



Park Hill School District

Building Successful Futures • Each Student • Every Day

2nd Grade Math Curriculum

Scope and Sequence:

Quarter	Instructional Units
1	Unit 1: Math Is... Unit 2: Place Value to 1,000 Unit 3: Patterns With Numbers
2	Unit 4: Meanings of Addition and Subtraction Unit 5: Strategies to Fluently Add w/in 100 Unit 6: Strategies to Fluently Subtract w/in 100
3	Unit 7: Measure and Compare Lengths Unit 8: Measure Money and Time Unit 9: Strategies to Add 3-Digit Numbers
4	Unit 10: Strategies to Subtract 3-Digit Numbers Unit 11: Data Analysis Unit 12: Geometric Shapes and Equal Shares

Unit 1: Math Is

Subject: Math

Grade: 2nd Grade

Name of Unit: Introduction

Length of Unit: 10

Overview of the unit:

This unit replaces Unit 1: Math Is unit in your Teacher's Edition of Reveal.

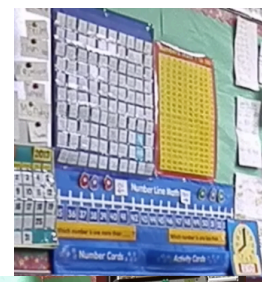
In this unit, second graders will begin their journey as mathematicians by building confidence, curiosity, and perseverance in math. They will engage in meaningful math routines (Standards for Mathematical Practice), learn to embrace mistakes as opportunities to grow, and explore different ways to communicate and show their thinking. Through hands-on activities, discussions, and visual representations, students will develop a positive attitude toward math and see themselves as capable problem solvers.

Unit Objectives				
Establish math classroom norms, such as these:				
Answers are important, but they are not the math. 	Talk about each other's thinking. 	Errors are gifts that promote discussion. 	Ask questions until ideas make sense. 	Use multiple strategies and multiple representations. 
These norms are introduced in this unit, but they will be reinforced throughout the year.				
- Students reflect on personal math strengths. - Students learn/review signature strategies. - Students learn classroom procedures and routines.				

Getting Ready for the Unit:

In preparation for teaching math this year, you will need to set up the following:

- Daily Routines Area**
 - Prepare an area in the classroom (typically near the front of the room / rug) where students can see the daily schedule and where there is a dedicated Math area of the wall
 - For second grade this should include:
 - Visual Schedule with Clocks/Times
 - Class Hundred Chart
 - Whiteboard or Anchor Chart Paper for recording student thinking
 - Monthly Calendar for Reference
- Print the Math About Me page
- Prepare Addition Clash and Cross Out
- Print the Six Step Problem Solving steps



Essential Questions:

- What does it mean to be a mathematician?
- Why are mistakes important in math?
- How can we show our math thinking in different ways?
- How can we help each other learn math?

Enduring Understandings:

- Everyone is a mathematician, and math is something we all can learn.
- Struggling with math is a natural part of learning, and we can work through challenges with persistence and effort.
- Mistakes are an important part of learning and help us grow.
- Math ideas can be represented and communicated in different ways.
- Talking about math helps us understand and learn from each other.

Engaging Experience 1

Teaching Point: *Today I want to teach you that math is all around us and it is important.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to have a class discussion about how numbers are all around us and can have different meanings. Next, have each student write a number that is important to them on a sticky note, share their choice, and find common numbers among classmates. Then, allow time for students to complete the “[Math About Me](#)” sheet in Schoology, and conclude by sharing their work with the class.

Engaging Experience 2

Teaching Point: *Today I am going to teach you that we all have different feelings about math, and that is okay.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is by reading a book of your choice, such as *The Girl With a Mind for Math: The Story of Raye Montague* by Julia Finley Mosca or *The Math Curse* by Jon Scieszka & Lane Smith, and discuss how math makes you feel.

Some suggestions you could discuss are:

- “How does the character feel about math?”
- "Have you ever felt the same way?"
- "What do you think math is used for in real life?"
- "How does math make **you** feel?"
- "Has your feeling about math ever changed?"

Then, display a [range of emojis](#) and have students draw the face that best represents their feelings about math. As an extension, they can complete the sentence starter: "Math makes me feel _____ because _____."

Engaging Experience 3

Teaching Point: *Today I am going to teach you about a new way to do math on your laptop called ALEKS Adventure.*

Suggested Length of Time: 1 day



Detailed Description/Instructions:

One way to do this is to show students how to launch ALEKS Adventure in the ConnectED tile in their Portal. Model to students how to get started on the ALEKS Diagnostic (should take 20-30 minutes). Before students start their own diagnostic, have them get their whiteboard and discuss why it's important to use their whiteboards as needed to help them as they work through the math. Once completed, allow students to create their avatar!

Engaging Experience 4

Teaching Point: *Today I am going to teach you that there are lots of tools mathematicians use to help them in their work.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to have students practice addition and subtraction fact fluency to 20 as they experience different learning stations. Use these games to introduce classroom expectations for games/manipulatives, patterns of movement, cleanup signal, and norms for working with others. Of course it is also a good time to talk about good sportsmanship. You could also include a station of ALEX Adventure as well as a station to practice working with manipulatives such as interlocking cubes and pattern blocks.

Set norms for use and misuse of manipulatives.

- Think about how you will introduce each material/station to the class.
- Decide how students will work: individually, in pairs, or in small groups
- Decide whether students will choose their group or whether you will assign groups
- Decide how students will clean up materials and how they will be taught the procedure.
- Think about how you will debrief the Learning Stations. Will you use a Turn-and-Talk, class share out, or journal reflection?

Learning Station #1 – Addition Clash

- [Addition Clash Rules](#)
- Deck of Playing Cards (1–10) or [0–10 Number Cards](#) copied on card stock and cut out

Supporting materials to have available at station:

- [Double Ten Frames](#)
- [Hundred Chart](#)
- [0–20 Number Line](#)
- Counters or cubes

Learning Station #2 - Cross Out

- [Cross Out Rules Teacher](#)
- [0-20 Number Line BLM](#)

Supporting materials to have available at station:

- [Double Ten Frames](#)
- [Hundred Chart](#)
- Counters or cubes

Learning Station #3 - ALEK Adventure**Learning Station #4 - Manipulative Exploration (interlocking cubes, pattern blocks, etc.)**

Engaging Experience 5

Teaching Point: *Today I am going to teach you that sometimes in math things are hard, but we have to push through. This is called Productive Struggle.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to

- Start with a class discussion, using a prompt such as, “When you think of struggle, what image comes to mind.” Have students share their thoughts and ask them what it means to struggle.
- Read a book about productive struggle, such as *The Struggle Bus*, *The Magical Yet*, *Taco Falls Apart*, *Mel Fell*, or a book of your own choosing.
- Next, show a [collage of pictures](#) of various people or animals having to really work hard at something (found in Schoology). Have them complete a quick write about a time when something was hard or challenging in their lives.
- Finally, talk with the kids about how productive struggle helps us grow by working through challenges in math and all subjects, making our brains stronger and helping us become confident problem-solvers

Engaging Experience 6

Teaching Point: *Today I am going to teach you that “mistakes are gifts” and they help us learn.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is by writing a math problem on the board (e.g., $22 + 7$), purposely making a mistake when solving it, such as writing $22 + 7 = 227$. Then, ask the students to become "Math Mistake Detectives" and look for what went wrong. Prompt them with questions like:

- “Can anyone spot the mistake?”
- “What should we do differently?”
- “Why do you think it didn’t work?”
- “How can we fix it?”

Guide the students through finding the mistake, discussing how it happened, and solving the problem correctly. Encourage students to explain their thinking as they work through it. After the problem is solved correctly, reflect by saying, "This mistake was a gift because it gave us a chance to figure out a better way. Mistakes help us grow in math!" When finished, post math norms in a place where all students can see. You will continue to add math norms throughout the next lessons.

Engaging Experience 7

Teaching Point: *Today I am going to teach you that mathematicians “talk about each other’s thinking” and “use multiple strategies and multiple representations.”*

Suggested Length of Time: 1 day



Detailed Description/Instructions:

One way to do this is to use the Number Routine image from Reveal Lesson 1-4. Students will think about the different methods of counting the number of oranges in the picture.

- Teach students [hand signals](#) to use during this time.
- Ask students to explain their thinking. Ideas include:
 - What are some strategies you can use to estimate the number of oranges?
 - How can estimation help you determine whether there are more or fewer than 20 oranges?

Another way to do this...Use [2.0 Math Talks](#) number dots and ten frames to explore the idea that there are a variety of ways to both recognize and add two numbers. Introduce the [hand signals](#) students will show to represent they are thinking, or have 1 or more solutions, or agree with a classmate. When finished, post math norms in a place where all students can see.

Engaging Experience 8

Teaching Point: *Today I am going to teach you that mathematicians “ask questions until ideas make sense.”*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to have students use number charts to play a math mystery number game. This will have students asking questions until they are able to eliminate enough numbers to make an educated guess on the mystery number (a number between 1-100) selected by the teacher or a classmate. Students can be given the following prompts to use :

Is your number greater than/less than _____?

Is your number between _____ and _____?

Is your number a number you can land on when you count by (2, 5, 10)?

Does your number have more/less tens than ones?

Have class discussion on how helpful it was to be able to ask questions versus just randomly trying to guess the correct mystery number. Students could also record how many questions they had to use to arrive at their mystery number. Discuss whether some questions were more helpful than others.

This will also be a great way to continue to practice your norms for games, math manipulatives, listening to others, and making errors. When finished, post the math norm in a place where all students can see.

Engaging Experience 9

Teaching Point: *Today I am going to teach you that “answers are important but they are NOT the math.”*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to start by writing the problem $12 - 4 = ?$ on the board. Ask students for the answer (which is 8), but shift the focus to how we got there. Model the process by drawing 12 apples on the board, then crossing out 4 apples to represent subtraction. Count the remaining apples aloud to show that there are 8 left. Emphasize that the math is in how we solved the problem, not just in the answer.

Next, provide a new problem, $15 - 6 = ?$, and have students solve it using different strategies, such as drawing pictures, using their fingers, using a number line, or counting back. Encourage them to explain how they solved the problem before sharing the answer. Afterward, lead a class discussion about how students used different methods to arrive at the same answer, reinforcing that the process is just as important as the answer.

To close, remind students that understanding how we solve problems and the strategies we use are just as important as finding the answer itself. For an extension, have students work in pairs to solve a new problem and share their strategies with each other.

When finished, post the math norm in a place where all students can see.

Engaging Experience 10

Teaching Point: Today I am going to teach you to use a six step framework for solving story problems.

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to create an anchor chart of the six step framework, and model using this with a few problems. We recommend using add to and take from problems for your students to understand the framework. Use the word problem generator to help you come up with specific problems.

[Greg Tang Word Problem Generator](#)

Create an anchor chart with your students or print the [Six Step Problem Solving](#) chart to keep in your math area to reference throughout the year.

6 Step Framework (Forsten & Tang)

1. Read the **entire** problem.
2. **Rewrite** the question as a statement.
3. **Who** or **what** is the problem about?
4. **Draw** your model.
5. **Solve** your equation(s).
6. **Check** your answer

Unit 2: Place Value to 1,000

Subject: Math

Grade: 2nd Grade

Name of Unit: Place Value to 1,000

Length of Unit: 12 days

Overview of Unit:

In this unit, students will explore concepts related to our base-ten place-value system to 1,000. We call it a base-ten system because it takes 10 of one unit to equal one unit in the next greater place-value position. Students will model with math to build their understanding that 10 groups of ten is equal to 100. They will also build an understanding that each digit in a place-value chart has a value.

Students will use their understanding of place value to decompose 3-digit numbers by grouping the hundreds, tens, and ones in different ways. They will draw on their knowledge of reading and writing numbers to discover how to write equivalent ways to write the same three-digit number in word form, expanded form, and standard form. Students will also compare 3-digit numbers using words and symbols.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - Base-Ten Blocks
 - [Place Value Mat](#) (ones, tens, hundreds, thousands)
 - 3-Digit Numbers (Teaching Resource)
 - Notecards
 - Number Cards 0-10 (Teaching Resource)

Essential Question:

- How can I use place value to understand and compare numbers to 1,000?

