Math Grade 7
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.

At Home Connections

The following are suggestions for reinforcing number sense and mathematical reasoning 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.

- Ask questions that require students to describe and elaborate on their thinking and reasoning. Topics can be about everyday things as well as mathematics.
- Engage students in situations that challenge them to inquire and persevere through questioning.
- Play card games with students
- Play games with students such as Mancala, Yahtzee, Blokus, Rack-O, Mastemind, etc.
- Work number puzzles such as Sudoku, KenKen, Kakuro, or Numbrix.

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.

The student uses mathematical process to acquire and demonstrate mathematical understanding. The student is expected to:

- 7.1A Apply mathematics to problems arising in everyday life, society, and the workplace
- 7.1B 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
- 7.1C 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
- 7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate
- 7.1E Create and use representations to organize, record, and communicate mathematical ideas
- 7.1F Analyze mathematical relationships to connect and communicate mathematical ideas
- 7.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

Grading Period 1

Unit 1: Rational Number Operations

Estimated Date Range: Aug. 10 – Sept. 2
Estimated Time Frame: 18 days

Unit Overview: In this unit, students will use visual representations to organize and display the relationship of the sets and subsets of rational numbers, which include natural numbers, whole numbers, integers and rational numbers. Understanding the relationships of sets and subsets of rational numbers assists in building the foundation of algebraic concepts students will need for eighth grade math. Prior to grade seven, students performed addition, subtraction, multiplication, and division with nonnegative rational numbers including whole numbers, positive fractions, and positive decimals. Students also modeled everyday situations with integers. Students will continue to add, subtract, multiply, and divide, but operations now include negative and positive rational numbers. Students will also fluently perform all operations of positive and negative rational numbers including integers, decimals, fractions and percentages converted to equivalent decimals or fractions.

At home connections:

- Parents may "call out" a number and ask student to classify it as a natural number, whole number integer, and/or rational number.
- Have student locate numbers on food labels, tv commercials, or text and ask him/her to classify it as a natural number, whole number integer, and/or rational number.

Concepts within Unit #1 Link to TEKS	Success Criteria for this concept
Establishing a Positive Mathematics Community TEKS: 7.1A, 7.1B, 7.1C, 7.1D, 7.1E, 7.1F, 7.1G	• Demonstrate active listening skills while sharing in the community circle. • Make positive and supportive connections with my peers. • Engage in circle dialogues using the circle guidelines. • Share my math ideas and strategies when given a problem during the number sense routine. • Explain what a Respect Agreement is and why it is created. • Work in a group to solve a mathematical problem. • Describe strategies that I can use to solve math problems. • Provide feedback to by peers using guidelines and a protocol.
Concept #1: Sets and Subsets TEKS: 7.2	• Classify rational numbers using visual representations • Describe the relationships between sets and subsets of rational numbers
Concept #2: Rational Number Operations TEKS:7.3A, 7.3B	• Add rational numbers fluently. • Subtract rational numbers fluently. • Multiply rational numbers fluently. • Divide rational numbers fluently. • Determine appropriate operations when given a context.

Unit 2: Proportional Relationships

Estimated Date Range: Sept. 6 – Oct. 7 and Oct. 11 – Oct. 13
Estimated Time Frame: 26 days

Unit Overview: In this unit, students will extend and apply their previous knowledge of ratios, rates, and percentage (single-step) problems from 6th grade to multi-step problems in 7th grade. Students will learn multiple strategies for solving proportion problems, such as equivalent ratios, unit rate, and ratio tables. Students will explain or show their thinking using representations and verify that their answers for reasonableness. In addition, students will also use models to identify the parts of the problem and how the values are related. Students will extend their understanding of proportional relationships to solving percentage problems involving sales tax, markups, markdowns, simple interest, commissions, fees, percentage increase and decrease. Students will also extend their understanding of proportional relationships to converting units within customary and metric systems.

At home connections:

- Have student determine the unit rate for various items in a grocery store or sales ad (I.e. If 5 lbs. of bananas cost $2.50, how much does 1 lb. of bananas cost?
- Ask student to estimate the tip for a service rendered given a standard tipping percentage of 15%.
- Have student to identify two similar figures, (at home, at the store, in the media, etc.) and explain why the two figures are similar.
- Have student create a scale model or drawing of an object in the house. Ask student to explain how the model or drawing was created and the scale factor used.

