

Kindergarten Math Overview 2022 - 2023

This document is designed 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 reasoning through outcomes of decisions*
- *Explaining 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 counting forwards and backwards.*

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.

K.1A apply mathematics to problems arising in everyday life, society, and the workplace

K.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

K.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

K.1D communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate

K.1E create and use representations to organize, record, and communicate mathematical ideas

K.1F analyze mathematical relationships to connect and communicate mathematical ideas

K.1G display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

Grading Period 1

Unit 1: Read, Write, Represent & Compare (0 – 10)

Estimated Date Range: 8/10/22 – 9/28/22

Estimated Time Frame: 34 Days

Unit Overview: This unit begins with 8 days of 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 or virtual environment. Students will then build the foundation for one to one correspondence, representing numbers a variety of ways and counting forwards and backwards. Students will begin to understand magnitude of numbers through comparing sets of objects, pictures and numerals. Students will apply understanding of more than/less than to generate sets that are more than, less than, or equal to a given number or one more and one less than a given number. Students will also begin composing and decomposing numbers up to 10 with objects and pictures in order to build an understanding of number values and representing numbers in multiple ways.

At home connections:

- Use positive affirmations to build students self-confidence
- Count their favorite toys or books.
- Show a number using different at home math tools (7 beans, 7 crackers, 7 toy cars—all represent 7 objects, but they may look like groups of different sizes)
- Practicing writing numbers or building number with playdough
- Compare sets of objects using toys, pictures in books, or things around the room.
- Create situations to practice decomposing objects. (e.g. Share five candies with your child. What are all the different combinations available/parent 3 candies, child 1 candy/parent 2 candies, child 3 candies, etc.)
- Create situation to practice composing objects. (e.g. counting connecting blocks and them together)

Concepts within Unit #1 Link to TEKS	Competencies that will be graded in this unit	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: Read, Write, and Represent Numbers 0-10 K.2A, K.2B, K.2C, K.2D, K.5A	Competency 1 Competency 2	<ul style="list-style-type: none"> • Read, write, and represent numbers from 0 -10 with and without objects • Read, write, and represent numbers from 0-10 with and without pictures • Count forward and backward to at least 10 with and without objects • Count a set of objects up to at least 10 to demonstrate the last number said is the number of the objects (even if the arrangement of the object changes) • Recognize instantly the value of a small group of objects in an organized arrangement • Recognize instantly the value of a small group of objects in an unorganized arrangement

		<ul style="list-style-type: none"> Recite numbers up to at least 30 by ones and tens beginning with any given number
<p>Concept #3: Compare Numbers 0-10 K.2H, K.2E, K.2F, K.2G, K.5A</p>	<p>Competency 1 Competency 2</p>	<ul style="list-style-type: none"> Generate a number that is one more than or one less than another number. Generate a set using objects that represent a number that is more than, less than, and equal to a given number Generate a set using pictures that represent a number that is more than, less than, and equal to a given number use comparative language (more than, less than, same as) to compare numbers in a real-world context using <ul style="list-style-type: none"> sets of objects pictorial representations numerals

Unit 2: Compose & Decompose

Estimated Date Range: 9/29/22 – 11/4/22

Estimated Time Frame: 25 Days (7 Days in GP 1 and 18 Days in GP 2)

Unit Overview: in this unit, students will continue to work on number fluency by counting forward and backward, counting sets of objects and reciting numbers. Students will compose and decompose numbers up to 10 with objects and pictures in order to build an understanding of number values and representing numbers in multiple ways.

At home connections:

- Create situations to practice decomposing objects. (e.g. Share five candies with your child. What are all the different combinations available/parent 3 candies, child 1 candy/parent 2 candies, child 3 candies, etc.)
- Create situations to practice composing objects. (e.g. counting connecting blocks and them together)

Concepts within Unit #2 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept
<p>Concept #1: Composing and Decomposing K.2I, K.2A, K.2C, K.5A</p>	<p>Competency 1 Competency 2</p>	<ul style="list-style-type: none"> compose numbers up to 10 using <ul style="list-style-type: none"> objects pictures decompose numbers up to 10 using <ul style="list-style-type: none"> objects pictures

Grading Period 2

Unit 2: Compose & Decompose (Continued)

Estimated Date Range: 9/29/22 – 11/4/22

Estimated Time Frame: 25 Days (7 Days in GP 1 and 18 Days in GP 2)

Unit Overview: in this unit, students will continue to work on number fluency by counting forward and backward, counting sets of objects and reciting numbers. Students will compose and decompose numbers up to 10 with objects and pictures in order to build an understanding of number values and representing numbers in multiple ways.

