## Unit 2 -Big Ideas Chapters 5-9

Content Area:
Course(s):
Time Period: Length: Status:

Mathematics
Mathematics 3
December
49 Instructional Days
Published

Unit 2 Overview: Big Ideas Math Chapters 5-9
Unit 2--Big Ideas Math Chapters 5-9
(Length of Time: 2nd Trimester)

This unit includes:

- Patterns \& Fluency (Chapter 5)
- Relate Area to Multiplication (Chapter 6)
- Round and Estimate Numbers (Chapter 7)
- Add \& Subtract Multi-Digit Numbers (Chapter 8)
- Multiples and Problem Solving (Chapter 9)


## Priority Standards

| MATH.3.OA.A | Represent and solve problems involving multiplication and division |
| :--- | :--- |
| MATH.3.OA.C | Multiply and divide within 100 |
| MATH.3.OA.D | Solve problems involving the four operations, and identify and explain patterns in <br> arithmetic |
| MATH.3.NBT.A.1 | Use place value understanding to round whole numbers to the nearest 10 or 100. |
| MATH.3.NBT.A.2 | With accuracy and efficiency, add and subtract within 1000 using strategies and <br> algorithms based on place value, properties of operations, and/or the relationship <br> between addition and subtraction. |
| MATH.3.NBT.A.3 | Multiply one-digit whole numbers by multiples of 10 in the range $10-90$ (e.g., $9 \times 80,5 \times$ <br> 60) using strategies based on place value and properties of operations. |
| MATH.3.M.B.3 | Recognize area as an attribute of plane figures and understand concepts of area <br> measurement. |

Unit 2 Learning Goals

| Chapter 5 | Patterns and Fluency |  |
| :--- | :--- | :--- |


| Chapter 7 | Round and Estimate Numbers | Standard: <br> 3.NBT.A. 1 - Use place understanding to rour to the nearest 10 or 1 <br> Standard: <br> 3.NBT.A. 2 - With accl efficiency, add and su 1000 using strategies based on place value, operations, and/or the between addition and |
| :---: | :---: | :---: |
| Chapter 8 | Add \& Subtract Multi-Digit Numbers | Standard: <br> 3.NBT.A. 2 - With accl efficiency, add and su 1000 using strategies based on place value, operations, and/or the between addition and |


| Chapter 9 |  |  |
| :--- | :--- | :--- |

Students will be able to:

- Add three-digit numbers.
- Add up to four numbers
- Complete a multiplication table.
- Count to find the area of a shape using standard units.
- Count to find the area of a shape.
- Find the area of a shape made up of rectangles.
- I can use addition to measure the area of a figure. (MA.3.3.MD.5)
- I can use the formula for area to calculate the area of rectangles. (MA.3.3.MD.7)
- Identify and use addition properties
- Identify the values of digits in three-digit numbers
- Identify, explain, and use patterns related to the multiplication table
- Solve multiplication and division word problems.
- Subtract three-digit numbers
- Use a number line to find a difference
- Use a number line to find a sum.
- Use a number line to round numbers to the nearest ten or nearest hundred.
- Use inverse operations to check answers.
- Use mental math to find a difference.
- Use mental math to find a sum.
- Use multiplication to find the area of a rectangle.
- Use number lines to multiply by multiples of 10
- Use partial sums to find a sum
- Use place value to multiply by multiples of 10 .
- Use place value to round numbers to the nearest ten or nearest hundred.
- Use properties to multiply by multiples of 10 .
- Use rounding or compatible numbers to estimate differences.
- Use rounding or compatible numbers to estimate sums.
- Use the Distributive Property to find the area of a rectangle
- Use the multiplication table to write related multiplication and division facts.
- Use the problem-solving plan to solve two-step addition and subtraction word problems.
- Use the problem-solving plan to solve two-step multiplication and division word problems.
- Use the problem-solving plan to solve two-step word problems involving different operations.


## Materials and Resources

- Big Ideas Materials
- Frax
- iReady
- Reflex Math


## Unit Assessments (Required)

- Big Ideas Chapter 5 Assessment
- Big Ideas Chapter 6 Assessment
- Big Ideas Chapter 7 Assessment
- Big Ideas Chapter 8 Assessment
- Big Ideas Chapter 9 Assessment


## Strategies for Students in Need of Intervention

- Extend pacing of lessons
- Graph paper
- Incorporate centers that focus on skills that students are struggling with
- Modified/ shortened assignments if necessary
- Multiplication chart
- Place value chart if applicable
- Provide a copy of notes/directions
- Provide list/chart of key words used in word problems to help determine operation. For example "In all, altogether mean addition"
- Small group instruction based on levels/abilities
- Use of calculator
- Use of manipulatives
- Utilize visual aids


## Learning Plan and Pacing Guide

## Trimester $2 \sim$ Big Ideas Chapters 5-9

Time
Frame
Lesson

Big
Ideas
Chapter
Lesson 5.1 : Identify
Patterns in the
Multiplication Table

Standard(s)
Standard:
3.OA.D - Solve two-step word problems, including problems involving money, using the Target: I can identify, four operations. Represent these problems using explain, and use equations with a letter standing for the unknown patterns related to the quantity. Assess the reasonableness of answers multiplication table. using mental computation and estimation strategies including rounding.