Concepts within Unit # 2 Link to TEKS	**Success Criteria for this concept**
Concept #1: Application of Percentages TEKS: 7.3B, 7.4D, 7.13A, 7.13E, 7.13F	• List the different ways to solve problems with proportions. • I will explain methods for solving problems involving proportions. • I will use proportions to make predictions and comparisons.
Concept #2: Calculating Unit Rates TEKS: 7.4B, 7.4E	• I will define what unit rate is and explain what it represents in a situation. • I will calculate unit rate from mathematical and real-world application problems. • I will use unit rates to convert between measurement systems.
Concept #3: Similarity TEKS: 7.5A, 7.5C	• Identify corresponding angles in two figures. • Identify corresponding sides in two figures. • Write proportions that describe the relationship of sides between similar shapes. • Write proportions that describe the relationship of sides within similar shapes • Simplify a ratio to determine if two figures are similar or not. • Use a scale on map to solve problems. • Use a scale provided to solve real-world problems. • Solve problems involving similarity

Grading Period 2

Unit 2: Proportional Relationships (continued)

Estimated Date Range: Sept.6 – Oct. 7 and Oct. 11 – Oct. 13
Estimated Time Frame: 26 days
See Grading period 1 for details

Unit 3: Linear Relationships

Estimated Date Range: Oct. 14 – Nov. 8
Estimated Time Frame: 17 days

Unit Overview: In this unit, students will use bivariate data to examine constant rates of changes given pictorial, tabular, verbal, numeric, graphical, and algebraic representations. Students will extend their understandings of the constant of proportionality. Students will be formally introduced to the slope intercept form of equations, $y=mx+b$, to represent linear relationships. Students will learn to relate the constant rate of change to m, and y-coordinate, when the x-coordinate is zero, to b in equations that simplify to the form of $y=mx+b$. Students will represent linear relationships using verbal descriptions, tables, graphs and equations that simplify to the form $y=mx+b$. Students may encounter various representations such as verbal descriptions, tables, graphs, and equations in the form $y = mx + b$ to describe algebraic relationships. Equations should include rational number coefficients and constants.

At home connections:

- Discuss with student what it means to travel at constant rate.
- Ask student to explain how the distance a car travel changes every hour if it travels at a constant speed of 65 miles per hour for four hours.
- Ask student to identify the "change" in the following situations: Max earns $12 per hour; The cost of the homecoming dance tickets is $7 per ticket.

Concepts within Unit # 3 **Link to TEKS**	**Success Criteria for this concept**
Concept #1: Representing Constant Rate of Change TEKS: 7.4A, 7.4C	• Represent constant rates of change in a table • Represent constant rates of change in a graph • Represent constant rates of change in a verbal situations • Represent constant rates of change in an equation in the form of y=kx • Make the connection between the unit rate and the constant of proportionality • Determine the constant of proportionality from a table • Determine the constant of proportionality from a graph • Determine the constant of proportionality from a verbal situation • Determine the constant of proportionality from an equation
Concept #2: Linear Relationships TEKS: 7.7A, 7.10A	• Calculate the rate of change from a table, graph, verbal, or mathematical situations. • Make connections between the different representations for the rate of change. • Determine the initial value of a situation from a table, graph, verbal, or mathematical situation. • Predict future values in linear situations from all representations. • Describe in words the components of a linear equation and what they represent. • Move fluently between all four representations of linear situations. • Compare and contrast different linear situations • Compare rates of change and initial value and their meaning in different linear situations.

Unit 4: Equations and Inequalities

Estimated Date Range: Nov 9 – Nov. 18 and Nov. 28 – Dec. 16
Estimated Time Frame: 23 days

Unit Overview: In this unit, students will write one-step equations, one-step inequalities, and two-step equations from real world situations. Students will also use concrete models, manipulatives, and inverse operations to solve two step equations and inequalities as well as represent solutions to equations and inequalities and determine if a solution makes an equation or inequality true. In the previous unit, students wrote one variable, two-step equations from verbal descriptions using the slope intercept form, *y=mx+b,* to represent linear relationships. In this unit, students will extend their understanding of linear relationships by solving equations by preserving equivalence throughout the steps.

At home connections:

- Utilize websites such as Solve me Puzzles to practice finding the value of various shapes.
- Utilize the Math Phet Inequality simulation to explore inequalities.

