication or division to solve.
- Practice multiplication facts with real world objects. (e.g. How many tires on the 5 cars in front of us?)

Concepts within Unit #8 **Link to TEKS**	**Success Criteria for this concept**

Concept #1: Multi-step Multiplication and Division Problems
3.4K, 3.5B, 3.4G, 3.4F, 3.5C, 3.5D, 3.5E
	• Multiply a two-digit number by a one-digit number using strategies
	  ○ mental math
	  ○ partial products
	  ○ operation properties
	  ○ place value strategies
	  ○ standard algorithm
	• Solve one-step and two-step problems involving multiplication and division within 100 using strategies with
	  ○ objects
	  ○ arrays area models
	  ○ equal groups
	  ○ properties of operations
	  ○ recall of facts
	• Represent and solve one- and two-step multiplication and division problems within 100 using
	  ○ arrays
	  ○ strip diagrams
	  ○ equations

Glossary of Curriculum Components

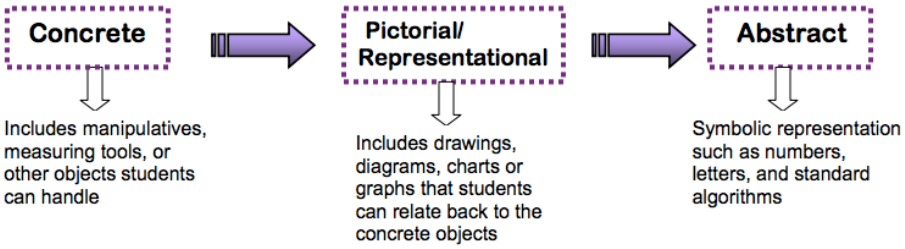
Overview– The content in this document provides an overview of the pacing and concepts covered in a subject for the year.
TEKS – Texas Essential Knowledge and Skills (TEKS) are the state standards for what students should know and be able to do.
Unit Overview – The unit overview provides a brief description of the concepts covered in each unit.
Concept – A subtopic of the main topic of the unit.
Success Criteria—a description of what it looks like to be successful in this concept.
Competency—Standards-Based Grading communicates students' understanding of the Texas Essentials Knowledge and Skills (TEKS). Using the TEKS, teachers developed grade-level competencies to communicate student progress in the Standards-Based gradebook. The competencies are the same for each grade-level content area (i.e. 1st grade math) across the district. Teachers report students' progress on the competencies using learning progressions.

Parent Resources
The following resources provide parents with ideas to support students' understanding. For sites that are password protected, your child will receive log-in information through their campus.

Resource	How it supports parent and students
Great Minds Eureka Math	This is the textbook for elementary school math. Click on the link for directions on accessing the textbook.
DreamBox	DreamBox is an online program that supports the development of elementary math skills through games and online practice. This resource is aligned to the TEKS and is computer adaptive, so it will adapt to the academic needs of the user.
Didax Virtual Manipulatives Math Learning Center Math Apps	These online resources provide access to virtual manipulatives.
Parent Resources from youcubed.org	This resource from youcubed.org includes articles for parents on ways to support their students in learning and understanding mathematics.
Student Resources from youcubed.org	This resource from youcubed.org includes videos concerning growth mindset in mathematics
Math: Why Doesn't Yours Look Like Mine?	This resource provides an explanation of why math looks different now as opposed to how parents learned mathematics and how to support students in learning mathematics.
Math4Texas	This resource breaks down grade level standards, provides example questions, vocabulary, and links to online resources for students aligned to the standards.

Instructional Model

The structures, guidelines or model in which students engage in a particular content that ensures understanding of that content.



The instructional model for mathematics is the Concrete-Representational-Abstract Model (CRA).

The CRA model allows students to access mathematics content first through a concrete approach ("doing" stage) then representational ("seeing" stage) and then finally abstract ("symbolic" stage). The CRA model allows students to conceptually develop concepts so they have a deeper understanding of the mathematics and are able to apply and transfer their understanding across concepts and contents. The CRA model is implemented in grades K-12 in FBISD.