Enduring Understandings:

- 100 can be seen as 10 groups of ten.
- Each digit in a 3-digit number shows the value of the hundreds place, the tens place, and the ones place.
- Numbers can be shown in standard, expanded, or word form, and broken into place value parts.
- Numbers can be compared using place value and symbols ($<$, $>$, $=$)

Priority Standards:

- **2.NBT.A.1** Understand three-digit numbers are composed of hundreds, tens, and ones
- **2.NBT.A.5** Compare two three-digit numbers using the symbols $>$, $=$ or $<$

Supporting Standards:

- **2.NBT.A.2** Understand that 100 can be thought of as 10 tens- called a “hundred”
- **2.NBT.A.4** Read and write numbers to 1000 using number names, base-ten numerals, and expanded form

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom’s Taxonomy Levels	Webb’s DOK
2.NBT.A.1	Three-digit numbers are composed of hundreds, tens, and ones	Understand that three-digit numbers are composed of hundreds, tens, and ones Compose and decompose three-digit numbers in multiple ways and explain their reasoning through models, pictures, or words.	Understand	3
2.NBT.A.5	Compare two three-digit numbers using symbols	Compare two three-digit numbers based on the meaning (value) of the digits Use the value of the digits to explain the comparison of two three-digit numbers Use symbols (<, =, >) to record the results of a comparison	Apply	3

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
● Unit 2 Readiness Diagnostic ● Unit 2 Math Probe ● Exit Tickets ● Daily Work	● Unit 2 Review ● Unit 2 Fluency Check ● Unit 2 Performance Task ● Unit 2 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
in common relate to decide explanation wonder apply relationship true	hundreds tens base-ten blocks digit ones place-value chart decompose expanded form standard form word form place value compare equal to ($=$) greater than ($>$) less than ($<$)

Math Language Routines:

- MLR1: Stronger and clearer each time
- MLR2: Collect and display
- MLR6: Three reads
- MLR7: Compare and connect
- MLR8: Discussion supports

Number Routines:

- Would You Rather?
- Mystery Number

Sense-Making Routines:

- Notice and Wonder: What do you notice? What do you wonder?
- Notice and Wonder: How are they the same? How are they different?
- Which Doesn't Belong?

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station	Students work with 3-digit numbers.
	• Put Together Both Parts Unknown Task Cards 2-1 • Represent that 3-Digit Number Task Cards 2-2 • More Represent that 3-Digit Number Task Cards 2-3 • Numbers Different Ways Concentration 2-4 • Greatest Number Showdown 2-5	
	Digital Game	Special Delivery Students add within 20. 2-1
	Have students complete at least one of the Use It! activities for this unit.	
	STEM Project Card	A Lot to Recycle Students write a summary of recycling data. 2-5
Application Station 	Connection Card	Color by Number Students create a color-by-number picture and write the directions for completing it. 2-2
	Real World Card	Class Celebration Students save tickets to earn a class party. 2-2

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to explore how to balance a scale using one-pound and ten-pound weights.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Different Ways to Balance* activity.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Different Ways to Balance* activity.

Suggestion: Prepare ahead of time a pan balance and tens and ones units to model place value and how numbers like 37 can be demonstrated with 37 ones units or 3 tens rods and 7 units.

Bloom's Levels: Apply

DOK: 2

Engaging Experience 1: 2-1 Understand Hundreds

Teaching Point: *Today I am going to teach you to explain how 10 groups of ten equal 100.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.A.1

Supporting: 2.NBT.A.2, 2.NBT.A.4

Detailed Description/Instructions:

One way to do this is to complete Guided Exploration 2-1 to extend students' understanding of place value to the hundreds place, building on their understanding that a group of 10 tens makes 1 hundred.

Another way to do this is to complete Activity-Based Exploration 2-1 and have students explore groups of tens to make 1 hundred.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 2: 2-2 Understand 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to show a 3-digit number and identify the value of the digits in a 3 digit number.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.A.1

Supporting: 2.NBT.A.2

Detailed Description/Instructions:

One way to do this is to complete Guided Exploration 2-2 to help students understand that each digit in a 3-digit number has a value. Base-ten blocks or a place value chart can be used to help determine the value of each digit. Determining the value of each digit can help students understand the value of a 3-digit number

Another way to do this is complete Activity-Based Exploration 2-2 to create 3-digit numbers with base-ten blocks to develop understanding of the value of each digit in a 3 digit number.

Suggestions: If students are having difficulty with the value of a number, have them make the number on a place value chart first, then name the value. Play a Quiz, Quiz Trade game using 3-digit numbers with a digit underlined and then the value of the digit printed on the back.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 3: 2-3 Read and Write Numbers to 1,000

Teaching Point: *Today I am going to teach you to read and write numbers to 1,000.*

Suggested Length of Time: 1 day

Standards Addressed:

Priority: 2.NBT.A.5

Supporting: 2.NBT.A.4

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 2-3 to extend what students already know about representing 3-digit numbers to reading and writing them in different ways.

Another way to do this is to complete the Activity-Based Exploration 2-3 to explore different ways to show 3-digit numbers (standard form, expanded form, and word form)

Suggestion: Provide a [number word chart](#) that has all the numbers in word form 1-20, then 20-100 by tens, as well as hundred and thousand. This will help them with using the word form.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 4: 2-4 Decompose 3-Digit Numbers

Teaching Point: *Today I am going to teach you to use your understanding of place value to decompose, or represent, 3-digit numbers in different ways.*

Suggested Length of Time: 1 day

Standards Addressed:

Priority: 2.NBT.A.1

Supporting: 2.NBT.A.4

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 2-4 to have students use their understanding of place value to decompose 3-digit numbers in different ways.

Another way to do this is to complete the Activity-Based Exploration 2-1 to allow students to explore different ways to decompose 3-digit numbers using place value.

Bloom's Levels: Apply

Webb's DOK: 3

Math Probe: Building Numbers

Teaching Point: *Today we are going to determine how many base-ten blocks are needed to build a number with the information provided.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 2 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 2 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 5: 2-5 Compare 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to compare 3-digit numbers using words and symbols to show the comparison.*

Suggested Length of Time: 1 day

Standards Addressed:

Priority: 2.NBT.A.5

Supporting: 2.NBT.A.4

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 2-5 to extend their knowledge of comparing numbers to 3-digit numbers.

Another way to do this is to use the Activity-based exploration 2-5 to explore different ways to compare 3-digit numbers.

Suggestion: If they are having a hard time comparing numbers, try using a [place value mat](#) to review the place value. Build both numbers on a place value mat and discuss the difference.

Bloom's Levels: Apply

Webb's DOK: 2

Unit Review and Fluency Check

Teaching Point: *Today we are going to review how to represent numbers in standard form, expanded form and written form and how to use place value to compare and decompose numbers.*

Suggested Length of Time: 1 Day

Standards Addressed:

Priority: 2.NBT.A.1, 2.NBT.A.5

Supporting: 2.NBT.A.2, 2 NBT.A.4

Detailed Description/Instructions:

One way to do this is to complete the Unit Review to prepare for the unit assessment.

Another way to do this is to complete the Unit 2 Fluency Practice where students will practice composing and decomposing 10.

Suggestions: Have students complete the unit review in partners for extra support, or take all the problems and print on separate cards and do this review as more of a Scoot or Showdown activity.

There is enough time to complete the Unit Review and Fluency Practice on the review day.

Bloom's Levels: Apply

Webb's DOK: 3

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of reading, writing, and decomposing 3-digit numbers in different ways, as well as comparing 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed:

Priority: 2.NBT.A.1, 2.NBT.A.5

Supporting: 2.NBT.A.2, 2 NBT.A.4

Detailed Description/Instructions:

One way to do this is to have students complete the paper/pencil Unit 2 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 2 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 2

Decode the Treasure Lock:

- The treasure chest (a decorated box) is locked with a mystery number (e.g., 472). You can create multiple treasure chests with different mystery numbers, so everyone isn't working on the same number.
- Students must build the number using base-ten blocks, expanded form, or number words before the treasure can be opened.
- Inside the box, you can have stickers, small prizes, or a class reward.

Step 1: Solve the Mystery Number!

The secret number is: **472**

Break it down:

- How many **hundreds**? _____
- How many **tens**? _____
- How many **ones**? _____

Step 2: Represent the Number!

1. Draw Base-Ten Blocks
 - Draw hundreds blocks, tens rods, and ones cubes to show 472.
2. Write in Expanded Form
 - $472 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$
3. Write in Number Words
 - $472 = \underline{\hspace{4cm}}$

Step 3: Unlock the Treasure!

Great job, explorer! You have decoded the number correctly. Now, draw a picture of what you think is inside the treasure chest!

Bonus Challenge:

- Can you create your own mystery number and break it down like we did above?
- Try with a different number between 100 and 999!

You did it! The treasure is yours! 🎉

Unit 3: Patterns with Numbers

Subject: Math

Grade: 2nd Grade

Name of Unit: Patterns within Numbers

Length of Unit: 13 days

Overview of Unit:

In this unit, students will review counting by 1s. Number charts are used to allow students to explore each hundred set between 100 and 1,000.

Once students are comfortable with counting by 1s, the number charts and number lines are used to help students identify patterns when skip counting by 5s, 10s, and 100s. These patterns are then used to solve problems when counting on 5s, 10s, and 100s. These patterns are then used to solve problems when counting problems when counting on by 5s, 10s, and 100s.

Finally, students explore the idea of even and odd numbers. Using grouping strategies, students define even numbers as numbers that can be broken into pairs with none left over, while an odd number cannot be broken into pairs with none left over.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials Needed:
 - Counters
 - Connecting Cubes
 - Number Cards 0-10 (Teaching Resource)
 - Number Charts: (1-100), (201-300), (401-500) (Teaching Resource)
 - Number Cubes
 - Paper Clips

Essential Question:

- How can I use patterns to count and add numbers?

Enduring Understandings:

- Patterns in counting by 1s, 5s, 10s, and 100s help us understand and organize numbers within 1,000.
- Numbers can be identified as even or odd based on their properties.
- Even numbers can be expressed as the sum of two equal addends.
- Arrays help represent and find the sum of equal addends.

Priority Standards:

- **2.RA.B.3** Find the total number of objects arranged in a rectangular array with up to 5 rows and 5 columns, and write an equation to represent the total as a sum of equal addends.
- **2.NBT.A.5** Compare two three digit numbers using the symbols $>$, $=$,

Supporting Standards:

- **2.NBT.A.3** Count within 1000 by 1s, 10s, and 100s starting at any number.
- **2.RA.B.2** Determine if a set of objects has an odd or even number of members.
 - a) Count by 2s to 100 starting with any even number.
 - b) Express even numbers as pairings/groups of 2, and write an expression to represent the number using addends of 2.
 - c) Express even numbers as being composed of equal groups and write an expression to represent the number with 2 equal addends.

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.RA.B.3	Use repeated addition to find the total number of objects arranged in a rectangular array	Use addition to find the total number of objects arranged in a rectangular array with up to 5 rows and 5 columns Write an equation to represent the total as a sum of equal addends, e.g., a 3 by 4 array can be thought of as 4 groups of 3 and represented as $3 + 3 + 3 + 3 = 12$ or as 3 groups of 4 and represented as $4 + 4 + 4 = 12$	Understand	3
2.NBT.A.5	Compare two three-digit numbers using symbols	Compare two three-digit numbers based on the meaning (value) of the digits Use the value of the digits to explain the comparison of two three-digit numbers Use symbols ($<$, $=$, $>$) to record the results of a comparison	Apply	3

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
• Unit 3 Readiness Diagnostic • Unit 3 Math Probe • Exit Tickets • Daily Work	• Unit 3 Review • Unit 3 Fluency Check • Unit 3 Performance Task • Unit 3 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
compare in common relate to apply wonder previous useful specific relationship	column pattern row skip count even odd doubles near doubles array repeated addition

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR6: Three Reads

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Mystery Number
- Let's Count
- Which Benchmark Is It Closest To?
- Where Does It Go?

Sense-Making Routines:

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Which Doesn't Belong?
- Numberless Word Problems

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students build proficiency with patterns within numbers.	
	• Count by 1 Within 1,000 Task Cards • Skip Count Race • Skip Count Tic Tac Toe • Even and Odd Numbers Showdown • Odd or Even Task Cards • Addition and Arrays Concentration • Addition and Arrays Concentration	3-1 3-2 3-3 3-4 3-5 3-6 3-7
	Digital Game 	High-Rise Rescue Students practice subtracting within 20. 3-1
	Have students complete at least one of the Use It! activities for this unit.	
	STEM Project Card 	So Many Shoes Students create a computer program to keep track of the number of shoes in a shoe store. 3-7
	Connection Card 	Exercise Program Students use numbers of less than 10 to create an exercise program. 3-4
	Real World Card 	Finish the Pattern Students create a skip counting pattern and describe it to their partner, who tries to complete it. Students switch roles and repeat. 3-3

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
● Targeted Intervention ● Small Group ● Take Another Look ● Reinforce Understanding ● ALEKS Adventure	● Practice It! ● Own It! ● Interactive Additional Practice ● Spiral Review ● Additional Practice ● ALEKS Adventure	● Use It! ● Websketch Exploration ● Extend Thinking ● ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to investigate an addition table, search for patterns, and explain what we find.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Addition Patterns* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Addition Patterns* unit opener.

Suggestion: Print an [Addition Table](#) for students to keep in a math notebook or AVID binder.