At home connections:

- Create situations to practice decomposing objects. (e.g. Share five candies with your child. What are all the different combinations available/parent 3 candies, child 1 candy/parent 2 candies, child 3 candies, etc.)
- Create situations to practice composing objects. (e.g. counting connecting blocks and them together)

Concepts within Unit #2 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept
Concept #1: Composing and Decomposing K.2I, K.2A, K.2C, K.5A	Competency 1 Competency 2	<ul style="list-style-type: none"> • compose numbers up to 10 using <ul style="list-style-type: none"> ○ objects ○ pictures • decompose numbers up to 10 using <ul style="list-style-type: none"> ○ objects ○ pictures

Unit 3: Geometry

Estimated Date Range: 11/7/22 – 12/2/22

Estimated Time Frame: 15 Days

Unit Overview: In this unit, students will identify and create regular and irregular 2D shapes by their attributes using informal and formal geometric language. Students will also sort and classify both regular and irregular two-dimensional shapes. Students will also identify three-dimensional figures in real-life objects. These include, but are not limited to, cylinders, cones, spheres and cubes. Students will learn academic vocabulary for the attributes of three-dimensional figures, such as, faces, vertices and edges, and be able to relate these attributes back to two-dimensional figures. Students will then classify and sort three-dimensional figures continuing to use geometric language.

At home connections:

- Go on a scavenger hunt around the house to identify 2-D and 3-D figures, name them, and describe their attributes.

Concepts within Unit #3 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept
Concept #1: 2-D Shapes K.6E, K.6A, K.6C, K.6D, K.6F	Competency 1 Competency 4	<ul style="list-style-type: none"> • Identify two-dimensional shapes including <ul style="list-style-type: none"> ○ Circles ○ Triangles ○ Rectangles ○ Squares as special rectangles • Identify the attributes of two-dimensional shapes using informal and formal geometric language such as <ul style="list-style-type: none"> • corners • vertices • edges • lines • sides • Classify and sort a variety of regular and irregular two-dimensional shapes (not using attributes such as the size of the shape or the direction of the shape)

<p>Concept #2: 3-D Solids K.6E, K.6B</p>	<p>Competency 1 Competency 4</p>	<ul style="list-style-type: none"> • Classify and sort three-dimensional shapes such as <ul style="list-style-type: none"> ○ cylinder (e.g. can of soup) ○ cone (e.g. birthday hat) ○ sphere (e.g. ball) ○ cube (e.g. tissue box) • Identify two-dimensional components of three-dimensional objects • Describe the classifications of three-dimensional figures using geometric language <ul style="list-style-type: none"> ○ Flat ○ Curved ○ Surface ○ Edges ○ Faces ○ Vertices ○ Circles ○ Triangles ○ Rectangles ○ Squares (special rectangle)
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Unit 4: Data Analysis & Personal Financial Literacy

Estimated Date Range: 12/5/22 - 1/27/23 (10 Days in GP 2 and 16 Days in GP 3)

Estimated Time Frame: 26 Days

Unit Overview: In this unit, students will learn about financial matters such as ways to earn income. Financial literacy also includes knowing that certain jobs require certain skills. Students will also collect and sort data, create real object and picture graphs, and draw conclusions from these graphs.

At home connections:

- While running errands, identify people working different types of jobs to earn income.
- Discuss opportunities to earn income, have a lemonade stand, or garage sale
- Find data based on a topic of interest sort and organize the data into categories
- Create real-object graphs and picture graphs to represent friends' or family's favorite colors, favorite foods, shoe collection, etc.

<p>Concepts within Unit #4 Link to TEKS</p>	<p>Competencies that will be graded in this unit</p>	<p>Success Criteria for this concept</p>
<p>Concept #1: Personal Financial Literacy K.4A, K.9A, K.9C</p>	<p>Competency 1</p>	<ul style="list-style-type: none"> • Identify ways to earn an income. • List simple skills required for jobs. • Identify U.S. coins by name, including <ul style="list-style-type: none"> ○ pennies ○ nickels ○ dimes ○ quarters

Grading Period 3

Unit 4: Data Analysis & Personal Financial Literacy (Continued)

Estimated Date Range: 12/5/22 - 1/27/23 (10 Days in GP 2 and 16 Days in GP 3)

Estimated Time Frame: 26 Days

Unit Overview: In this unit, students will learn about financial matters such as ways to earn income. Financial literacy also includes knowing that certain jobs require certain skills. Students will also collect and sort data, create real object and picture graphs, and draw conclusions from these graphs.