Concepts within Unit # 4 Link to TEKS	Success Criteria for this concept
Concept #1: Writing Equations and Inequalities TEKS: 7.10A, 7.10C	• Model equations that represent a verbal situation. • Write an expression to represent a verbal situation for an equation or inequality • Write a one-variable two step equation that represents a situation • Model inequalities that represent a verbal situation. • Write a one-variable, two-step inequality that represents a situation.
Concept #2: Model and Solve Equations TEKS: 7.11A	• Explain that when solving an equation, it has to maintain balance. • Prove that my solutions make the equation equivalent on both sides. • Explain (written or verbally) what a solution to an equation represents • Model a one-variable, two-step equation • Describe how to solve a one-variable, two-step equation using models. • Make connections between using models and inverse operations • Solve one-variable, two-step equations using inverse operations. • Solve equations from real-world situations.
Concept #2: Model and Solve Inequalities TEKS: 7.10B, 7.11A	• Explain (verbally or written) what the solution of an inequality represents • Graph solutions for an inequality on a number line • Model a one-variable, two-step inequality • Explain/describe how to solve a one-variable, two-step inequality using models or manipulatives • Explain and justify when to reverse the inequality symbol while solving an inequality • Solve a one-variable, two-step inequality using inverse operations • Solve a one-variable, two-step inequality from a real-world situation.
Concept #4: Applications of Equations and Inequalities TEKS: 7.11A, 7.11B, 7.11C	• Describe geometry concepts including sum of angles in a triangle, supplementary angles, complementary angles, adjacent angles, and vertical angles. • Set up an equation based on the geometry concepts • Solve the equation to determine the value of the variable • Solve the equation and then determine the value of the missing angle.

Grading Period 3

Unit 5: Circumference & Area of 2-D Figures

Estimated Date Range: Jan. 5 – Feb. 2
Estimated Time Frame: 19 days

Unit Overview: In this unit, students will discover Pi and how it is the ratio of the circumference to the diameter. Students learn to represent the relationship between the parts of the circle and circumference with pictures, graphs, and algebraically. Based on the ratio of circumference to diameter, students will then identify how to calculate circumference of a circle when provided with the radius or the diameter. Students will explore and determine how to calculate area of circles based on what they know about the area of a parallelogram by using manipulatives and technology to make the connections. Students will need to be able to apply the knowledge of area and circumference to different real-world situations. In this unit, students will use their prior knowledge of area of polygons and circles to determine area of composite figures.

At home connections:

- Have student find various circular objects in the home and measure the radius and diameter.
- Have student find various circular objects in the home and determine the area and circumference.
- Ask student to create a composite figure using 2-dimensional figures and determine the area of each shape and the composite area.
- Ask student to research and explain the origin and value of pi.

Concepts within Unit # 6 **Link to TEKS**	**Success Criteria for this concept**
Concept #1: Circumference and Area of Circles TEKS: 7.5B, 7.8C, 7.9B	• Identify the radius, diameter, and circumference of the circle. • Determine the relationship of radius and diameter of a circle. • Understand that the relationship between the circumference of a circle and its diameter is a constant rate by comparing different size circles dimensions. • Define what Pi represents. • Use my knowledge of the ratio of pi to determine how to calculate circumference. • Determine circumference when given radius or diameter of a circle. • Determine the circumference of a circle in real world application problems. • Decompose a circle into small triangular sections to make connections to the radius and circumference of a circle to the dimensions of a rectangle. • Use the connections to approximate the formula for area of a circle. • Apply the formula for area of a circle to solve real world application problems. • Determine the area of a circle. • Determine the difference between what area of a circle and circumference represents and identify which situations are circumference and which situations are area.
Concept #2: Area of Composite Figures TEKS: 7.9B, 7.9C	• Decompose a composite shape into simple shapes such as square, rectangle, triangle, trapezoid, semi-circles, and quarter circles.

	• Identify the dimensions needed to find the area of the simple shapes. • Determine the area of a composite shape involving two or more simple shapes. • Solve application problems involving composite area. • Determine the reasonableness of the area calculated for the composite figure. • Determine the area of a shaded or unshaded region within a figure. • Determine the area of a composite figure on a coordinate grid by adding the area of the shapes that create the composite figure. • Determine the area of the composite figure on a coordinate grid by subtracting the area of the non-shaded part when drawing a rectangle (or other shape) around the figure • Model the area of a composite figure with an equation.