Bloom's Levels: Analyze

DOK: 2

Engaging Experience 1: 3-1 Counting Patterns

Teaching Point: *Today I am going to teach you to identify a pattern when counting by 1s within 1,000.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.A.5

Supporting: 2.NBT.A.3

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 3-1 to extend students' understanding that place-value patterns can help them identify that the ones digits go up by 1 from left to right in each row, the tens go up by 1 when the ones change to 0, and the hundreds go up by 1 when the ones and tens change to 0.

Another way to do this is to complete Activity-Based Exploration 3-1 to have students' show what they know about counting patterns and extend their understanding as they build a number chart representing a different decade. Students use their understanding to determine unknown numbers.

Suggestion: Consider having a Hundreds Chart for each student.

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Experience 2: 3-2 Patterns When Skip Counting By 5s

Teaching Point: *Today I will teach you how to identify and describe patterns when skip counting by 5s.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.A.5

Supporting: 2.NBT.A.3

Detailed Description/Instructions:

One way to do this is to complete Guided Exploration 3-2 where students will skip count by 5s and identify and describe the place value patterns using number charts and number lines

Another way to do this is to complete Activity-Based Exploration 3-2 and have students determine different ways to count groups of 5 and develop an understanding of skip counting patterns.

Suggestion: Prepare a Hundreds Chart for students to keep in a clear pocket to mark on during lessons for support.

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Experience 3: 3-3 Patterns When Skip Counting by 10s and 100s

Teaching Point: *Today I am going to teach you how to identify and describe patterns when skip counting by 10s and 100s.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.A.5

Supporting: 2.NBT.A.3

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 3-3 to extend students' understanding of counting patterns from skip counting by 5s to skip counting by 10s and 100s.

Another way to do this is to complete Activity-Based Exploration 3-3 to have students skip count by 10's and 100's from 1, 2, and 3-digit numbers, gaining understanding of place value counting patterns.

Suggestion: Have a Hundred Chart for students to refer to and circle numbers and patterns on.

Bloom's Levels: Apply
Webb's DOK: 3

Math Probe: Skip Counting

Teaching Point: *Today we are going to determine the number that comes next when skip counting by 1s, 5s, or 10s.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 3 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 3 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 4: 3-4 Understand Even and Odd Numbers

Teaching Point: *Today I will teach you how to determine whether a group of objects is odd or even and to recognize patterns within even and odd numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.B.3

Supporting: 2.RA.B.2

Detailed Description/Instructions:

One way to do this is to do the Guided Exploration 3-4 where students' extend their understanding of counting and skip counting to understanding even and odd numbers. Encourage students to use counters to represent the pretend students when modeling the situation.

Another way to do this is to complete Activity-Based Exploration 3-4 where students explore making pairs to determine if there is an even or odd number of students in class today. Students will discuss the difference between an even and odd number.

Suggestions: Encourage students to group objects into groups of two to better understand when numbers are even and odd. They can also see if groups can be evenly split into two equal groups or not. For larger numbers, have them underline the ones place to better help them use the patterns they are learning.

Bloom's Levels: Apply
Webb's DOK: 3

Engaging Experience 5: 3-5 Addition Patterns

Teaching Point: *Today I am going to teach you how to write an equation to show an even number as a sum of doubles and an odd number as a sum of near doubles.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.B.3

Supporting: 2.RA.B.2

Detailed Description/Instructions:

One way to do this is to complete Guided Exploration 3-5 where students' extend their knowledge of even and odd numbers to understanding addition patterns of even and odd sums.

Another way to do this is to complete Activity-Based Exploration 3-5 where students recognize the pattern of even sums of doubles and odd sums of near doubles by determining if given quantities of connecting cubes are even or odd.

Bloom's Levels: Analyze

Webb's DOK: 3

Engaging Experience 6: 3-6 Patterns With Arrays

Teaching Point: *Today I will teach you to represent equal groups with arrays and to skip count to find the total number of objects in an array.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.B.3

Supporting: 2.RA.B.2

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 3-6 to extend students' knowledge of skip counting strategies to find the total number of objects in an array. They also think of patterns to organize objects to count more efficiently.

Another way to do this is to use the Activity-Based Exploration 3-6 to allow students to explore different ways to arrange objects into rows and columns. They will look for equal groups and find ways to skip count to find the total number of objects using the arrays they create.

Suggestions: Create an [anchor chart](#) with your students to help them understand columns, rows, and repeated addition. Teach students hand motions to help them remember the direction of rows and columns. For example: Arm bent at elbow pointing up (column) Hand bent at elbow across the chest (row).

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Experience 7: 3-7 Use Arrays to Add

Teaching Point: *Today I am going to teach you how to write equations to describe arrays.*

Suggested Length of Time: 1 day

Standards Addressed**Priority:** 2.RA.B.3**Supporting:** 2.RA.B.2**Detailed Description/Instructions:**

One way to do this is to complete Guided Exploration 3-7 to extend students' knowledge of skip counting and arrays to understanding how to use arrays and repeated addition to find a total.

Another way to do this is to complete Activity-Based Exploration 3-7 to have students create arrays and equations to represent the addition situations and then find the total number of objects in the array.

Suggestion: View the BrainPop Jr. video about arrays to continue to review columns & rows.

Bloom's Levels: Apply**Webb's DOK:** 3**Unit Review and Fluency Check:**

Teaching Point: *Today we are going to review skip counting by 1s 10s and 5s to 1000, odd and even numbers and their patterns, and how to build arrays and use repeated addition to count the total number of objects.*

Suggested Length of Time: 1 Day**Standards Addressed****Priority:** 2.NBT.A.5, 2.RA.B.3**Supporting:** 2.NBT.A.3, 2.RA.B.2**Detailed Description/Instructions:**

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 3 Fluency Practice where students will practice using doubles to add.

Bloom's Levels: Apply**Webb's DOK:** 2**Unit Assessment and Performance Task**

Teaching Point: *Today we are going to demonstrate our learning of skip counting, odd and even numbers, building arrays and using repeated addition to find the total number of objects.*

Suggested Length of Time: 1 day**Detailed Description/Instructions:**

One way to do this is to have students complete the paper /pencil Unit 3 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 3 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply**Webb's DOK:** 3

Engaging Scenario - Unit 3

Array City

Materials Needed:

- Construction paper (various colors)
- Scissors
- Glue sticks
- Markers or crayons

Steps:

1. Introduce Arrays & Repeated Addition

Explain that an **array** is a group of objects arranged in rows and columns. Each row has the same number of objects. Show an example, like:



This array has 3 rows of 3 apples ($3+3+3 = 9$).

2. Build "Array City" Skyscrapers

- Give students construction paper to cut out rectangular buildings.
- Have them draw rows of windows using dots, squares, or stickers.
- Example: A building with 4 rows of 5 windows represents $5+5+5+5 = 20$.

3. Label the Buildings

- Each student writes a repeated addition sentence below their building (e.g., $4+4+4 = 12$ for a building with 3 rows of 4 windows).
- Encourage them to also write the multiplication sentence if they are ready (e.g., $3 \times 4 = 12$).

4. Create a City Display

- Glue all buildings onto a large poster or bulletin board to form a colorful **Array City**!
- Students can add roads, trees, and cars for decoration.

Extension Activity:

- Challenge students to build **bigger buildings** and write the matching repeated addition/multiplication equations.
- Have students count and compare **whose building has the most windows**!

Unit 4: Meanings of Addition and Subtraction

Subject: Math

Grade: 2nd Grade

Name of Unit: Meanings of Addition and Subtraction

Length of Unit: 17 days

Overview of Unit:

In this unit, students build on their understanding of addition and subtraction situations previously learned. These ideas are explored in different ways as each part of the problem is the unknown.

First, they solve addition problems in which the total is unknown, and then problems in which the addends are unknown. In subtraction, they first solve problems with an unknown result, and then those in which the change is unknown. Students solve problems using various representations and write equations to represent the situations.

While usually only one operation (either addition or subtraction) is shown, it is important that students understand that, because addition and subtraction are inverse operations, either operation can be used to represent the same situation. While the order of the numbers may change, an addition and subtraction equation can be written for any of the situations.

Students represent and solve Add To, Take From, Put Together, Take Apart, and Compare word problems.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Review the [Word Problem Types](#) chart to familiarize yourself with the different problem types students will encounter in this unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - Number cubes 0-5 and 5-10
 - Part-Part-Whole Mat (Teaching Resource)
 - Word Problem Cards (Teaching Resource)
 - Bar Diagram (Teaching Resource)
 - Base-Ten Blocks
 - Connecting Cubes

Essential Question:

- How can I represent and solve addition and subtraction word problems?

Enduring Understandings:

- Addition and subtraction can be used to solve real-world problems involving parts and wholes, comparisons, and changes over time.
- Using tools like drawings, number lines, and number strategies helps us understand and solve math problems.
- Understanding how numbers are related in a word problem helps us choose the right operation to solve it.
- Solving problems involves identifying what is known, what is unknown, and determining how to find the answer.
- Understanding the context of a word problem is important before solving it.

Priority Standards:

- 2.NBT.B.9 Use the relationship between addition and subtraction to solve problems.

Supporting Standards:

- 2.NBT.C.11 Write and solve problems involving addition and subtraction within 100.

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.NBT.B.9	There is a relationship between addition and subtraction that can be used to solve problems.	Understand problems can be solved using either addition or subtraction Understand addition and subtraction are inverse operations Understand properties of operations (i.e. fact families and part-part-whole) Use addition and/or subtraction to solve problems with or without context	Apply	2

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
• Unit 4 Readiness Diagnostic • Unit 4 Math Probe • Exit Tickets • Daily Work	• Unit 4 Review • Unit 4 Fluency Check • Unit 4 Performance Task • Unit 4 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
decide describe solution useful connect quantities relate represent calculation check necessary organize tools apply solve make-sense plan	addend part-part-whole mat unknown bar diagram sum compare

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR5: Co-Craft Questions and Problems

MLR6: Three Reads

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Where Does It Go?
- Greater Than or Less Than
- Decompose It
- Let's Count

Sense-Making Routines:

- Notice and Wonder: What question could you ask?
- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Which Doesn't Belong?
- Is It Always True?
- Numberless Word Problems

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station	Game Station	Students build proficiency with adding and subtracting within 100.
		
	• Represent That Word Problem Task Cards	4-1
	• Subtract Within 10 Race	4-2
	• Add To and Take From Sort	4-3
	• Put Together Both Addends Unknown Task Cards	4-4
	• Add To and Take From Task Cards	4-5
	• Two-Step Problems Four in a Row	4-6
	• Compare Task Cards	4-7
	• Compare Race	4-8
Digital Station	Digital Game	Apples & Oranges Students practice comparing numbers to 100.
		4-1
Have students complete at least one of the Use It! activities for this unit.		
Application Station	STEM Project Card	Designing Neighborhoods Students design two neighborhoods and indicate how many items, such as mailboxes, are needed for each neighborhood.
		4-6
	Connection Card	Burning Calories Students keep an exercise journal to count calories they burn.
Application Station		4-7
	Real World Card	Use Safe Websites Students write a video script to explain how to be safe on the Internet.
Application Station		4-8

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to play a strategy game that involves counting up, counting down, addition, and subtraction. .*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Up and Down* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Up and Down* unit opener.

Suggestion: Prepare ahead of time the Ignite Up and Down sheet, number cube and a game token.

Bloom's Levels: Apply

DOK: 2

Engaging Experience 1: 4-1 Represent and Solve Problems

Teaching Point: *Today I am going to teach you how to represent and solve Add To problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete Guided Exploration 4-1 to help students make sense of an Add To problem with an unknown addend by representing it using a part-part-whole mat and an equation.

Another way to do this is to complete the Activity-Based Exploration 4-1 where students explore using a part-part-whole mat and an equation to represent an Add To problem with an unknown addend.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 2: 4-2 Represent and Solve Take From Problems

Teaching Point: *Today I am going to teach you how to represent and solve Take From problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-2 to have students make sense of a Take From problem with an unknown total and represent it using a bar diagram and an equation.

Another way to do this is to complete the Activity- Based Exploration 4-2 where students explore using a bar diagram and an equation to represent a Take From problem with an unknown total.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 3: 4-3 Solve Two-Step Add to and Take From Problems

Teaching Point: *Today I am going to teach you how to represent and solve two-step Add to and Take From word problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-3 to have students make sense of two-step Add to and Take From problems by representing them with drawings and an equation.

Another way to do this is to complete the Activity- Based Exploration 4-3 where students explore using drawings and equations to represent two-step Add To and Take From problems.

Bloom's Levels: Apply

Webb's DOK: 3

Suggestion: You can use this [two-step word problem work mat](#) if students need additional support breaking the problem down into two steps and knowing which to solve first.

