Math Grade 3 Overview 2019-2020

This document is designed to provide parents/guardians/community an overview of the curriculum taught in the FBISD classroom. It includes pacing, TEKS, Unit Overview, Big Ideas and Essential Questions, Concepts and Instructional Model.

Definitions:

**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.

**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.

**Unit Overview** – The unit overview provides a brief description of the concepts covered in each unit.

**Big Ideas and Essential Questions** - Big ideas create connections in learning. They anchor all the smaller isolated, facts together in a unit. Essential questions (questions that allow students to go deep in thinking) should answer the big ideas. Students should not be able to answer Essential Questions in one sentence or less. Big ideas should be the underlying concepts, themes, or issues that bring meaning to content.

**Concept** – A subtopic of the main topic of the unit

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

Parent Supports:

The following resources provide parents with ideas to support students in mathematical understanding

- Advice for Parents: Helping Children with Math
- How Math Should be Taught
- The Most Important Mathematical Habit of Mind
- Math: Why Doesn't Yours Look Like Mine?
**Instructional Model:**

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>
<thead>
<tr>
<th>Task and Share</th>
<th>Mini Lesson, Guided Math and Learning Stations</th>
<th>Guided Math and Learning Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Sense Routine</td>
<td>Number Sense Routine</td>
<td>Number Sense Routine</td>
</tr>
<tr>
<td>Math Task</td>
<td>Mini Lesson</td>
<td>Guided Math</td>
</tr>
<tr>
<td></td>
<td>Guided Math</td>
<td>Learning Stations</td>
</tr>
<tr>
<td>Task Share and Student Reflective Closure</td>
<td>Student Reflective Closure</td>
<td>Student Reflective Closure</td>
</tr>
</tbody>
</table>

**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.
Adopted Resources:
Elementary:  https://www.fortbendisd.com/Page/93917

Mathematical Process Standards:

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

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 Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate
3.1G Create and use representations to organize, record, and communicate mathematical ideas
3.1H Analyze mathematical relationships to connect and communicate mathematical ideas
3.1I Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

Grading Period 1

Unit 1: Creating a Mathematical Community through Graphing
Estimated Date Range: Aug. 14 – Aug. 20

Unit Overview:  In the previous grade level, students focused on pictographs and bar graphs with intervals of one. Students were expected to explain the length of a bar in a bar graph and the number of symbols in a pictograph represents the number of data points for each category. In this unit, students will continue to represent data in bar graphs and pictographs with multiple categories and scaled intervals. In addition to working with bar graphs and pictographs, students will also explore using frequency tables to organize data from a data collection. The focus of graphing in Third Grade is to analyze and summarize data. Students will be creating a frequency table, pictograph, and bar graph during this first week to analyze information. Students will use this knowledge in their everyday life when working with graphs, and apply this learning to understand how to read a variety of graphs. This unit is set up with graphing ideas to help teachers and students learn about each other.
In addition to graphing, the intent of this unit is to establish a foundation for upcoming units by reinforcing and supporting student ownership of learning. The emphasis will be on the creation of a positive and respectful learning environment through highlighting attributes of Profile of a Graduate, Growth Mindset, and the implementation and support of structured Math Workshop routines and procedures. The goal is to build a community of learners with a mathematical mindset in which students value their mistakes and struggles, and feel safe to engage in mathematical discourse.

Big Ideas:
• Problems can be solved and questions can be answered by collecting and analyzing data.
• Data can be represented visually using tables, charts, and graphs. The type of data determines the best choice of visual representation.
The question to be answered or the problem to be solved determines the most effective way the collection of data should be visually represented.

Graphs summarize information so that it is easier to understand.

**Essential Questions:**
- How can collecting and analyzing data help answer questions or solve problems?
- How can we visually represent a collection of data in a variety of ways?
- Why is it important to visually represent data in a variety of ways?
- Why are graphs important?