At home connections:

- While running errands, identify people working different types of jobs to earn income.
- Discuss opportunities to earn income, have a lemonade stand, or garage sale
- Find data based on a topic of interest sort and organize the data into categories
- Create real-object graphs and picture graphs to represent friends' or family's favorite colors, favorite foods, shoe collection, etc.

Concepts within Unit #4 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept
Concept 2: Sort & Organize Data K.8A, K.8B, K.8C, K.9B, K.9D	Competency 1 Competency 6	<ul style="list-style-type: none"> • collect, sort, and organize data into two categories <ul style="list-style-type: none"> ○ determine a label for each category ○ describe similarities and differences to justify groupings • collect, sort, and organize data into three categories <ul style="list-style-type: none"> ○ determine a label for each category ○ describe similarities and differences to justify groupings • draw conclusions from real-object graph or picture graph <ul style="list-style-type: none"> ○ use comparative language to describe different sets of data within the same graph ○ summarize the data to draw a conclusion from data within the graph

Unit 5: Read, Write, Represent and Compare Numbers 0 – 20

Estimated Date Range: 1/30/23 - 2/24/23

Estimated Time Frame: 18 Days

Unit Overview: Students will continue to build the foundation for one to one correspondence, representing numbers a variety of ways and counting forwards and backwards using numbers from 0-20. Students will apply understanding of more than/less than to generate sets that are more than, less than, or equal to a given number or one more and one less than a given number.

At home connections:

- Count their favorite toys or books.
- Show a number using different at home math tools (7 beans, 7 crackers, 7 toy cars—all represent 7 objects, but they may look like groups of different sizes)
- Practicing writing numbers or building number with playdough

- Compare sets of objects using toys, pictures in books, or things around the room. Count their favorite toys or books.

Concepts within Unit #5 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept
Concept #1: Read, Write, and Represent Numbers 0-20 K.2B, K.2A, K.2C, K.2D, K.5A	Competency 1 Competency 2	<ul style="list-style-type: none"> • Read, write, and represent numbers from 0 -20 with and without objects • Read, write, and represent numbers from 0-20 with and without pictures • Count forward and backward to at least 20 with and without objects • Count a set of objects up to at least 20 to demonstrate the last number said is the number of the objects (even if the arrangement of the object changes) • Recognize instantly the value of a small group of objects in an organized arrangement • Recognize instantly the value of a small group of objects in an unorganized arrangement • Recite numbers up to at least 80 by ones and tens beginning with any given number
Concept #2: Compare Numbers 0-20 K.2H, K.2E, K.2F, K.2G	Competency 1 Competency 2	<ul style="list-style-type: none"> • Generate a number that is one more than or one less than another number • Generate a set using objects that represent a number that is more than, less than, and equal to a given number • Generate a set using pictures that represent a number that is more than, less than, and equal to a given number • Use comparative language (more than, less than, same as) to compare numbers in a real-world context using <ul style="list-style-type: none"> ○ sets of objects ○ pictorial representations ○ numerals

Unit 6: Sums & Differences

Estimated Date Range: 2/27/23 - 4/14/23

Estimated Time Frame: 28 Days (10 Days in GP 3 and 18 Days in GP 4)

Unit Overview: In this unit, students will review composing and decomposing numbers in order to begin connections with addition and subtraction. Students will be expected to solve word problems involving addition and subtraction and explain the strategies they used to solve the problems.

At home connections:

- Identify places where you see different number combinations or addition/subtraction situations around you. (e.g. we started the week with 8 granola bars, how many do we have now? How many have we eaten?)
- Use toys and other small objects to model addition and subtraction problems and explain their story as they model.