Engaging Experience 4: 4-4 Represent and Solve Put Together Problems

Teaching Point: *Today I am going to teach you how to represent and solve Put Together problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-4 to help students make sense of a Put Together problem with an unknown addend by representing it with a part-part-whole mat and equations.

Another way to do this is to complete the Activity-Based Exploration 4-4 where students explore using a part-part-whole mat and an equation to make sense of a Put Together problem with an unknown addend.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 5: 4-5 Represent and Solve Take Apart Problems

Teaching Point: *Today I am going to teach you how to represent and solve Take Apart problems*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-5 to help students make sense of a Take Apart problem with an unknown difference by representing it with a drawing and equations.

Another way to do this is to complete the Activity- Based Exploration 4-5 where students explore using a drawing and equations to make sense of a Take Apart problem with an unknown addend.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 6: 4-6 Solve Two-Step Put Together and Take Apart Problems

Teaching Point: *Today I am going to teach you how to represent and solve two-step Put Together and Take Apart problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-6 to help students make sense of a two-step Put Together/Take Apart problem with an unknown addend by representing it with a drawing and equations.

Another way to do this is to complete the Activity-Based Exploration 4-6 where students explore using a drawing and equations to make sense of a two-step Put Together/Take Apart problem with an unknown addend.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 7: 4-7 Represent and Solve Compare Problems

Teaching Point: *Today I am going to teach you to represent and solve Compare problems where the greater quantity is unknown.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-7 to help students make sense of a Compare problem with an unknown greater quantity by representing it using a bar diagram and an equation.

Another way to do this is to complete the Activity-Based Exploration 4-7 where students explore using a bar diagram and an equation to make sense of a Compare problem with an unknown greater quantity

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 8: 4-8 Represent and Solve More Compare Problems

Teaching Point: *Today I am going to teach you how to represent and solve Compare problems where the lesser quantity is unknown.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-8 to help students make sense of a Compare problem with an unknown lesser quantity by representing it using a bar diagram and an equation.

Another way to do this is to complete the Activity-Based Exploration 4-8 where students explore using a bar diagram and equations to make sense of a Compare problem with an unknown lesser quantity.

Bloom's Levels: Apply

Webb's DOK: 2

Math Probe: Addition and Subtraction Equation

Teaching Point: *Today we are going to solve a problem using an addition or subtraction strategy of your choice.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 4 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 4 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 9: 4-9 Solve Two-Step Problems with Comparison

Teaching Point: *Today I am going to teach you how to represent and solve two-step Compare problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-9 to help students make sense of a two-step problem with comparison by representing it with a drawing and equations.

Another way to do this is to complete the Activity-Based Exploration 4-9 where students explore using a drawing and equations to make sense of a two-step Compare problem with an unknown addend.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 10: 4-10 Solve Two-Step Problems Using Addition and Subtraction

Teaching Point: *Today I am going to teach you to represent and solve two-step word problems using addition and subtraction*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 4-10 to help students make sense of a two-step addition and subtraction problem by representing it with a drawing and equations.

Another way to do this is to complete the Activity-Based Exploration 4-10 where students explore using a drawing and equations to make sense of a two-step problem with an unknown addend.

Bloom's Levels: Apply

Webb's DOK: 2

Unit Review and Fluency Check:

Teaching Point: *Today we are going to review how to use addition and subtraction strategies to solve different types of one and two-step word problems.*

Suggested Length of Time: 1 Day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 4 Fluency Practice where students will practice making ten to add.

Bloom's Levels: Apply

Webb's DOK: 2

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of how to use addition and subtraction strategies to solve different types of one and two-step word problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.9

Supporting: 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 4 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 4 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 4

Baking with Addition (Combining Groups)

The Baker Wizard is preparing magic cupcakes. He starts with 5 cupcakes and bakes 7 more.

- How many cupcakes are there in total?
 - Solve using one of these strategies:
 - **Counting On:** Start with one number and count up.
 - **Number Line:** Hop along a number line to add up!
 - **Place Value Strategy:** Add tens first, then ones.

 **Show Your Work:** Use drawings or number sentences to explain your answer.

Bonus: The wizard also bakes 8 cookies. How many treats are there now?

- Solve: ____ + ____ = ____
-

Selling with Subtraction (Taking Away)

The bakery opens, and customers buy treats!

The wizard baked 15 cookies. A dragon customer buys 6 cookies.

- **How many are left?**
 - Solve using one of these strategies:
 - **Counting Back:** Start at 15 and count back.
 - **Number Line:** Use a number line to subtract!
 - **Place Value Strategy:** Subtract tens first, then ones.

 **Show Your Work:** Draw a picture or write a number sentence to explain.

Bonus: The wizard sells 4 more cookies. How many cookies are left now?

- Solve: ____ - ____ = ____

You may choose to administer Cumulative Benchmark Assessment #1 before beginning Unit 5.

Unit 5: Strategies to Fluently Add w/in 100

Subject: Math

Grade: 2

Name of Unit: Strategies to Fluently Add Within 100

Length of Unit: 17 days

Overview of Unit:

In this unit, students first review strategies to add within 20. They review count on, make a 10, doubles, and near doubles. Students use these mental math strategies to help prepare them for when they add 2-digit numbers using place value and properties of operations.

Students use various tools and strategies to find sums up to 100. Students use base-ten blocks and number lines to decompose and adjust addends. They use base-ten blocks to decompose one or two addends into tens and ones, and then combine the tens and ones to find the sum.

Students will extend their understanding of the addition concepts to find sums up to 100. They will continue to build proficiency by trading 10 ones for 1 ten. Students learn partial sums addition where sums are computed for each place-value position of the addends. Students will continue to decompose addends and will learn to adjust addends or make friendly numbers, understanding that compensation does not affect the sum.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards.
- Materials needed:
 - Number Line 0-20 (Teaching Resource)
 - Number Cards 0-10 (Teaching Resource)
 - Base-ten Blocks
 - Place-Value Chart (Teaching Resource)
 - Number Chart 0-100 (Teaching Resource)
 - Index cards
 - Number Lines and Bars: Addition (Teaching Resource)
 - Blank Open Number Lines (Teaching Resource)
 - Number cubes

Essential Question:

- What strategies can I use to add 2-digit numbers?

Enduring Understandings:

- Models, drawing and equations are used to illustrate addition. Strategies should be chosen based on the numbers involved.
- A number can be broken apart in many ways as the sum of two numbers.
- The equal sign is a symbol that means the amount on one side of the sign is the same as the amount on the other side.
- Addition strategies can be used to solve two-step word problems.

Priority Standards:

- **2.RA.A.1** Demonstrate fluency with addition and subtraction within 20.
- **2.GM.C.9** Represent whole numbers as lengths on a number line, and represent whole-number sums and differences within 100 on a number line.
- **2.NBT.B.8** Add or subtract within 1000 and justify the solution.

Supporting Standards:

- **2.NBT.B.6** Demonstrate fluency with addition and subtraction within 100.
- **2.NBT.B.7** Add up to four two-digit numbers
- **2.NBT.C.11** Write and solve problems involving addition and subtraction within 100.

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.RA.A.1	Fluency with addition and subtraction within 20 involves understanding and applying mental strategies,	Demonstrating fluency with sums and differences within 20. Using mental strategies such as make ten, doubles, near doubles, and properties of operations (associative, commutative, identity)	Apply	3
2.GM.C.9	Represent lengths on a number line and represent whole-number sums and differences within 100 using a number line	Place whole numbers accurately on a number line Understand a number line is a tool that measures the distance from 0 Use a number line to solve and explain addition and subtraction problems within 100 Understand that jumps on a number line represent operations (forward = addition and backwards = subtraction)	Understand	2
2.NBT.B.8	Add or subtract within 1,000 and justify the solution	Accurately add and subtract within 1,000 using various strategies (place value, decomposing and composing numbers, number lines, and base-ten blocks). Explain solutions using reasoning such as place value, visual models, oral or written explanations, and equations that show the steps.	Evaluate	3

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
- Unit 5 Readiness Diagnostic - Unit 5 Math Probe - Exit Tickets - Daily Work	- Unit 5 Review - Unit 5 Fluency Check - Unit 5 Performance Task - Unit 5 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
represent strategy explanation wonder explore relationship compare related arrange decide check relate to plan information	addend count on doubles near doubles regroup decompose friendly numbers partial sums place value number line adjust

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR3: Critique, Correct, and Clarify

MLR5: Co-Craft Questions and Problems

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Find the Pattern, Make a Pattern
- Mystery Number
- Which Benchmark Is It Closest To?
- Decompose It

Sense-Making Routines:

- Which Doesn't Belong?
- Notice and Wonder: What do you see?
- Notice and Wonder: What do you notice? What do you wonder?
- Is It Always True?
- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: Tell me everything you can.
- Numberless Word Problems

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students use strategies to add within 100.	
	• Add Within 20 Race • Doubles Facts Four in a Row • Add 2-Digit Numbers Task Cards • Add 2-Digit Numbers Task Cards • Decompose 2-Digit Task Cards • Decompose 2-Digit Task Cards • Decompose One Addend Tic Tac Toe • Adjusting Addends Task Cards • Add More Than Two Numbers Four in a Row • Representing Addition Showdown	5-1 5-2 5-3 5-4 5-5 5-6 5-7 5-8 5-9 5-10
	Digital Game 	Math Buzz Students add numbers to 100. 5-1
	Have students complete at least one of the Use It! activities for this unit.	
	STEM Project Card 	Bike Trail App Students use bike trail information to create an app that tracks the number of miles ridden on a bike. 5-10
	Connection Card 	Picture Collage Students make a picture collage and write addition problems that go with the pictures. 5-3
	Real World Card 	Good Websites Students write a list of tips on index cards to know about finding good websites. 5-10

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to explore addition patterns on a number chart to promote thinking about ways to add 2-digit numbers.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Corner Sums in Squares* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Corner Sums in Squares* unit opener.

Suggestion: Prepare ahead of time a Hundred Chart for each child.

Bloom's Levels: Apply

DOK: 2

Engaging Experience 1: 5-1 Strategies to Add Fluently Within 20

Teaching Point: *Today I am going to show you how to add fluently within 20 by counting on and by making a 10.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.A.1

Supporting: 2.NBT.B.6

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 5-1 to have students use mental math strategies such as counting on and making a 10 to add fluently within 20.

Another way to do this is to use the Activity-Based 5-1 to have students create equations and count on or make 10 to find the sums.

Bloom's Levels: Apply
Webb's DOK: 3

Engaging Experience 2: 5-2 More Strategies to Add Fluently within 20

Teaching Point: *Today I am going to teach you how to add fluently within 20 and how to use doubles and near doubles to help add within 20.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.A.1

Supporting: 2.NBT.B.6

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 5-2 to have students connect their understanding of doubles and near doubles facts as mental math strategies to add within 20.

Another way to do this is to use the Activity-Based Exploration 5-2 to have students represent doubles and near doubles facts within 20 using counters.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 3: 5-3 Represent Addition with 2-Digit Numbers

Teaching Point: *Today I am going to teach you to use and explain how to use base-ten blocks to help add 2-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 5-3 to have students connect their understanding of representing numbers with base-ten blocks to adding 2-digit numbers with base-ten block representations.

Another way to do this is to complete the Activity-Based Exploration 5-3 to have students use base ten blocks and a place value chart to add 2-digit numbers within 100.

Bloom's Levels: Apply
Webb's DOK: 3

Engaging Experience 4: 5-4 Use Properties to Add

Teaching Point: *Today I am going to teach you how to add addends in any order to find the sum and how to explain that addends added in any order have the same sum.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 5-4 to help students extend their understanding of addition in order to prove they can add two addends in any order to find the same sum.

Another way to do this is to use the Activity-Based Exploration 5-4 to have students explore using base-ten blocks to add two addends in different orders and draw conclusions based on their sums.

Bloom's Levels: Understand

Webb's DOK: 2

Engaging Experience 5: 5-5 Decompose Two Addends to Add

Teaching Point: *Today I am going to teach you how to decompose and explain how to decompose two addends to help us add two 2-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 5-5 to have students demonstrate decomposing both addends by place value and adding the partial sums to find the sum of a 2-digit addition equation.

Another way to do this is to use the Activity-Based Exploration 5-6 to have students explore ways to use base-ten blocks to decompose two addends to add.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 6: 5-6 Use a Number Line to Add

Teaching Point: *Today I am going to show you how to use and explain how to use a number line to help you add.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.C.9

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 5-6 to use number bars and jumps on a number line to show addition. Students understand that the combined total of bars or jumps represents the sum of the two numbers.

Another way to do this is to use the Activity-Based Exploration 5-6 to have students represent addends in an addition equation by combining number bars on a number line to find the sum.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 7: 5-7 Decompose One Addend to Add

Teaching Point: *Today I am going to teach you how to decompose and explain how to decompose one addend to add.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 5-7 to have students use their knowledge about decomposing two addends to add to decomposing only one addend. Students will use a number line to count on to find the sum.