Unit 7: Volume & Surface Area of 3-D Figures
Estimated Date Range: Feb. 2 – Mar. 3
Estimated Time Frame: 20 days

Unit Overview: In this unit, students will make the bridge from 2-D shapes into 3-D shapes from calculating composite area to calculating surface area using nets. Students will only focus on rectangular prims and pyramids and triangular prisms and pyramids. Students will determine the net of these figures when given a 3-D picture or model. They will identify the location of the dimensions on the shapes net when the prism or pyramid is a 3-D drawing. Students will learn to calculate the lateral and total surface area of the figures as well as understand and explain the difference between the two and apply it to real world scenarios. Students will learn how the volume formula is derived. Students will also gain a better understanding of how the volume formula relates to prisms and pyramids with congruent bases and heights. Students will apply their understanding of volume to solve real-world application problems involving volume of those four figures.

At home connections:

- Ask student to identify real-world situations in which finding the volume and surface area of a 3-D figure is relevant.
- Have student use a cereal box to explain total and lateral surface area and volume of rectangular prism.
- Have student create a photo album of real-world photos of rectangular prisms, triangular prisms, rectangular pyramids and triangular pyramids.

Concepts within Unit # 7 **Link to TEKS**	**Success Criteria for this concept**
Concept #1: Surface Area TEKS: 7.9C, 7.9D	• Explain the relationships between surface area and area of composite shapes. • Solve problems involving surface area of rectangular prisms, rectangular pyramids, triangular prisms, and triangular pyramids. • Solve problems involving lateral surface are of rectangular prisms, rectangular pyramids, triangular prisms, and triangular pyramids. • Understand how the area formulas used when calculating composite area (of nets) are connected to the lateral and total surface area formulas of the 3D figures. (Composing and Decomposing) • Solve for the lateral/total surface area of a prism in a real-world situation.

	• Differentiate between the similarities and differences between lateral and total surface area in mathematical and real-world applications • Justify and explain the reasonableness of a solution (measurement of a dimension, lateral or total surface area) as it relates to the context within a real-world situation.
Concept #2: Volume of 3-D Figures TEKS: 7.8A, 7.8B, 7.9A	• Identify whether a shape is a prism or a pyramid. • Explain the relationships between volume of prisms and pyramids and their relationship to their corresponding formulas. • Identify the base of the prism or pyramid. • Be able to identify the height of the prism or pyramid. • Identify the appropriate formula for the volume of the figure • Calculate volume of triangular prisms and pyramids when given pictures • Calculate the volume of rectangular prisms and pyramids when given pictures • Calculate a missing dimension when given the volume of a three-dimensional figure. • Solve application problems involving volume of rectangular and triangular prisms and pyramids. • Explain the connections between the dimensions of the net and its 3D figure and how they are used to calculate the volume of the figures.
Unit 8: Data & Probability Estimated Date Range: Mar. 6 – Mar. 10 and Mar. 20 – April 17 Estimated Time Frame: 24 days See Grading Period 4 for details	

Grading Period 4

Unit 8: Data & Probability

Estimated Date Range: Mar. 6 – Mar. 10 and Mar. 20 – April 17
Estimated Time Frame: 24 days

Unit Overview: In this unit, students will create sample spaces using tree diagrams and lists as well as using manipulatives and technology to understand probability of outcomes in simple and compound events. Students will identify a probability of simple event and its complement and describe the relationships between the two. Students will explore and understand the difference between theoretical probability and experimental probability for various events. Students will also create simulations of different events with or without technology to make predictions and compare different events. Students will make predictions with simple and compound events based on experimental data and/or theoretical probability.

At home connections:

- Have student use small candy bags (Skittles, M&Ms, etc.) to determine the theoretical probability of choosing a certain color from the bag.
- Play "Coin Toss" with student. This will require you and your child to choose heads or tails, flip the coin 15 times, record the outcomes, and the determine the probability of flipping a coin landing or heads or tails. The probability must be expressed as a fraction, decimal or percentage. The person with the greater probability wins.