<table>
<thead>
<tr>
<th>Concepts within Unit #1</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Graphing and Setting Up Guided Math</td>
<td>3.8A, 3.8B</td>
</tr>
</tbody>
</table>

**Unit 2: Numeration**

**Estimated Date Range:** Aug. 21 – Aug. 30

**Unit Overview:** In this unit, students will gain a deeper understanding of place value by representing the value of digits by using concrete models, pictorial models and symbolic representations. Students will describe the mathematical relationships found in the base-10 place value system through the hundred thousands. They will also represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers. Students will also compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate.

**Big Ideas:**
- Concrete and pictorial representations help students build place value understanding.
- The base 10 number system uses digits 0-9, groups of 10 and place value to understand number structure.
- Any number can be represented in many ways and have the same value.
- Place Value knowledge impacts the understanding of operations.
- Numbers, expressions, and measures can be compared by their relative values.

**Essential Questions:**
- How does building numbers help you understand place value?
- How does the position of a digit in a number affect its value?
- How many different ways can you compose and decompose a number?
- Why do you need to know how to decompose and compose numbers?
- How do you compare two numbers? How do you order numbers? Why is this important?

<table>
<thead>
<tr>
<th>Concepts within Unit #2</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Compose and Decompose Numbers</td>
<td>3.2A, 3.2B</td>
</tr>
<tr>
<td>Concept #2: Compare and Order</td>
<td>3.2C, 3.2D</td>
</tr>
</tbody>
</table>

**Unit 3: Addition and Subtraction**

**Estimated Date Range:** Sep. 3 – Sep. 18
Unit Overview: Previously, students used addition and subtraction to solve one-step and multi-step problems within 1,00. They were expected to recall basic facts, understand and apply strategies and algorithms and use a knowledge of place value and properties of operations. In this unit, students will solve one and two-step problems with addition and subtraction using a variety of computation strategies and demonstrate understanding of the inverse relationship between addition and subtraction. Students will apply the skill of rounding and using compatible numbers to estimate addition and subtraction problems. Students will utilize these skills in the next grade level when they represent the value of a whole numbers through 1,000,000, decimals to the hundredths using expanded notation and numerals, and interpret the value of each place value position as ten times the position to the right or as one-tenth of the value of the place to its left.

Big Ideas:
- A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence.
- The base 10 system helps students solve addition and subtraction with understanding.
- Numerical expressions can be represented in different but equivalent ways to make calculations simpler.
- The same number sentence can be associated with different concrete or real-world situations, and different numbers sentences can be associated with the same concrete or real-world situation.
- Rules of arithmetic and algebra can be used together with notions of equivalence to transform equations so solutions can be found.
- Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally.

Essential Questions:
- How do I know where to begin when solving a problem?
- Why is place value important when solving addition and subtraction problems?
- Why is it important to solve multi-step math problems?
- What do you do to solve a problem?
- What is the relationship between the numbers presented?
- What generalization can be made from the numbers presented?

<table>
<thead>
<tr>
<th>Concepts within Unit #3</th>
<th>TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Rounding</td>
<td>3.2C, 3.4B</td>
</tr>
<tr>
<td>Concept #2: Addition and Subtraction Meaning</td>
<td>3.2A, 3.2B, 3.2C, 3.5A</td>
</tr>
<tr>
<td>Concept #3: Addition Progression and Estimation 2 and 3 Digit Numbers</td>
<td>3.2A, 3.2B, 3.2C, 3.4A, 3.4B, 3.5A</td>
</tr>
<tr>
<td>Concept #4: Subtraction Progression and Estimation 2 and 3 Digit Numbers</td>
<td>3.2A, 3.2B, 3.2C, 3.4A, 3.4B, 3.5A</td>
</tr>
<tr>
<td>Concept #5: Addition and Subtraction Problem Solving and Tables</td>
<td>3.2B, 3.2C, 3.4A, 3.5A, 3.5E</td>
</tr>
</tbody>
</table>

Unit 4: Multiplication and Division
Estimated Date Range: Sep. 19 – Oct. 10

Unit Overview: In this unit, students will build on their basic fact knowledge. Students will create multiple representations of multiplication and division problems to better understand the meaning of both operations as well as working towards solving problems using strategies as well as the standard algorithm. This will be used as students multiply with larger whole numbers and in future grade levels working with multiplying decimals and fractions.
Big Ideas:
- A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence.
- The base 10 system helps students solve multiplication and division with understanding.
- Numerical expressions can be represented in different but equivalent ways to make calculations simpler.
- The same number sentence can be associated with different concrete or real-world situations, and different numbers sentences can be associated with the same concrete or real-world situation.
- Rules of arithmetic and algebra can be used together with notions of equivalence to transform equations so solutions can be found.