Another way to do this is to use the Activity-Based Exploration 5-7 to have students decompose two addends to help them decide if decomposing only one addend is a useful strategy.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 8: 5-8 Adjust Addends to Add

Teaching Point: *Today I am going to teach you to adjust and explain how to adjust addends to make them friendlier numbers to add within 100.*

Suggested Length of Time:

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 5-8 to have students adjust addends to make friendly numbers to help them add 2-digit numbers

Another way to do this is to use the Activity-Based Exploration 5-8 to have students adjust addends to make friendly numbers to help them add 2-digit numbers using base-ten blocks and number lines.

Suggestions: Encourage students to look at the two addends and determine which is closer to the next ten. This gives students a good starting point to know which addend to adjust first. Adjusting addends is also referred to as compensation in some resources.

Bloom's Levels: Apply

Webb's DOK: 3

Math Probe: Using Strategies to Add 2- Digit Numbers

Teaching Point: *Today we are going to determine if a strategy shown is the correct way to solve an additional equation.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 5 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 5 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 9: 5-9 Add More Than Two Numbers

Teaching Point: *Today I am going to teach you to explain how to decompose and adjust addends to add more than two 2-digit numbers and to explain how you did it.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.7, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 5-9 to have students add more than two 2-digit numbers using different addition strategies.

Another way to do this is to use the Activity-Based Exploration 5-9 to have students create equations with more than two 2-digit numbers and apply addition strategies to solve them.

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Experience 10: 5-10 Solve One and Two-Step Problems Using Addition

Teaching Point: *Today I am going to teach you to solve one-and two-step addition word problems and to explain how you did it.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 5-10 to have students solve one-and two-step addition word problems using different addition strategies.

Another way to do this is to use the Activity-Based Exploration 5-10 to have students solve one- and two-step problems using addition strategies they have learned in the unit.

Bloom's Levels: Apply

Webb's DOK: 3

Unit Review and Fluency Check:

Teaching Point: *Today I am going to review with you how to solve 2-digit addition problems by using the strategies of decomposing, adjusting the numbers, and a number line.*

Suggested Length of Time: 1 Day

Standards Addressed

Priority: 2.RA.A.1, 2.GM.C.9, 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.7, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 5 Fluency Practice where students will practice making ten to subtract.

Suggestion: There is enough time to complete the Unit Review and Fluency Practice on the review day.

Bloom's Levels: Apply

Webb's DOK: 3

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of how to solve 2-digit addition problems by using the strategies of decomposing, adjusting the numbers, and a number line.*

Suggested Length of Time: 1 day

Priority: 2.RA.A.1, 2.GM.C.9, 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.7, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 5 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 5 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 5

Quick Mixing with Addition Strategies

The Baker Wizard is making a batch of cookies and muffins. He bakes 23 cookies and 45 muffins.

- **How many treats does he have in total?**
 - Solve using one of these strategies:
 - **Make a Ten:** Break apart numbers to make adding easier.
 - **Doubles or Near Doubles:** Use known facts to help solve.
 - **Number Line:** Hop along a number line to add up!
 - **Place Value Strategy:** Add tens first, then ones.

 **Show Your Work:** Use drawings or number sentences to explain your answer. Challenge your students to show at least two methods.

Bonus: The wizard also bakes 36 cupcakes. How many treats are there now?

- Solve: ____ + ____ = ____

 Fantastic work, magical bakers! You've helped the Baker Wizard by using your super addition skills! Draw a picture of your favorite magical treat below.   

Unit 6: Strategies to Fluently Subtract w/in 100

Subject: Math

Grade: 2

Name of Unit: Strategies to Fluently Subtract Within 100

Length of Unit: 17 days

Overview of Unit:

In this unit, students build on their understanding of place value to develop strategies to subtract 2-digit numbers. Students subtract both tens and ones. Students work toward regrouping 1 ten as 10 ones.

Students use various strategies to build fluency with subtraction facts within 20. They use number lines, then the Make a 10 strategy, and relate subtraction to addition.

Students use base-ten blocks to represent and solve subtraction problems, without regrouping at first. Using base-ten blocks reinforces place value concepts as students connect the digits in the tens and ones places to base-ten blocks that are taken away and the blocks that are left over.

Students choose and explain how to use a strategy to solve a given problem including decomposing a number, adjust numbers, and use addition to subtract.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - Number Cards 0-10, 11-19, 20-100 (Teaching Resource)
 - Number Line 0-20 (Teaching Resource)
 - Base-Ten Blocks
 - Ten Frames (Teaching Resource)
 - Number Bond 1 (Teaching Resource)
 - Decomposing Boxes and Arrows (Teaching Resource)
 - Number Chart 1-100 (Teaching Resource)
 - Index cards
 - Part-Part-Whole Mat (Teaching Resource)
 - Number Lines and Bars - Subtraction (Teaching Resource)
 - Blank Open Number Lines (Teaching Resource)
 - Number cubes

Essential Question:

- What strategies can I use to subtract 2-digit numbers?

Enduring Understandings:

- Subtraction can be solved in more than one way such as counting on, counting back, make a 10, and using addition to subtract.
- Strategies should be chosen based on the numbers involved.
- Numbers can be broken apart (decomposed) to make subtraction easier.
- Using place value helps make subtraction more efficient.
- Checking subtraction with addition helps confirm the answer.

Priority Standards:

- **2.RA.A.1** Demonstrate fluency with addition and subtraction within 20
- **2.GM.C.9** Represent whole numbers as lengths on a number line, and represent whole-number sums and differences within 100 on a number line
- **2.NBT.B.8** Add or subtract within 1000 and justify the solution.
- **2.NBT.B.9** Use the relationship between addition and subtraction to solve problems

Supporting Standards:

- **2.NBT.B.6** Demonstrate fluency with addition and subtraction within 100
- **2.NBT.C.11** Write and solve problems involving addition and subtraction within 100

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.RA.A.1	Fluency with addition and subtraction within 20 involves understanding and applying mental strategies,	Demonstrating fluency with sums and differences within 20. Using mental strategies such as make ten, doubles, near doubles, and properties of operations (associative, commutative, identity)	Apply	3
2.GM.C.9	Represent lengths on a number line and represent whole-number sums and differences within 100 using a number line	Place whole numbers accurately on a number line Understand a number line is a tool that measures the distance from 0 Use a number line to solve and explain addition and subtraction problems within 100 Understand that jumps on a number line represent operations (forward = addition and backwards = subtraction)	Understand	2

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.NBT.B.8	Add or subtract within 1,000 and justify the solution	Accurately add and subtract within 1,000 using various strategies (place value, decomposing and composing numbers, number lines, and base-ten blocks. Explain solutions using reasoning such as place value, visual models, oral or written explanations, and equations that show the steps.	Evaluate	3
2.NBT.B.9	There is a relationship between addition and subtraction that can be used to solve problems.	Understand problems can be solved using either addition or subtraction Understand addition and subtraction are inverse operations Understand properties of operations (i.e. fact families and part-part-whole) Use addition and/or subtraction to solve problems with or without context	Apply	2

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
• Unit 6 Readiness Diagnostic • Unit 6 Math Probe • Exit Tickets • Daily Work	• Unit 6 Review • Unit 6 Fluency Check • Unit 6 Performance Task • Unit 6 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
different	count back
prefer	count on
process	decompose
represent	difference
explain	regroup
information	number line
check	decompose
relate	place value
similar	adjust
argument	friendly numbers
compare	related facts
make sense	
require	

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR4: Info Gap

MLR5:Co-Craft Questions and Problems

MLR6: Three Reads

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Would You Rather?
- Find the Pattern, Make a Pattern
- Where Does it Go?
- Greater Than or Less Than
- About How Much?

Sense-Making Routines:

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Which Doesn't Belong?
- Is It Always True?
- Numberless Word Problems

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students build proficiency with fluently subtracting within 100.	
	• Compare Bump	6-1
	• Use Known Facts to Subtract Four in a Row	6-2
	• Represent Subtraction Task Cards	6-3
	• 2-Digit Subtraction Concentration	6-4
	• 2-Digit Subtraction Showdown	6-5
	• Decompose to Subtract Race	6-6
	• Making Friendly Numbers Task Cards	6-7
	• Unknown Number Showdown	6-8
	• Use Known Facts to Subtract Four in a Row	6-9
	• Two-Step Word Problems Task Cards	6-10
Digital Station 	Digital Game Special Delivery Students practice adding numbers within 40.	6-1
Have students complete at least one of the Use It! activities for this unit.		
Application Station 	STEM Project Card Build a Model Students draw a model of a building and use 100 or fewer building blocks to build it.	6-4
	Connection Card Math Football Students create a math football game to practice subtraction.	6-6
	Real World Card Buying Decisions Students create a price comparison chart for 5 items from 2 different stores.	6-7

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to explore how differences stay the same over time - and how that relates to a strategy for subtraction.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Same Difference* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Same Difference* unit opener.

Bloom's Levels: Understand

DOK: 2

Engaging Experience 1: 6-1 Strategies to Subtract Within 20

Teaching Point: *Today I am going to teach you how to count on and count back to subtract within 20 and to explain how to count on and count back to subtract within 20.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.A.1

Supporting: 2.NBT.B.6

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 6-1 to apply their understanding of counting on and counting back. They use mental strategies to subtract within 20.

Another way to do this is to use the Activity-Based Exploration 6-1 to have students use counters, number lines, and mental strategies to count on and count back to subtract.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 2: 6-2 More Strategies to Subtract Within 20

Teaching Point: *Today I am going to teach you to explain how to subtract within 20 by making a 10 or using addition.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.A.1

Supporting: 2.NBT.B.6

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 6-2 to have students expand their knowledge of subtraction strategies to include making a 10 and using addition. They use these strategies to subtract with 20 using mental strategies.

Another way to do this is to use the Activity-Based Exploration 6-2 to have students use various tools and strategies to discover how to subtract by making a 10 and by using addition.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 3: 6-3 Represent Subtraction with 2-Digit Numbers

Teaching Point: *Today I am going to teach you how to subtract and represent subtracting 2-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to complete the Guided Exploration 6-3 and have students use base-ten blocks to represent and solve 2-digit subtraction equations without regrouping.

Another way to do this is to use the Activity-Based Exploration 6-3 to have students represent and solve 2-digit subtraction equations without regrouping.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 4: 6-4 Represent 2-Digit Subtraction with Regrouping

Teaching Point: *Today I am going to teach you how to subtract 2-digit numbers with regrouping and how to represent 2-digit subtraction with regrouping.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 6-4 to have students represent and solve 2-digit subtraction equations with regrouping using base-ten blocks.

Another way to do this is use the Activity-Based Exploration 6-4 to have students use base-ten blocks to represent and solve 2-digit subtraction equations with regrouping.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 5: 6-5 Use a Number Line to Subtract

Teaching Point: *Today I am going to teach you how to use and explain how to use a number line to subtract.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.C.9

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 6-5 to have students represent and solve 2-digit subtraction equations using a number line.

Another way to do this is to use the Activity-Based Exploration 6-5 to have students use number lines to represent and solve subtraction equations.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 6: 6-6 Decompose Numbers to Subtract

Teaching Point: *Today I am going to teach you how to decompose and to explain how to decompose 2-digit numbers to make subtracting friendlier.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 6-6 to have students decompose one number to make subtraction friendlier.

Another way to do this is to use the Activity-Based Exploration 6-6 to have students decompose a number, then use a number line to subtract.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 6: 6-7 Adjust Numbers to Subtract

Teaching Point: *Today I am going to teach you how to adjust and subtract 2-digit numbers and to explain how to adjust 2-digit numbers for friendlier subtraction.*

Suggested Length of Time: 1 day

Standards Addressed**Priority:** 2.NBT.B.8**Supporting:** 2.NBT.B.6, 2.NBT.C.11**Detailed Description/Instructions:**

One way to do this is to use the Guided Exploration 6-7 to have students adjust numbers for friendlier subtraction.

Another way to do this is to use the Activity-Based Exploration 6-7 to have students explore ways to make numbers friendlier to subtract.

Bloom's Levels: Apply**Webb's DOK:** 2**Math Probe:** Using Strategies to Subtract 2- Digit Numbers

Teaching Point: *Today we are going to determine if a given strategy is a correct approach to solve a 2-digit subtraction problem.*

Suggested Length of Time: 1 day**Detailed Description/Instructions:**

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 6 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 6 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience: 6-8 Relate Addition to Subtraction

Teaching Point: *Today I am going to teach you to use and explain how to use addition to solve 2-digit subtraction equations.*

Suggested Length of Time: 1 day**Standards Addressed****Priority:** 2.NBT.B.9**Supporting:** 2.NBT.B.6, 2.NBT.C.11**Detailed Description/Instructions:**

One way to do this is to use the Guided Exploration 6-8 to have students use related addition equations to solve 2-digit subtraction problems.