Concepts within Unit # 8 Link to TEKS	Success Criteria for this concept
Concept #1: Foundations of Probability TEKS: 7.6A, 7.6B	• Identify and determine the possible outcomes for an event. • Create a list and/or a tree diagram to represent all outcomes for a simple event • Create a list and/or a tree diagram to represent all outcomes for a compound event. • Determine the total number of outcomes for an event based on the sample space created. • Determine which sample space is correct when provided with choices in different forms. • Use dice, spinners, cards, etc. to create a simulation for an event. • Use a simulation to create a sample space for an event.
Concept #2: Determining Probability of Simple and Compound Events TEKS: 7.6A, 7.6B, 7.6E, 7.6I	• Understand and connect probability and ratios written as a fraction, decimal or percent. • Determine the difference between theoretical and experimental probability. • Use sample spaces to determine theoretical probability of simple events. • Use data to determine experimental probability of simple events. • Explain the relationship between probability of a simple event and its complement. • Describe how to find the probability of a simple event. • Use sample spaces to determine theoretical probability of compound events. • Use data to determine experimental probability of compound events. • Describe how to find the probability of a compound event.

	• Explain the difference between independent and dependent compound events and identify whether two events are independent or dependent. • Utilize simulations with or without technology to determine experimental probability.
Concept #3: Making Predictions with Simple and Compound Events TEKS: 7.6B, 7.6C, 7.6D, 7.6H	• Make predictions for simple events based on experimental data • Make predictions for compound events based on experimental data • Make quantitative predictions and comparisons of simple events • Make qualitative predictions and comparisons of simple events. • Make predictions using theoretical probability of simple events • Make predictions using theoretical probability of compound events.

Unit 9: Data & Statistics

Estimated Date Range: April 18 – May 10
Estimated Time Frame: 17 days

Unit Overview: In this unit, students will use proportional reasoning to compare data and solve data problems represented in bar graphs, dot plots, and circle graphs. Students will use part-to-part and part-to-whole comparisons and equivalencies to solve problems involving data from bar graphs, dot plots, and circle graphs. Students will compare the shape, center and spread of data using comparative plots, measures of central tendency and distribution of the data. Students will learn what a random sample is and be able to determine whether a sample is valid. Students will also use data to make connections between random samples and populations, make inferences from random samples of data using proportional reasoning. Students will also compare two populations based on the data in random samples to make inferences about similarities and differences.

At home connections:

- Have student survey immediate or extended family member on their favorite ice cream flavor. Student will use the results to create a bar graph and circle graph.

Concepts within Unit # 9 Link to TEKS	**Success Criteria for this concept**
Concept #1: Analyzing Data in Bar Graphs, Dot Plots, and Circle Graphs TEKS: 7.6G	• Read and understand the information represented in bar graphs, circle graphs, and dot plots. • Solve problems involving data from bar graphs. • Solve problems involving data from dot plots. • Solve problems involving circle graphs. • Identify part-to-whole comparisons and equivalencies in bar graphs, dot plots, and circle graphs. • Identify part-to-part comparisons and equivalencies in bar graphs, dot plots, and circle graphs. • Use part-to-part and part-to-whole comparisons and equivalencies to solve problems involving different forms of data.
Concept #2: Comparing Two Sets of Data TEKS: 7.12A	• Be able to read and interpret box plots. • Be able to read and interpret dot plots.

	• Be able to determine measures of center in box plots and dot plots • Be able to determine shapes and spread in box plots and dot plots. • Compare two sets of data in box plots by comparing their shapes, centers, and spreads. • Be able to compare two sets of data in box plots by comparing their shapes, centers, and spreads.
Concept #3: Making Inferences with Data TEKS: 7.12B, 7.12C	• Be able to read and interpret bar graphs, circle graphs, dot plots, and box plots. • Be able to make connections between samples and their populations. • Make inferences about populations from random samples. • Make predictions from random samples of data using proportional reasoning. • Compare two populations based on data in random samples. • Make inferences about the differences between two populations based on random samples from the populations.

Unit 10: Financial Literacy

Estimated Date Range: May 11 – May 25
Estimated Time Frame: 11 days

Unit Overview: In this unit, students will differentiate between taxable and non-taxable items as well as learn how to calculate sales tax. Students will use a pay stub to calculate income tax, payroll tax (Medicare and social security), paycheck withholdings, and net income. Students will utilize net income to calculate a budget and categorize expenses. Students will also identify fixed and variable expenses as well as target salaries and occupations that support them. Students will analyze assets and liabilities to identify net worth. Students will compare simple and compound interest and analyze total interest earned.

At home connections:

- Ask student to estimate the tax of a sales item given a tax rate of 8%.
- Show student receipts of various sales item and ask them to calculate the tax rate.
- Have student determine the cost of an item he/she would like to purchase after taking a percentage off, such as 25%.
- Share with student a sample pay stub and discuss the purpose of income tax, social security and Medicare. Show students how these taxes are a percentage of earnings.
- Create a family budget spreadsheet with student.