Standard:

Lesson 5.2 : Use the Multiplication Table

Lesson 5.3 : Complete the Multiplication Table
3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using write related equations with a letter standing for the unknown multiplication and quantity. Assess the reasonableness of answers division facts. using mental computation and estimation strategies including rounding.
Standard:
3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
Standard:
3.OA.A - Represent and solve problems involving multiplication and division.

## Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two onedigit numbers.

Standard:
3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
Standard:
3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can solve multiplication and division word problems.

Target: I can use a multiplication table to identify/explain patterns.


#### Abstract

Standard: 3.OA.C - With accuracy and efficiency, multiply and divide within 100 , using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two onedigit numbers.


Standard:
3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding
Standard:
3.OA.A - Represent and solve problems involving multiplication and division.

## Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100 , using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-
3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding
digit numbers.

Standard:
Chapter 5 Assessment

Standard:

I can solve multiplication and division word problems

| Chapter <br> 6 | Chapter 6 Area <br> (2 Days) | 3.M.B Geometric measurement - Understand squares. <br> concepts of area and relate area to multiplication <br> and to addition. |
| :--- | :--- | :--- |
|  |  | Standard: |

## Standard:

Lesson 6.2: Measure Area Using Standard Units
3.M.B Geometric measurement - Understand Target: I can count to concepts of area and relate area to multiplication find the area of a shape and to addition. using standard units.

## Standard:

## Lesson 6.3: Find Area By Multiplying

3.M.B Geometric measurement - Understand Target: I can use concepts of area and relate area to multiplication multiplication to find and to addition. the area of a rectangle.

Standard:
Lesson 6.4: Area and the Distributive Property

Lesson 6.5: Find the Area of More Shapes
.Chapter 6 Review
3.M.B Geometric measurement - Understand
concepts of area and relate area to multiplication

Target: I can use the and to addition. Distributive Property to find the area of a rectangle.

## Standard:

3.M.B Geometric measurement - Understand Target: I can find the concepts of area and relate area to multiplication area of a shape made up and to addition. of rectangles.

Standard:
3.M.B Geometric measurement - Understand concepts of area and relate area to multiplication and to addition.

Target: I can find the area of a shape.

Standard:
.Chapter 6 Assessment
and to addition.

Big
Ideas
Chapter
(7 days)

Lesson: 7.3 Rounding Numbers Using Place Value

Lesson: 7.4 Estimate Sums

Lesson: 7.5 Estimate Differences

Lesson 7 REVIEW
FORM A

Lesson: 7.2 Rounding Numbers Using a Number Line

Standard:
3.NBT.A. 1 - Use place value understanding to round whole numbers to the nearest 10 or 100 .
Lesson: 7.1 Place Value

Standard:
3.NBT.A. 1 - Use place value understanding to round whole numbers to the nearest 10 or 100 .

Standard:
3.NBT.A. 1 - Use place value understanding to round whole numbers to the nearest 10 or 100 .

Standard:
3.NBT.A. 1 - Use place value understanding to round whole numbers to the nearest 10 or 100 .

Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
Standard:
3.NBT.A. 1 - Use place value understanding to round whole numbers to the nearest 10 or 100 .

Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
Standard:
3.NBT.A. 1 - Use place value understanding to

Target: .I can identify the values of digits in three-digit numbers.

Target: .I can round (to the nearest 10) using a number line and place value.

Target: .I can round (to the nearest 100) using a number line and place value.

Target: .I can estimate sums.

Target: .I can estimate differences.

Target: .I can round numbers to the nearest 10 or 100 using place
round whole numbers to the nearest 10 or 100 .

Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
Standard:
3.NBT.A. 1 - Use place value understanding to round whole numbers to the nearest 10 or 100 .

## Lesson 7 ASSESSMENT

FORM B Standard:

Big
Ideas
Chapter
(14
days)

Lesson 8.1: Addition Properties

Lesson 8.2 Use a Number Line to Add

Lesson 8.3 Use Mental Math to Add
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

## Standard:

3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

I can estimate sums and differences.