Another way to do this is to use the Activity-Based Exploration 6-8 to have students use a Part-Part-Whole mat to help them solve 2-digit subtraction equations.

Bloom's Levels: Apply**Webb's DOK:** 2**Engaging Experience:** 6-9 Solve One-Step Problems Using Subtraction

Teaching Point: *Today I am going to teach you to use and explain how to use subtraction strategies to solve one-step problems using subtraction.*

Suggested Length of Time: 1 day

Standards Addressed**Priority:** 2.NBT.B.8**Supporting:** 2.NBT.B.6, 2.NBT.C.11**Detailed Description/Instructions:**

One way to do this is to use the Guided Exploration 6-9 to have students apply their understanding of how bar diagrams can be used to represent real-world situations involving subtraction. Then they will use the subtraction strategies to solve.

Another way to do this is to use the Activity-Based Exploration 6-9 to have students write and solve one-step subtraction word problems.

Bloom's Levels: Apply**Webb's DOK:** 2**Engaging Experience:** 6-10 Solve Two-Step Problems Using Subtraction

Teaching Point: *Today I am going to teach you to use and explain how to use subtraction strategies to solve two-step problems using subtraction.*

Suggested Length of Time: 1 day**Standards Addressed****Priority:** 2.NBT.B.8**Supporting:** 2.NBT.B.6, 2.NBT.C.11**Detailed Description/Instructions:**

One way to do this is to use the Guided Exploration 6-10 to have students apply their understanding of subtraction by using strategies to solve both steps of the problem.

Another way to do this is to use the Activity-Based Exploration 6-10 to have students work to solve two-step word problems.

Bloom's Levels: Apply**Webb's DOK:** 3**Unit Review and Fluency Check:**

Teaching Point: *Today I am going to review with you how to solve 2-digit subtraction problems by using the strategies of decomposing, adjusting the numbers, and a number line.*

Suggested Length of Time: 1 day**Standards Addressed****Priority:** 2.RA.A.1, 2.NBT.B.8, 2.NBT.B.9, 2.GM.C.9**Supporting:** 2.NBT.B.6, 2.NBT.C.11**Detailed Description/Instructions:**

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 7 Fluency Practice where students will practice using near doubles to add.

Suggestion: There is enough time to complete the Unit Review and Fluency Practice on the review day.

Bloom's Levels: Apply
Webb's DOK: 3

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of solving two digit subtraction problems within 100.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.RA.A.1, 2.NBT.B.8, 2.NBT.B.9, 2.GM.C.9

Supporting: 2.NBT.B.6. 2.NBT.C.11

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 6 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 6 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply
Webb's DOK: 3

Engaging Scenario - Unit 6

The Great Animal Rescue! Subtracting Within 100

Instructions: Oh no! A storm has caused some animals to wander away from Wildwood Animal Park. Solve the subtraction problems below to figure out how many animals are missing and help bring them back!

1. **The Zebra Pen**

- Before the storm: **62 zebras**
- After the storm: **48 zebras**
- **How many zebras are missing?**
- **$62 - 48 =$ _____**

2. **The Parrot Aviary**

- Before the storm: **95 parrots**
- Now in the aviary: **67 parrots**
- **How many parrots are missing?**
- **$95 - 67 =$ _____**

3. **The Elephant Sanctuary**

- Before the storm: **80 elephants**
- Found so far: **73 elephants**
- **How many elephants do we still need to find?**
- **$80 - 73 =$ _____**

4. **The Monkey Grove**

- Before the storm: **58 monkeys**
- Now counted: **39 monkeys**
- **How many monkeys are missing?**
- **$58 - 39 =$ _____**

5. **The Giraffe Plains**

- Before the storm: **77 giraffes**
- Found after the storm: **68 giraffes**
- **How many giraffes are still lost?**
- **$77 - 68 =$ _____**

Bonus Challenge:

- Can you write your own subtraction word problem about missing animals? Draw a picture to go with it!

Great job, Wildwood Rangers! Once you've solved all the problems, draw a picture of the animals safe and happy back at the park!

Unit 7: Measure and Compare Lengths

Subject: Math

Grade: 2

Name of Unit: Measure and Compare Lengths

Length of Unit: 18 days

Overview of Unit:

In this unit, students will build on their prior knowledge of measuring lengths using non-standard units by learning to measure using standard units including inches, feet, yards, centimeters, and meters and examine their relationships.

As students become comfortable measuring objects, they then compare the lengths of two objects. They will also be asked to relate their measurements to each other, allowing them to make more accurate measurements.

Students will be asked to estimate the length of objects prior to measuring, using a standard measurement tool. Students will then determine the appropriateness of their precise measurements.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - Inch Ruler (Teaching Resource)
 - Number Cards 0-10 (Teaching Resource)
 - Yard Measuring Tape (Teaching Resource)
 - Connecting Cubes
 - Centimeter Ruler (Teaching Resource)
 - Meter Measuring Tape (Teaching Resource)
 - Yard Measuring Tape (Teaching Resource)
 - Number Chart 1-100 (Teaching Resource)
 - Blank Number Lines 2 (Teaching Resource)

Essential Question:

- How can I estimate and measure length in standard units?

Enduring Understandings:

- Measurement provides a way to describe and compare the size of objects using both customary and metric units.
- Different measurement systems, such as customary and metric, allow for comparisons of length.
- Units of measurement are related, and understanding these relationships helps in converting between inches, feet, yards, centimeters, and meters.
- Estimation is a useful strategy for determining length when precise measurement is not necessary.
- Solving real-world problems involving length requires selecting appropriate units, making conversions, and applying mathematical reasoning

Priority Standards:

- **2.GM.B.5** Analyze the results of measuring the same object with different units
- **2.GM.C.9** Represent whole numbers as lengths on a number line, and represent whole-number sums and differences within 100 on a number line

Supporting Standards:

- **2.GM.B.4** Measure the length of an object by selecting and using appropriate tools
- **2.GM.B.6** Estimate lengths using units of inches, feet, yards, centimeters and meters
- **2.GM.B.7** Measure to determine how much longer one object is than another
- **2.GM.C.8** Use addition and subtraction within 100 to solve problems involving lengths that are given in the same units

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.GM.B.5	Analyze the results of measuring the same object with different units	Recognize that the size of the measurement unit used is related to the number of units needed to measure the object. When larger units are used, fewer of the units will be needed to measure the object	Analyze	3
2.GM.C.9	Represent lengths on a number line and represent whole-number sums and differences within 100 using a number line	Place whole numbers accurately on a number line Understand a number line is a tool that measures the distance from 0 Use a number line to solve and explain addition and subtraction problems within 100 Understand that jumps on a number line represent operations (forward = addition and backwards = subtraction)	Understand	2

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
• Unit 7 Readiness Diagnostic • Unit 7 Math Probe • Exit Tickets • Daily Work	• Unit 7 Review • Unit 7 Fluency Check • Unit 7 Performance Task • Unit 7 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
conclude	inch
determine	length
describe	unit
explain	foot/feet
compare	yard
relate	yardstick
important	customary unit
useful	estimate
pattern	centimeter
previous	meter
process	meterstick
agree	metric unit
sense	
information	
strategy	
purpose	
similar	

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR5: Co-Craft Questions and Problems

MLR6: Three Reads

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Let's Count
- Decompose It
- About How Much?
- Where Does It Go?

Sense-Making Routines:

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What question could you ask?
- Notice and Wonder: What do you notice? What do you wonder?
- Notice and Wonder: What could the question be?
- Notice and Wonder: Tell me everything you can.
- Numberless Word Problem: What is the question?

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students build proficiency with measuring and comparing lengths.	
	• Inches Task Cards	7-1
	• Measuring Feet and Yards Task Cards	7-2
	• Compare Lengths Task Cards	7-3
	• Measuring Inches, Feet, and Yards Task Cards	7-4
	• Measuring Feet and Yard Task Cards	7-5
	• Compare Lengths Showdown	7-6
	• Centimeter or Meter Tic Tac Toe	7-7
	• Inches Task Cards	7-8
	• Centimeter or Meter Tic Tac Toe	7-9
	• Word Problem Race	7-10
	• Word Problem Race	7-11
Digital Station 	Digital Game Factory Sort Students practice place value.	7-1
Have students complete at least one of the Use It! activities for this unit.		
Application Station 	STEM Project Card Rubber Band Car Students design, build, and test a car and measure how far it goes.	7-3
	Connection Card Disc Golf Course Students design a disc golf course and measure it in meters.	7-10
	Real World Card How to Get There Students write instructions for how to get from one place in the classroom to another by measuring in feet.	7-2

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
- Targeted Intervention - Small Group - Take Another Look - Reinforce Understanding - ALEKS Adventure	- Practice It! - Own It! - Interactive Additional Practice - Spiral Review - Additional Practice - ALEKS Adventure	- Use It! - Websketch Exploration - Extend Thinking - ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to explore ways to use non-standard measurement to determine which path is the shortest.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Which Path Is the Shortest* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Which Path Is the Shortest* unit opener.

Suggestion: Prepare ahead of time by having rulers and string or yarn.

Bloom's Levels: Apply

DOK: 2

Engaging Experience 1: 7-1 Measure Length with Inches

Teaching Point: *Today I am going to teach you how to measure length in inches.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.4

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-1 to have students connect their understanding of measuring objects with nonstandard units to using inches on a ruler as a standard unit of measure to determine length.

Another way to do this is to use the Activity-Based Exploration 7-1 to have students use inch rulers to understand measuring objects.

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Experience 2: 7-2 Measure Length with Feet and Yards

Teaching Point: *Today I am going to teach you how to measure length in feet and yards.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.4

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-2 to expand on students' understanding of standard measurement to include using inches, feet, and yards.

Another way to do this is to use the Activity-Based Exploration 7-2 to have students use inch rulers and yardsticks to understand measuring objects of different lengths.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 3: 7-3 Compare Lengths Using Customary Units

Teaching Point: *Today I am going to teach you to compare lengths using customary units.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.7

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-3 for students to use their understanding of measurement to compare the lengths of two objects to find the difference in length.

Another way to do this is to use the Activity Based Exploration 7-3 to have students measure two objects and compare their lengths.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 4: 7-4 Relate Inches, Feet, and Yards

Teaching Point: *Today I am going to teach you the relationships between inches, feet, and yards.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.4, 2.GM.B.7

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-4 to relate inches, feet, and yards by comparing three different measurements of the same object.

Another way to do this is to use the Activity-Based Exploration 7-4 to have students explore measuring the same object in inches, feet, and yards to determine the relationships between the units.

Bloom's Levels: Analyze
Webb's DOK: 2

Engaging Experience 5: 7-5 Estimate Length Using Customary Units

Teaching Point: *Today I am going to teach you how to use everyday items to help estimate length in customary units.*

Suggested Length of Time:

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.6

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-5 to have students learn about using everyday items to estimate the length of real-world objects.

Another way to do this is use the Activity-Based Exploration 7-5 to have students estimate the length of classroom objects using an everyday item as a benchmark unit.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 6: 7-6 Measure Length with Centimeters and Meters

Teaching Point: *Today I will teach you to measure length with centimeters and meters.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.4

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-6 to have students connect their understanding of measuring length in inches and yards to using centimeters and meters to measure length.

Another way to do this is to use the Activity-Based Exploration 7-6 to have students use centimeter rulers and metersticks to understand measuring objects using metric units.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 7: 7-7 Compare Lengths Using Metric Units

Teaching Point: *Today I will teach you to compare lengths using metric units.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.7

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-7 to have students use their knowledge of measurement to compare the lengths of two objects by writing and solving a subtraction equation.

Another way to do this is to use the Activity-Based Exploration 7-7 to have students use metric units to measure two objects and compare their lengths.

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Experience 8: 7-8 Relate Centimeters and Meters

Teaching Point: *Today I will teach how to explain the relationship between centimeters and meters.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.4, 2.GM.B.7

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-8 to have students relate centimeters and meters by comparing two different measurements of the same object.

Another way to do this is to use the Activity-Based Exploration 7-8 to have students explore measuring the same object with centimeters and with meters to determine the relationship between the units.

Bloom's Levels: Analyze

Webb's DOK: 2

Math Probe: Appropriate Units to Measure Objects

Teaching Point: *Today we are going to consider two measurements of objects and choose an appropriate unit to measure an object .*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 7 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 7 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 9: 7-9 Estimate Length Using Metric Units

Teaching Point: *Today I will teach you how to use everyday items to estimate length in metric units.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.B.5

Supporting: 2.GM.B.6

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-9 to have students learn about everyday items to estimate the length of other real-world objects.