Essential Questions:
- How do I know where to begin when solving a problem?
- Why is it important to solve multi-step math problems?
- What is the relationship between the numbers presented?
- What generalization can be made from the numbers presented?

Concepts within Unit #4
<table>
<thead>
<tr>
<th>Concept #1: Introducing Multiplication</th>
<th>TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Link to TEKS</td>
</tr>
<tr>
<td>Concept #1: Introducing Multiplication</td>
<td>3.4D, 3.4E, 3.4F, 3.4K, 3.5B, 3.5C, 3.5D, 3.5E</td>
</tr>
</tbody>
</table>

Concept #2: Multiplication
<table>
<thead>
<tr>
<th>Concept #2: Multiplication</th>
<th>TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Link to TEKS</td>
</tr>
<tr>
<td>Concept #2: Multiplication</td>
<td>3.4D, 3.4E, 3.4F, 3.4K, 3.5B, 3.5C, 3.5D, 3.5E</td>
</tr>
</tbody>
</table>

Grading Period 2

Unit 4: Multiplication and Division (cont.)
Estimated Date Range: Oct. 15 – Oct. 28

Unit Overview: In this unit, students will build on their basic fact knowledge. Students will create multiple representations of multiplication and division problems to better understand the meaning of both operations as well as working towards solving problems using strategies as well as the standard algorithm. This will be used as students multiply with larger whole numbers and in future grade levels working with multiplying decimals and fractions.

Big Ideas:
- A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence.
- The base 10 system helps students solve multiplication and division with understanding.
- Numerical expressions can be represented in different but equivalent ways to make calculations simpler.
- The same number sentence can be associated with different concrete or real-world situations, and different numbers sentences can be associated with the same concrete or real-world situation.
- Rules of arithmetic and algebra can be used together with notions of equivalence to transform equations so solutions can be found.

Essential Questions:
- How do I know where to begin when solving a problem?
- Why is it important to solve multi-step math problems?
- What is the relationship between the numbers presented?
• What generalization can be made from the numbers presented?

<table>
<thead>
<tr>
<th>Concepts within Unit #4</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #3: Division</td>
<td>3.4F, 3.4H, 3.4I, 3.4J, 3.4K, 3.5B, 3.5D, 3.5E</td>
</tr>
<tr>
<td>Concept #4: Relationship between Multiplication and Division</td>
<td>3.4D, 3.4E, 3.4F, 3.4G, 3.4H, 3.4I, 3.4J, 3.4K, 3.5B, 3.5C, 3.5D, 3.5E</td>
</tr>
</tbody>
</table>

**Unit 5: Money and Personal Financial Literacy**
*Estimated Date Range: Oct. 29 – Nov. 8*

**Unit Overview:** In this unit, students will add bills and coins. Students will also understand how planned and unplanned spending, credit, and the relationship between resources and costs help make decisions about saving and spending.

**Big Ideas:**
- All pieces of money have a specific value.
- An amount of money can be represented using different combinations of pieces of money.
- Money is used to satisfy needs and wants.
- Important personal finance knowledge and skills help people become financially capable and responsible to make decisions when it comes to satisfying needs and wants.

**Essential Questions:**
- Why is it important to understand the value of coins?
- In what ways can units of money be grouped?
- Why do we have money?