Concepts within Unit #6 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept
Concept #1: Composing and Decomposing K.2I, K.2A, K.2C	Competency 1 Competency 2	<ul style="list-style-type: none"> • compose numbers up to 10 using <ul style="list-style-type: none"> ○ objects ○ pictures • decompose numbers up to 10 using <ul style="list-style-type: none"> ○ objects ○ pictures
Grading Period 4 Unit 6: Sums & Differences (Continued) Estimated Date Range: 2/27/23 - 4/14/23 Estimated Time Frame: 28 Days (10 Days in GP 3 and 18 Days in GP 4)		
<p>Unit Overview: In this unit, students will review composing and decomposing numbers in order to begin connections with addition and subtraction. Students will be expected to solve word problems involving addition and subtraction and explain the strategies they used to solve the problems.</p> <p>At home connections:</p> <ul style="list-style-type: none"> • Identify places where you see different number combinations or addition/subtraction situations around you. (e.g. we started the week with 8 granola bars, how many do we have now? How many have we eaten?) • Use toys and other small objects to model addition and subtraction problems and explain their story as they model. 		
Concepts within Unit #6 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept
Concept #2: Sums and Differences K.3B, K.2I, K.3A, K.3C	Competency 1 Competency 3	<ul style="list-style-type: none"> • Solves word problems involving sums • Solves word problems involving differences • Explains strategies used to solve problems
Unit 7: Measurement Estimated Date Range: 4/17/23 -5/5/23 Estimated Time Frame: 15 Days		
<p>Unit Overview: In this unit, students will discuss give examples of measurable attributes of a given object. For example, a student must determine if a pencil can be measured as length, capacity and/or weight. Students will also compare two objects that can both be measured with the same attribute (length, capacity, and weight) and explain which object is longer, shorter, heavier, lighter, hold more, or holds less.</p> <p>At home connections:</p> <ul style="list-style-type: none"> • Identify a variety of household objects and determine how these objects can be measured. (e.g. Can this object’s weight be measured? Length? Capacity?) 		
Concepts within Unit #7 Link to TEKS	Competencies that will be graded in this unit	Success Criteria for this concept

<p>Concept #1: Measurement K.7B, K.7A</p>	<p>Competency 1 Competency 5</p>	<ul style="list-style-type: none"> • Compare two objects that can both have their length measured to see which object is longer, shorter, or the same • Compare two objects that can both have their capacity measured to see which object holds more, hold less, or holds the same • Compare two objects that can both have their weight measured to see which object is heavier, lighter, or equal to
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Unit 8: Essential Understanding of Kindergarten

Estimated Date Range: 5/8/23 - 5/25/23

Estimated Time Frame: 14 Days

Unit Overview: Students will review collecting and sorting data, creating real object and picture graphs, and drawing conclusions from these graphs. They will also have more opportunities to solve word problems involving addition and subtraction, and explain the strategies they used.

At home connections:

- Find data based on a topic of interest sort and organize the data into categories
- Create real-object graphs and picture graphs to represent friends' or family's favorite colors, favorite foods, shoe collection, etc.
- Identify places where you see different number combinations or addition/subtraction situations around you. (e.g. we started the week with 8 granola bars, how many do we have now? How many have we eaten?)
- Use toys and other small objects to model addition and subtraction problems and explain their story as they model.

<p>Concepts within Unit #8 Link to TEKS</p>	<p>Competencies that will be graded in this unit</p>	<p>Success Criteria for this concept</p>
<p>Concept #1: Sort, Organize, and Analyze Data K.8A, K.3B, K.2B, K.2H</p>	<p>Competency 1 Competency 3 Competency 6</p>	<ul style="list-style-type: none"> • Collect, sort, and organize data into two categories <ul style="list-style-type: none"> ○ determine a label for each category ○ describe similarities and differences to justify groupings • Collect, sort, and organize data into three categories <ul style="list-style-type: none"> ○ determine a label for each category ○ describe similarities and differences to justify groupings • Solves word problems involving sums <ul style="list-style-type: none"> ○ Solves word problems involving differences ○ Explains strategies used to solve problems

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.

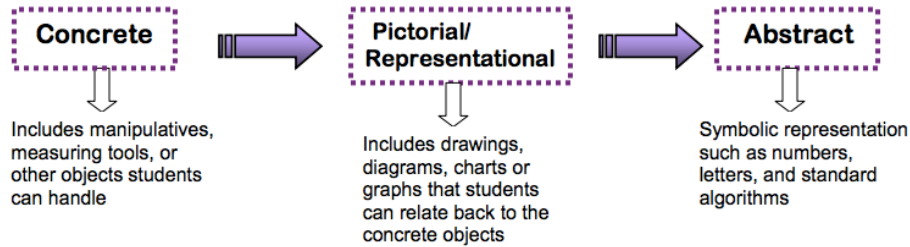
Parent Resources

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 through Clever located in 1Link.
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.
ST Math	ST Math 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.

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.