Concepts within Unit # 10 **Link to TEKS**	**Success Criteria for this concept**
Concept #1: Tax TEKS: 7.13A, 7.13F	• Calculate sales tax for a purchase • Calculate income tax based on given wages. • Understand and define sales tax and income tax. • Explain how different monetary incentives work and can be used. • Calculate final prices when using monetary incentives with or without sales tax. • Determine which monetary incentives provide you the best deal.
Concept #2: Personal Budget and Net Worth TEKS: 7.13B, 7.13C, 7.13D	• Identify the components of a family budget and different expenses that are included in each.

	• Calculate percentages of a budget that each category comprises of the total budget. • Define and differentiate between fixed and variable expenses. • Define and differentiate between assets and liabilities. • Use knowledge of assets and liabilities to create a net worth statement. • Determine how to improve different people net worth when given scenarios. • Use a family budget estimator to determine minimum hourly wage or salary needed to meet a family's needs. • Compare minimum wages needed for family budgets when living in different cities and states.
Concept #3: Interest TEKS: 7.13E	• Calculate simple interest earned on different principal amounts over different time periods. • Calculate compound interest earned on different principal amounts over different time periods. • Explain the difference between simple and compound interest. • Compare simple and compound interest earnings for different principal amounts and over different time periods.

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.

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.

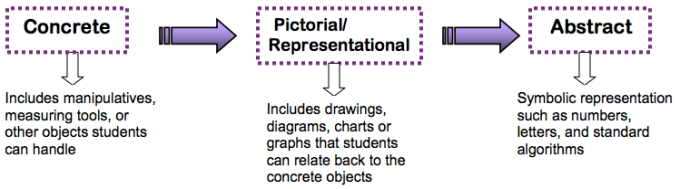
Resource	How it supports parent and students
Open Up Resources – Family Resources (Grade 7)	This is a family resource for information regarding the content that is being covered in your student's math class. Please note the units do not align to the unit's in FBISD's curriculum, however the content aligns.
Didax Virtual Manipulatives Math Learning Center Math Apps Polypad: Mathigon – Virtual Manipulatives	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.

Supplemental Resource and Tool Designation:

- The TI Nspire CX calculator is a standardized technology integration tool used for Mathematics and Science in FBISD.

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.

Math Workshop:

During math instruction in grades K-8 in FBISD, we follow the Math Workshop structures. Instruction during a math class follows one of the three structures: Task and Share, Mini Lesson, Guided Math and Learning Stations, and Guided Math and Learning Stations. The structure that is used each day is determined by the content covered as well as student need.

<table>
<tr><th>Task and Share</th><th colspan="2">Mini Lesson, Guided Math and Learning Stations</th><th colspan="2">Guided Math and Learning Stations</th></tr>
<tr><td>Number Sense Routine</td><td colspan="2">Number Sense Routine</td><td colspan="2">Number Sense Routine</td></tr>
<tr><td rowspan="2">Math Task</td><td colspan="2">Mini Lesson</td><td rowspan="2">Guided Math</td><td rowspan="2">Learning Stations</td></tr>
<tr><td>Guided Math</td><td>Learning Stations</td></tr>
<tr><td>Task Share and Student Reflective Closure</td><td colspan="2">Student Reflective Closure</td><td colspan="2">Student Reflective Closure</td></tr>
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Number Sense Routine – An engaging accessible, purposeful routine to begin math class that promotes a community of positive mathematics discussion and thinking.

Math Task – A problem-solving task that students work on in small groups. The teacher monitors and probes student thinking through questions. The task should have multiple entry points, allowing for all students to have access to the problem.

Task Share with Student Reflective Closure – Students come together as a whole class and discuss the various strategies they used to solve a rich mathematical task. Students ask questions, clarify their thinking, modify their work, and add to their collection of strategies.

Mini Lesson – A well-planned whole group lesson focused on the day's learning intention and accessible to all levels of learners.

Guided Math – Small group instruction that allows the teacher to support and learn more about students' understandings and misconceptions. Can include intervention, more on-level support, or enrichment.

Learning Stations – Activity in which students engage in meaningful mathematics and are provided with purposeful choices. Could include individual, partner or group tasks.

Student Reflective Closure – A deliberate and meaningful time for students to reflect on what they've learned and experienced during a math task, at activities in learning stations, or in a guided math group.