<table>
<thead>
<tr>
<th>Concepts within Unit #5</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Money – Coins and Bills</td>
<td>3.4A, 3.4C, 3.4K</td>
</tr>
<tr>
<td>Concept #2: Personal Financial Literacy</td>
<td>3.9ª, 3.9B, 3.9C, 3.9D, 3.9E, 3.9F</td>
</tr>
</tbody>
</table>

**Unit 6: Multiplication & Division and Numeration**
*Estimated Date Range: Nov. 11 – Nov 22*

**Unit Overview:** In this unit, students will represent real-world relationships using number pairs in a table and verbal descriptions. Students will decompose numbers in order to multiply by its place value. Students will summarize and solve one-step and two step problems using data from a graph.

**Big Ideas:**
- For a given set of numbers there are relationships that are always true, and these are the rules that govern arithmetic and algebra.
- Relationships can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways.
- Place Value knowledge impacts in the understanding of operations.
- Data summarized in graphs help us make sense of information in our world.

**Essential Questions:**
What is the relationship between the numbers presented?
What generalization can be made from the numbers presented?
How can an understanding of expanded notation help with multiplying numbers?
How can collecting and analyzing data help answer questions or solve problems?

<table>
<thead>
<tr>
<th>Concepts within Unit #6</th>
<th>TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Tables</td>
<td>3.4A, 3.5C, 3.5E</td>
</tr>
<tr>
<td>Concept #2: Expanded Notation</td>
<td>3.2B</td>
</tr>
<tr>
<td>Concept #3: Graphing</td>
<td>3.8A, 3.8B</td>
</tr>
</tbody>
</table>

### Unit Overview
In this unit, students will sort and group two and three dimensional figures based on attributes and properties. Students will solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals.

### Big Ideas:
- Two- and three-dimensional objects with or without curved surfaces can be described, classified, and analyzed by their attributes.
- Some questions can be answered or problems can be solved by collecting and analyzing data.
- Data can be represented visually using tables, charts, and graphs. The type of data determines the best choice of visual representation.
- The question to be answered or the problem to be solved determines the most effective way the collection of data should be visually represented.
- Graphs summarize information so that it is easier to understand.

### Essential Questions:
- How many ways can you sort and classify two or three-dimensional shapes?
- How can collecting and analyzing data help answer questions or solve problems?
- How can we visually represent a collection of data in a variety of ways?
- Why is it important to visually represent data in a variety of ways?
- Why are graphs important?
- How can we display the same information on two different types of graphs?

<table>
<thead>
<tr>
<th>Concepts within Unit #7</th>
<th>TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Classify and Sort Two-Dimensional Shapes/Quadrilaterals</td>
<td>3.6A, 3.6B, 3.6E</td>
</tr>
<tr>
<td>Concept #2: Classify and Sort Three-Dimensional Solids</td>
<td>3.6A, 3.6B</td>
</tr>
<tr>
<td>Concept #3: Problem Solving with Graphs</td>
<td>3.6A, 3.8A, 3.8B</td>
</tr>
</tbody>
</table>

### Grading Period 3
Unit 8: Graphing
Estimated Date Range: Jan. 7 – Jan. 13
Unit Overview: In this unit, students will review second grade concepts such as organized collection of data and display the information on bar graphs or pictographs with intervals of one or more. In third grade, students will continue to represent data on bar graphs or pictographs with multiple categories and scaled intervals. Bar graphs include scaled intervals marked in multiples of 2, 3, 4, 5, etc. Students will also explore using frequency tables to organize data. Students will also encounter dot plots for the first time and will learn how to create and interpret data on these graphs.

Big Ideas:
- Data summarized in graphs help us make sense of information in our world.
- Problems can be solved and questions can be answered by collecting and analyzing data.
- Data can be represented visually using tables, charts, and graphs. The type of data determines the best choice of visual representation.
- The question to be answered or the problem to be solved determines the most effective way the collection of data should be visually represented.
- Graphs summarize information so that it is easier to understand.

Essential Questions:
- Why are graphs important?
- How can collecting and analyzing data help answer questions or solve problems?
- How can we visually represent a collection of data in a variety of ways?
- Why is it important to visually represent data in a variety of ways?
- Why are graphs important?