Another way to do this is to use the Activity-Based Exploration 7-9 to have students use everyday items in the classroom to estimate the lengths of other objects in the classroom.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 10: 7-10 Solve Problems Involving Length

Teaching Point: *Today I will teach you how to solve problems involving length.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.C.9

Supporting: 2.GM.C.8

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-10 to have students represent a word problem involving length with a drawing and an equation They will then solve the problem.

Another way to do this is to use the Activity-Based Exploration 7-10 to have students generate an addition word problem involving length, then they solve it using known strategies.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 11: 7-11 Solve More Problems Involving Length

Teaching Point: *Today I am going to teach you how to use a number line to solve problems involving length.*

Suggested Length of Time: 1 day

Standards Addressed

Priority:2.GM.C.9

Supporting: 2.GM.C.8

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 7-11 to have students represent a problem involving length with a drawing and an equation Then they use a number line to solve the equation.

Another way to do this is to use the Activity-Based Exploration 7-11 to have students generate a subtraction word problem involving length, then they solve it using a number line.

Bloom's Levels: Apply

Webb's DOK: 2

Unit Review and Fluency Check:

Teaching Point: *Today I am going to review with you how to measure precisely, choose an appropriate unit of measurement, and solve problems involving length.*

Suggested Length of Time: 1 Day

Standards Addressed

Priority: 2.GM.B.5, 2.GM.C.9

Supporting: 2.GM.B.4, 2.GM.B.6, 2.GM.B.7, 2.GM.C.8

Detailed Description/Instructions:

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 7 Fluency Practice where students will practice using near doubles to subtract.

Suggestion: There is enough time to complete the Unit Review and Fluency Practice on the review day.

Bloom's Levels: Apply

Webb's DOK: 2

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of precisely measuring objects, choosing an appropriate unit of measurements, and solving problems involving length.*

Suggested Length of Time: 1 day

Priority: 2.GM.B.5, 2.GM.C.9

Supporting: 2.GM.B.4, 2.GM.B.6, 2.GM.B.7, 2.GM.C.8

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 7 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 7 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 7

The Magical Measurement Challenge

The wizard is wrapping a giant cake in a magical box. The box is 24 inches tall, but the cake is only 19 inches tall.

- **How much extra space is left at the top?**

- Solve: $24 - 19 = \underline{\hspace{1cm}}$ inches

 **Explain Your Thinking:** How did you solve it? Use words, pictures, or numbers.

Bonus: The wizard wants to add a second layer to the cake, making it 6 inches taller.

- **Will the cake still fit in the box? Why or why not?**

- Solve: New Cake Height = $19 + 6 = \underline{\hspace{1cm}}$ inches

- Compare the new cake height to the box height. Will it fit? Explain your answer.

Suggestion: Have students show their work on a poster.

You may choose to administer Cumulative Benchmark Assessment #2 before beginning Unit 8.

Unit 8: Measure Money and Time

Subject: Math

Grade: 2

Name of Unit: Measure Money and Time

Length of Unit: 11 days

Overview of Unit:

In this unit, students learn to count money and to tell and write time to the nearest five minutes. Skip counting is employed in both topics.

Besides counting coins and bills to find the value of a group of coins or bills, students also explore different combinations of bills or coins to show a given amount of money. They apply addition and subtraction skills when they solve problems involving money.

Throughout the unit, students use both analog and digital clocks to show time. Students use the abbreviations a.m. and p.m. to be precise when telling time.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - Coin Value Cards (Teaching Resource)
 - Counters
 - Pennies, Nickels, Dimes, and Quarters
 - Number Chart 1-100 (Teaching Resource)
 - Paper Bag
 - Index Cards
 - Clocks (Teaching Resource)
 - Student Clocks
 - Time Cards (Teaching Resource)
 - Timeline (Teaching Resource)

Essential Question:

- How can I measure with money and time?

Enduring Understandings:

- Coins and bills have specific values that can be combined to make different amounts.
- Clocks help us measure time in hours and minutes.
- Knowing the difference between a.m. and p.m. helps us understand when things happen and be precise when telling time.

Priority Standards:

- **2.GM.D.12** Find the value of combinations of dollar bills, quarters, dimes, nickels and pennies, using \$ and ¢ appropriately

Supporting Standards:

- **2.GM.D.10** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- **2.GM.D.11** Describe a time shown on a digital clock as representing hours and minutes, and relate a time shown on a digital clock to the same time on an analog clock
- **2.GM.D.13** Find combinations of coins that equal a given amount

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.GM.D.12	Find and represent the value of combinations of dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ appropriately	Identify and state the value of each coin and bill Combine multiple coins to find a total value Choose when to use \$ or ¢ depending on the amount Represent 100¢ and \$1 in multiple ways Use addition strategies and skip counting to find the value of a given set of coins	Apply	3

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
● Unit 8 Readiness Diagnostic ● Unit 8 Math Probe ● Exit Tickets ● Daily Work	● Unit 8 Review ● Unit 8 Fluency Check ● Unit 8 Performance Task ● Unit 8 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
image represent arrange similar different decide determine	cent dime nickel penny quarter dollar bill dollar sign (\$) analog clock digital clock half past hour hand minute hand quarter past quarter to a.m. p.m.

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR6: Three Reads

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- About How Much?
- Greater Than or Less Than?
- Finding the Missing Values

Sense-Making Routines:

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Notice and Wonder: Tell me everything you can.
- Which Doesn't Belong?

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students build proficiency with measurement using money and time.	
	• Cents Bump • Money Task Cards • Dollars Four in a Row • Tell Time Concentration • A.M. or P.M. Tic Tac Toe	8-1 8-2 8-3 8-4 8-5
	Digital Game 	Special Delivery Students add and subtract within 20. 8-1
	Have students complete at least one of the Use It! activities for this unit.	
	STEM Project Card 	New Clock Students practice telling time by designing a clock. 8-4
Application Station 	Connection Card 	Art Museum Special Event Students plan an art museum special event and practice adding fees. 8-3
	Real World Card 	Donate Money Students practice counting money by creating a donation chart. 8-2

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to explore different patterns related to using the fewest possible pennies, nickels, and dimes to show a given amount of money.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *How Many Coins* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *How Many Coins* unit opener.

Suggestion: Prepare ahead of time by having bags of pennies, nickels, and dimes.

Bloom's Levels: Understand

DOK: 2

Engaging Experience 1: 8-1 Understand the Values of Coins

Teaching Point: *Today I am going to teach you how to determine the value of different types of coins and to skip count to determine the value of a group of like coins.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.D.12

Supporting: 2.GM.D.13

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 8-1 to have students apply their understanding of coins and their values to explore a variety of ways to use the same coin to represent a given amount.

Another way to do this is to use the Activity-Based Exploration 8-1 to have students use coins to show how a specified monetary value can be represented by groups of the same type of coin.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 2: 8-2 Solve Money Problems Involving Coins

Teaching Point: *Today I am going to teach you how to determine the value of a group of mixed coins.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.D.12

Supporting: 2.GM.D.13

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 8-2 to have students use skip counting and addition to find the value of two sets of mixed coins.

Another way to do this is to use the Activity-Based Exploration 8-2 to have students use a number chart to find the value of a group of mixed coins.

Bloom's Levels: Apply

Webb's DOK: 2

Math Probe: Coin Values and Combining Coins to Determine Value

Teaching Point: *Today we are going to determine if the amount of money shown with pictures or described with words is 86 cents.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 8 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 8 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 3: 8-3 Solve Money Problems Involving Dollar Bills and Coins

Teaching Point: *Today I am going to teach you how to determine the value of a group of mixed coins or dollar bills.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.D.12

Supporting: 2.GM.D.13

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 8-3 to have students use skip counting and addition to find the value of different dollar amounts.

Another way to do this is to use the Activity-Based Exploration 8-3 to have students use play money to explore the different combinations of dollar bills that could be used to represent a certain dollar amount.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 4: 8-4 Telling Time to the Nearest Five Minutes

Teaching Point: *Today I am going to teach you how to tell time on a digital clock and skip count to help you tell time on an analog clock.*

Suggested Length of Time: 1 day

Standards Addressed**Priority:** N/A**Supporting:** 2.GM.D.10, 2.GM.D.11**Detailed Description/Instructions:**

One way to do this is to use the Guided Exploration 8-4 to have students use analog and digital clocks to tell time to the nearest five minutes.

Another way to do this is to use the Activity-Based Exploration 8-4 to have students use analog and digital clocks to tell time and write to the nearest five minutes.

Bloom's Levels: Apply**Webb's DOK:** 2**Engaging Experience 5:** 8-5 Be Precise When Telling Time

Teaching Point: *Today I am going to teach you to determine if the time of an event is a.m. or p.m.*

Suggested Length of Time: 1 day**Standards Addressed****Priority:** N/A**Supporting:** 2.GM.D.10, 2.GM.D.11**Detailed Description/Instructions:**

One way to do this is to use the Guided Exploration 8-5 to have students determine whether the time of an event is a.m. or p.m.

Another way to do this is to use the Activity-Based Exploration 8-5 to have student connect daily activities to a time and decide whether the event is a.m. or p.m.

Bloom's Levels: Understand**Webb's DOK:** 2**Unit Review and Fluency Check:**

Teaching Point: *Today I am going to review with you how to count coins, tell time to 5 minutes, and determine if an event takes place in the a.m. or p.m.*

Suggested Length of Time: 1 day**Standards Addressed****Priority:** 2.GM.D.12**Supporting:** 2.GM.D.10, 2.GM.D.11, 2.GM.D.13**Detailed Description/Instructions:**

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 8 Fluency Practice where students will practice using known addition and subtraction facts to help with addition and subtraction facts they do not know.

Bloom's Levels: Apply**Webb's DOK:** 2

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of identifying coins, solving problems involving money, telling time to five minutes and using a.m. and pm.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.D.12

Supporting: 2.GM.D.10, 2.GM.D.11, 2.GM.D.13

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 8 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 8 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 8

Treasure Chest Challenge! Counting Coins & Dollars

Ahoy, Matey! You've found a hidden treasure chest, but it's locked! To open it, you must count the exact amount of treasure inside. Are you ready for the challenge?  

Step 1: Count Your Treasure!

Look inside your treasure chest (or use the coins and dollars shown by your teacher). Write down the total amount below:

 **Dollars:** _____
 **Quarters:** _____
 **Dimes:** _____
 **Nickels:** _____
 **Pennies:** _____

Total Treasure Value: \$ _____

Step 2: Pirate Market Purchases!

Now that you've unlocked your treasure chest, you can spend your gold at the Pirate Market! What can you buy with your treasure? Choose from the list below:

-  **Pirate Hat** - \$2.75
-  **Parrot** - \$5.50
-  **Pirate Sword** - \$3.25
-  **Mystery Gem** - \$4.10
-  **Golden Trophy** - \$6.00

Write down what you can buy with your treasure:

1. _____
2. _____

Step 3: Reflection Questions

1. How much treasure did you have in total? \$ _____
2. Could you afford everything you wanted? Yes / No
3. If you found \$2.00 more, what would you buy? _____
4. What was the trickiest part about counting your treasure? _____

 **Great job, pirate! You unlocked the treasure and became a true treasure master!**  Now, draw a picture of your pirate and their new treasure below:

(Draw a large blank box for students to sketch their pirate and treasure)

Unit 9: Strategies to Add 3-Digit Numbers

Subject: Math

Grade: 2

Name of Unit: Strategies to Add 3-Digit Numbers

Length of Unit: 13 days

Overview of Unit:

Starting in second grade, students use different strategies to solve 2-digit addition problems, such as decomposing addends, adding partial sums, and adjusting addends.

Students build on the understanding of these strategies in this unit to extend these techniques to 3-digit addition problems. Students break apart a number into its place value and rewrite the number as an expression in expanded form. Students look at different ways to decompose addends.

Students focus on adding hundreds to hundreds, tens to tens, and ones to ones to create partial sums and then add the sums together. They will recognize addition patterns when using partial sums.

Students learn to adjust addends in three-digit numbers to make friendly numbers to solve problems more efficiently. They compare the sums to see that they do not change when addends are adjusted.

Students use tools to represent and help solve addition problems including base-ten blocks, open number lines, decomposition drawing, and adjustment arrows.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - Blank Open Number Lines (Teaching Resource)
 - Number Cards 0-10 (Teaching Resource)
 - Number Cubes
 - Base-Ten Blocks
 - Hundreds, Tens, and Ones Place Value Chart (Teaching Resource)
 - Index Cards
 - Number Cubes 0-5 and 5-10

Essential Question:

- What strategies can I use to add 3-digit numbers?