Target: .I can round numbers to the nearest 10 or 100 using place value.

I can estimate sums and differences.

Target: .I can identify and use addition properties,

Target: .I can use different strategies to add (including a number line).

Target: .I can use different strategies to add (practice adding with mental math).

Lesson 8.4 Use Partial Sums to Add
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

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3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

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3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Target: .I can use different strategies to add

Lesson 8.5 Add ThreeDigit Numbers

Lesson 8.6 Add Three or More Numbers

Lesson 8.7 Use Number Lines to Subtract

Lesson: Lesson 8.8: Use Mental Math to Subtract

Just subtract

Target: .I can add up to four numbers.

$$
0
$$

Target: .I can add threedigit numbers.
four
addition and subtraction.

Lesson 8.10: Relate
Addition \& Subtraction

Extra Lesson: Subtract
Across Zero

Lesson: 8.11
Addition/Subtraction Word Problems

Lesson: Ch 8 Review

Lesson: Ch 8 Test

Big Lesson 9.1: Number Ideas Lines and Multiples of Chapter 10

Standard:
3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

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3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

## Standard:

3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

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## Standard:

3.NBT.A. 2 - With accuracy and efficiency, add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Standard:
3.NBT.A. 3 - Multiply one-digit whole numbers by multiples of 10 in the range $10-90$ using

Target: .I can explain the relationship between addition and subtraction.

Target: I can subtract across zeros..

Target: I can use problem solving strategies to add and subtract word problems.

Target: I can fluently add and subtract using any strategy.

Target: I can fluently add and subtract using any strategy.

Target: I can use number lines to multiply by multiples of 10.
strategies based on place value and properties of operations.

Standard:

Lesson 9.2: Using Place
Value to Multiply by Multiples of 10

Lesson: 9.3: Using
Properties to Multiply by Multiples of 10
3.NBT.A. 3 - Multiply one-digit whole numbers by multiples of 10 in the range $10-90$ using strategies based on place value and properties of operations.

Target: I can use place value to multiply by multiples of 10 .

Standard:
3.NBT.A. 3 - Multiply one-digit whole numbers by multiples of 10 in the range $10-90$ using strategies based on place value and properties of properties to multiply
operations. operations.

Target: I can use

Standard:
3.OA.D - Solve two-step word problems, including problems involving money, using the Target: I can solve two four operations. Represent these problems using step multiplication and equations with a letter standing for the unknown division problems. quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding
Standard:
3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding
Standard:

## Chapter 9 Review

Target: I can solve twostep word problems involving different operations.

Lesson: 9.5 ProblemSolving: All Operations

Lesson: 9.4: ProblemSolving: Multiplication \& Division
3.NBT.A. 3 - Multiply one-digit whole numbers
by multiples of 10 in the range $10-90$ using
strategies based on place value and properties of
operations.
3.NBT.A. 3 - Multiply one-digit whole numbers
by multiples of 10 in the range $10-90$ using
strategies based on place value and properties of
operations.
3.NBT.A. 3 - Multiply one-digit whole numbers
by multiples of 10 in the range $10-90$ using
strategies based on place value and properties of
operations. operations.

Standard:
3.OA.D - Solve two-step word problems,

Target: I can use place value and properties to multiply by multiples of 10.

I can solve two-step word problems involving different operations.
including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding
Standard:
3.NBT.A. 3 - Multiply one-digit whole numbers by multiples of 10 in the range $10-90$ using strategies based on place value and properties of operations.

Target:
I can use place value and properties to multiply by multiples of 10.

## Chapter 9 Assessment

Standard:
3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding

## Technology Integration

- Big Ideas Online
- Freckle Math
- Google Classroom
- Reflex Math: https://www.reflexmath.com/
- www.brainpopjr.com
- www.khanacademy.com

TECH.8.1.5.A. 2

TECH.8.1.5.A. 3
TECH.8.1.5.E. 1

TECH.8.2.5.D. 3
TECH.8.2.5.E. 4

Format a document using a word processing application to enhance text and include graphics, symbols and/or pictures.

Use a graphic organizer to organize information about problem or issue.
Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.

Follow step by step directions to assemble a product or solve a problem.
Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events,
procedures, memory, storage, processing, software, coding, procedure, and data).

## Interdisciplinary Connections

- Math/STEAM: Students will integrate science, technology, engineering, and/or art with math to develop a game that involves place value
- Math/Science/Reading: My Math Leveled Readers
- Math/Social Studies/Reading: My Math Leveled Readers
- Math/Social Studies: Provide examples on a famous mathematician