<table>
<thead>
<tr>
<th>Concepts within Unit #8</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Graphing</td>
<td>3.4A, 3.8A, 3.8B</td>
</tr>
</tbody>
</table>
Unit 9: Fractions
Estimated Date Range: Jan. 14 – Feb. 28

Unit Overview: In this unit, students will identify fractions as part of a whole and represent fractions on a number line. Students will divide objects among two or more recipients. Students will represent equivalent fractions and compare two fractions. Students will use their knowledge of fractions and apply it to problem solving.

Big Ideas:
- The relationship between amount of fractional parts and size of the parts is foundational for comparing fractions.
- Any number can be represented in an infinite number of ways that have the same value.
- Numbers can be compared by their values.
- Define a fraction as partitioning one whole into equal parts.
- Develop an understanding of unit fractions.
- Divide an object or set of objects among 2 or more recipients.

Essential Questions:
- What is a fraction?
- Why is it important to understand the relationship between amount of fractional parts and size of the parts?
- Why is it important to compare fractions?
- What does partition mean?
- Why is the unit fraction an essential concept in understanding fractions in general?

<table>
<thead>
<tr>
<th>Concepts within Unit #9</th>
<th>TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Fractions as Part of a Whole</td>
<td>3.3A, 3.3B, 3.3C, 3.6E, 3.7A</td>
</tr>
<tr>
<td>Concept #2: Fractions on a Number Line and Measuring Length</td>
<td>3.3A, 3.3B, 3.3D, 3.7A</td>
</tr>
<tr>
<td>Concept #3: Sharing</td>
<td>3.3A, 3.3D, 3.3E</td>
</tr>
<tr>
<td>Concept #4: Compare and Order Fractions</td>
<td>3.3D, 3.3F, 3.3G, 3.3H</td>
</tr>
<tr>
<td>Concept #5: Problem Solving with Graphs</td>
<td>3.3A, 3.5E, 3.8A, 3.8B</td>
</tr>
</tbody>
</table>

Unit 10: Measurement
Estimated Date Range: Mar. 2 – Mar. 6

Unit Overview: In this unit, students will determine the area of rectangle or composite figure and determine the perimeter of a polygon. Students will determine the solutions time intervals and determine liquid volume (capacity and weight using appropriate units and tools. This is the building block for students to use models to determine the formulas for area and perimeter and solve problems involving length, area, intervals of time, liquid, volume and mass.

Big Ideas:
- Some attributes of objects are measurable and can be quantified using unit amounts.
- Measurement involves a selected attribute of an object and a comparison of the object being measured against a unit of the same attribute.
- Operations can be used to solve measurement problems.
- Perimeter is useful in everyday life.
The duration of an event is called elapsed time and it can be measured.

**Essential Questions:**
- What types of things can be measured? How can some things be measured?
- Why do measurements need both numbers and units? Why do we need standard units in measurement? How do we choose the best unit of measurement to use?
- How can patterns be used to determine standard formulas for area and perimeter?
- What operations help us to solve problems involving the perimeter of a polygon?
- Why is important to understand the perimeter of a shape?

<table>
<thead>
<tr>
<th>Concepts within Unit #10</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept #1: Area and Perimeter</td>
<td>3.4A, 3.4K, 3.6C, 3.6D, 3.6E, 3.7A, 3.7B</td>
</tr>
<tr>
<td>Concept #2: Liquid Volume, Capacity, Weight</td>
<td>3.7D, 3.7E</td>
</tr>
<tr>
<td>Concept #3: Time</td>
<td>3.7C</td>
</tr>
</tbody>
</table>

**Grading Period 4**

**Unit 10: Measurement (cont.)**

Estimated Date Range: Mar. 16 – Apr. 8

**Unit Overview:** In this unit, students will determine the area of rectangle or composite figure and determine the perimeter of a polygon. Students will determine the solutions time intervals and determine liquid volume (capacity and weight using appropriate units and tools. This is the building block for students to use models to determine the formulas for area and perimeter and solve problems involving length, area, intervals of time, liquid, volume and mass.

**Big Ideas:**
- Some attributes of objects are measurable and can be quantified using unit amounts.
- Measurement involves a selected attribute of an object and a comparison of the object being measured against a unit of the same attribute.
- Operations can be used to solve measurement problems.
- Perimeter is useful in everyday life.
- The duration of an event is called elapsed time and it can be measured.

**Essential Questions:**
- What types of things can be measured? How can some things be measured?
- Why do measurements need both numbers and units? Why do we need standard units in measurement? How do we choose the best unit of measurement to use?
- How can patterns be used to determine standard formulas for area and perimeter?
- What operations help us to solve problems involving the perimeter of a polygon?
- Why is important to understand the perimeter of a shape?
## Unit 11: Solving Problems with Addition and Subtraction

**Estimated Date Range:** Apr. 9 – Apr. 27

**Unit Overview:** In this unit, students will represent and solve one and two-step problems with addition and subtraction. Students will apply the skill of rounding and using compatible numbers to estimate addition and subtraction problems.

**Big Ideas:**
- A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence.
- The base 10 system helps students solve addition and subtraction with understanding.
- Numerical expressions can be represented in different but equivalent ways to make calculations simpler.
- The same number sentence can be associated with different concrete or real-world situations, and different numbers sentences can be associated with the same concrete or real-world situation.
- Rules of arithmetic and algebra can be used together with notions of equivalence to transform equations so solutions can be found.
- Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally.

**Essential Questions:**
- How do I know where to begin when solving a problem?
- Why is place value important when solving addition and subtraction problems?
- Why is it important to solve multi-step math problems?
- What do you do to solve a problem?
- What is the relationship between the numbers presented?
- What generalization can be made from the numbers presented?

<table>
<thead>
<tr>
<th>Concepts within Unit #11</th>
<th>TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concept #1: Addition and Subtraction Problem Solving</strong></td>
<td>3.2B, 3.2C, 3.4A, 3.5A, 3.5E</td>
</tr>
</tbody>
</table>

## Unit 12: Solving Problems with Multiplication & Division to 100

**Estimated Date Range:** Apr. 28 – May 14

**Unit Overview:** In this unit, students will represent and solve one-and two-step multiplication and division word problems using different strategies. Students will also use properties of multiplication and different strategies, including the standard algorithm, to multiply a two-digit number by a one-digit number.

**Big Ideas:**
- Understand the relationship between multiplication and division.
- The base 10 system helps students solve multiplication and division with understanding.
- The operations of multiplication and division can be represented as actions involving objects or quantities within the context of a real-life problem.

**Essential Questions:**
- How can the relationship of multiplication and division be represented?
- How does understanding the properties of operations help us multiply large numbers?
- How can multiplication and division be used to solve real world problems?
## Unit 13: Solidifying Third Grade

**Estimated Date Range:** May 15 – May 28

**Unit Overview:** The purpose of this unit is to solidify third grade concepts with the purpose to allow students a solid and smooth transition to fourth grade.

**Big Ideas:**
- A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence.
- The base 10 system helps students solve addition and subtraction with understanding.
- The base 10 system helps students solve multiplication and division with understanding.
- The relationship between amount of fractional parts and size of the parts is foundational for comparing fractions.
- Any number can be represented in an infinite number of ways that have the same value.

**Essential Questions:**
- How do I know where to begin when solving a problem?
- Why is it important to solve multi-step math problems?
- What do you do to solve a problem?
- What is a fraction?
- Why is it important to understand the relationship between amount of fractional parts and size of the parts?
- Why is it important to compare fractions?

### Concepts within Unit #12

<table>
<thead>
<tr>
<th>Concept #1: Multiplication and Division to 100</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4G, 3.4K, 3.5B</td>
<td></td>
</tr>
</tbody>
</table>

### Concepts within Unit #13

<table>
<thead>
<tr>
<th>Concept #1: Addition and Subtraction</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2A, 3.2C, 3.4A, 3.4B, 3.4J, 3.5A, 3.5D</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concept #2: Multiplication and Division</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4G, 3.4J, 3.4K, 3.5B, 3.5C, 3.5D</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concept #3: Fractions</th>
<th>TEKS Link to TEKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3A, 3.3D, 3.3E, 3.3F, 3.3G, 3.3H</td>
<td></td>
</tr>
</tbody>
</table>