Enduring Understandings:

- Place value patterns and basic facts can be used to help mentally add 10 and 100 to any given three digit number.
- Adding 10 to a 3-digit number increases the value of the tens place by 1, while the hundreds and ones places stay the same.
- Adding 100 to a 3-digit number increases the value of the hundreds place by 1, while the tens and ones places stay the same.
- 3-digit numbers can be broken apart using hundreds, tens, and ones and added in different ways.
- When adding 3 digit numbers, hundreds are added to hundreds, tens to tens, and ones to ones.
- Adding accurately requires careful attention to the value of each digit.

Priority Standards:

- **2.NBT.B.8** Add or subtract within 1000, and justify the solution

Supporting Standards:

- **2.NBT.B.6** Demonstrate fluency with addition and subtraction within 100
- **2.NBT.B.10** Add or subtract mentally 10 or 100 to or from a given number within 1000
- **2.NBT.C.11** Write and solve problems involving addition and subtraction within 100

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.NBT.B.8	Add or subtract within 1,000 and justify the solution	Accurately add and subtract within 1,000 using various strategies (place value, decomposing and composing numbers, number lines, and base-ten blocks. Explain solutions using reasoning such as place value, visual models, oral or written explanations, and equations that show the steps.	Evaluate	3

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
- Unit 9 Readiness Diagnostic - Unit 9 Math Probe - Exit Tickets - Daily Work	- Unit 9 Review - Unit 9 Fluency Check - Unit 9 Performance Task - Unit 9 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
pattern solve strategies useful check efficient related determine represent wonder decide	hundreds addend regroup decompose partial sums adjust friendly numbers

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR5:Co-Craft Questions and Problems

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Find the Pattern, Make a Pattern
- Find the Missing Values
- About How Much?

Sense-Making Routines:

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Which Doesn't Belong?
- Is It Always True?

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students build proficiency with strategies to add 3-digit numbers. • Add 10 or 100 Race 9-1 • 2-Digit and 3-Digit Tic Tac Toe 9-2 • Add 3-Digit Numbers Race 9-3 • Decompose 3-Digit and 2-Digit Addends Task Cards 9-4 • Decompose 3-Digit and 2-Digit Addends Task Cards 9-5 • Friendly Numbers Addition Showdown 9-6 • Two-Step Word Problems Task Cards 9-7	
	Digital Game 	Math Buzz Students add numbers to 100. 9-1
	Have students complete at least one of the Use It! activities for this unit.	
	STEM Project Card 	Digital Library Students create an app to track and count items in a digital library. 9-6
	Connection Card 	Community Festival Students create an order sheet to plan a community festival. 9-3
	Real World Card 	Passwords Students write an article about how to make good passwords. 9-6

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to apply our understanding of addition and place value to tackle some addition challenges.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Greatest and Least Sums* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Greatest and Least Sums* unit opener.

Suggestion: *Prepare ahead of time by having number cards from 1-9.*

Bloom's Levels: Apply

DOK: 2

Engaging Experience 1: 9-1 Use Mental Math to Add 10 or 100

Teaching Point: *Today I am going to teach you how to mentally add 10 or 100 to a 3-digit number.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.10

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 9-1 to have students identify patterns to help them mentally add 10 or 100 to a 3-digit number.

Another way to do this is to use the Activity-Based Exploration 9-1 to have students use base-ten blocks and number line representations to help identify patterns when adding 10 or 100 to a 3-digit number.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 2: 9-2 Represent Addition with 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to add 3-digit numbers without regrouping.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 9-2 to have students use their knowledge of place value to represent and solve 3-digit addition equations.

Another way to do this is use the Activity-Based Exploration 9-3 to have students generate addition equations with 3-digit addends and apply their knowledge of place value to represent and solve them.

Bloom's Levels: Apply

Webb's DOK: 2

Suggestion: You can use the [Place Value Block addition mat](#) as an alternative to the one in Reveal.

Engaging Experience 3: 9-3 Represent Addition with 3-Digit Numbers with Regrouping

Teaching Point: *Today I am going to teach you how to regroup ones and tens to add 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 9-3 to have students use base-ten blocks to represent and solve 3-digit addition equations with regrouping.

Another way to do this is to the Activity-Based Exploration 9-3 to have students generate addition equations with 3-digit numbers and apply their understanding of place value and regrouping to find the sums.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 4: 9-4 Decompose Addends to Add 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to decompose two addends to help me add 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 9-4 to have students demonstrate decomposing both addends by place value and adding the partial sums to solve 3-digit addition equations.

Another way to do this is to use the Activity-Based Exploration 9-4 to have students use base-ten blocks to compose two 3-digit addends and find the sum. Students develop understanding of decomposing as a useful way to add 3-digit numbers.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 5: 9-5 Decompose One Addend to Add 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to decompose one addend to add 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 9-5 to have students apply their understanding of decomposing to decompose one addend to add 3-digit numbers.

Another way to do this is to use the Activity-Based Exploration 9-5 to have students explore decomposing one addend and using a number line to find the sum of two 3-digit numbers.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 6: 9-6 Adjust Addends to Add 3-Digit Numbers

Teaching Point: *Today I am going to teach you to adjust addends to make them friendlier to add.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 9-6 to have students adjust addends to make friendly numbers to help them add 3-digit numbers.

Another way to do this is to use the Activity-Based Exploration 9-6 to have students explore adjusting quantities of base-ten blocks to help them find the sum of two 3-digit numbers.

Suggestion: Use the Blank Open Number Line template and base-ten blocks to support students.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 7: 9-7 Explain Addition Strategies

Teaching Point: *Today I am going to teach you how to explain the addition strategy you are using to add 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed**Priority:** 2.NBT.B.8**Supporting:** 2.NBT.B.6, 2.NBT.B.11**Detailed Description/Instructions:**

One way to do this is to use the Guided Exploration 9-7 to have students explain three strategies for adding 3-digit numbers and thinking about when each is an efficient method.

Another way to do this is to the Activity-Based Exploration 9-7 to have students use an addition strategy to find the sum of the 3-digit numbers they generate and think about why the strategy is most efficient for the numbers in their equation. .

Suggestion: Have an anchor chart of all addition strategies taught displayed for students to refer to as they explain the steps they took to solve the problem.

Bloom's Levels: Analyze**Webb's DOK:** 2

Math Probe: Solve a 3-Digit Addition Word Problem and Justify Solution.

Teaching Point: *Today we are going to solve a 3-digit word problem and determine if our answer is more than a given number.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 9 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 9 in ConnectEd and then open the Unit Resources to download the cards.

Unit Review and Fluency Check:

Teaching Point: *Today I am going to review with you the strategies (decomposing, adjusting numbers, base-ten shorthand) you can use to find the sum of 3-digit addition problems within 1000.*

Suggested Length of Time: 1 day

Standards Addressed**Priority:** 2.NBT.B.8**Supporting:** 2.NBT.B.6, 2.NBT.B.10, 2.NBT.B.11**Detailed Description/Instructions:**

One way to do this is have students complete the unit review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 9 Fluency Practice where students will practice adding or subtracting multiples of ten.

Bloom's Levels: Apply**Webb's DOK:** 2

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of adding 3-digit numbers within 1000.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.10, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 9 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 9 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 9

Toy Store Sale 🎉🧸

The Toy Maker Wizard sells 56 plush bears and 38 dolls.

- **How many toys did he sell in total?**

Solve using your favorite strategy and explain how you found the answer.

Now try to have students make up their own toy problem and solve it.

Unit 10: Strategies to Subtract 3-Digit Numbers

Subject: Math

Grade: 2

Name of Unit: Strategies to Subtract 3-Digit Numbers

Length of Unit: 16 days

Overview of Unit:

In this unit, students will examine strategies that can help when subtracting 3-digit numbers. These strategies are familiar to them at this point, as they have used them for subtracting 2-digit numbers but are slightly more complex now that they involve 3-digit numbers. (Adjust, decompose, friendly numbers, regroup)

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - Base-Ten Blocks
 - Blank Open Number Lines (Teaching Resource)
 - Number Cards 0-10 (Teaching Resource)
 - Number Cubes
 - Place Value Chart (Teaching Resource)
 - Index Cards
 - Number Cubes 0-5

Essential Question:

- What strategies can I use to subtract 3-digit numbers?

Enduring Understandings:

- Place value patterns and basic facts can be used to help mentally subtract 10 and 100 to any given three digit number.
- 3-digit numbers can be broken apart using hundreds, tens, and ones in different ways.
- When subtracting 3-digit numbers, hundreds are subtracted from hundreds, tens from tens, and ones from ones.
- 3-digit numbers can be broken apart using hundreds, tens, and ones and added in different ways.
- Subtracting accurately requires careful attention to the value of each digit.

Priority Standards:

- **2.NBT.B.8** Add or subtract within 1000, and justify the solution

Supporting Standards:

- **2.NBT.B.6** Demonstrate fluency with addition and subtraction within 100
- **2.NBT.B.10** Add or subtract mentally 10 or 100 to or from a given number within 1000
- **2.NBT.C.11** Write and solve problems involving addition and subtraction within 100

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.NBT.B.8	Add or subtract within 1,000 and justify the solution	Accurately add and subtract within 1,000 using various strategies (place value, decomposing and composing numbers, number lines, and base-ten blocks. Explain solutions using reasoning such as place value, visual models, oral or written explanations, and equations that show the steps.	Evaluate	3

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
● Unit 10 Readiness Diagnostic ● Unit 10 Math Probe ● Exit Tickets ● Daily Work	● Unit 10 Review ● Unit 10 Fluency Check ● Unit 10 Performance Task ● Unit 10 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
pattern	hundreds
relate	tens
represent	place value
mental math	decompose
make sense	related facts
efficient	regroup
similar	adjust
compare	friendly numbers
important	
value	
operation	
strategy	
useful	
explain	

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR4: Information Gap

MLR5:Co-Craft Questions and Problems

MLR7: Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Let's Count
- Would You Rather?
- Mystery Number
- Decompose It

Sense-Making Routines:

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Notice and Wonder: Tell me everything you can.
- Numberless Word Problem

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students build proficiency with strategies to subtract 3-digit numbers.	
	• Subtract 10 or 100 Race	10-1
	• Subtraction Bingo	10-2
	• Decompose to Count Back Task Cards	10-3
	• Count On Showdown	10-4
	• Subtraction Bingo	10-5
	• Subtract Tens or Hundreds Concentration	10-6
	• Friendly Numbers Task Cards	10-7
	• Decompose to Count Back Tic Tac Toe	10-8
	• Problems with 3-Digit Numbers Race	10-9
Digital Station 	Digital Game Special Delivery Students add within 40.	10-1
	Have students complete at least one of the Use It! activities for this unit.	
Application Station 	STEM Project Card Weight of Seals Students make a table to compare the weight of five types of seals.	10-6
	Connection Card Elevation Maps Students compare the elevations of two different states.	10-6
	Real World Card Write the Instructions Students write instructions for how to subtract 3-digit numbers.	10-3

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
- Targeted Intervention - Small Group - Take Another Look - Reinforce Understanding - ALEKS Adventure	- Practice It! - Own It! - Interactive Additional Practice - Spiral Review - Additional Practice - ALEKS Adventure	- Use It! - Websketch Exploration - Extend Thinking - ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we will apply our understanding of subtraction and place value to tackle subtraction challenges.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Greatest and Least Differences* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Greatest and Least Differences* unit opener.

Suggestion: Prepare ahead of time by having number cards 1-9.

Bloom's Levels: Apply

DOK: 2

Engaging Experience 1: 10-1 Use Mental Math to Subtract 10 or 100

Teaching Point: *Today I am going to teach you how to mentally subtract 10 and 100 from a 3-digit number.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.10

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 10-1 to help students identify patterns to help them mentally subtract 10 or 100 from 3-digit numbers.

Another way to do this is to use the Activity-Based Exploration 10-1 to have students represent subtraction on a number line to explore and identify patterns when subtracting 10 or 100 from 3-digit numbers.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 2: 10-2 Represent Subtraction with 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to subtract 3-digit numbers without regrouping.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 10-2 to have students use their knowledge of place value and base-ten blocks to represent and solve 3-digit subtraction problems.

Another way to do this is to use the Activity-Based Exploration 10-2 to have students generate subtraction equations with 3-digit numbers and exercise their knowledge of place value to solve them.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 3: 10-3 Decompose One 3-Digit Number to Count Back

Teaching Point: *Today I am going to teach you how to decompose one 3-digit number to count back.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 10-3 to have students explore different ways to decompose one number and count back on a number line to subtract 3-digit numbers.

Another way to do this is to use the Activity-Based Exploration 10-3 to have students explore decomposing in different ways and use number lines to represent and solve 3-digit subtraction equations.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 4: 10-4 Count On to Subtract 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to count on to subtract 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 10-4 to have students count on using a number line to solve a subtraction problem with 3-digit numbers.

Another way to do this is to use the Activity-Based Exploration 10-4 to have students explore using an open number line to help them solve 3-digit subtraction equations.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 5: 10-5 Regroup Tens

Teaching Point: *Today I am going to teach you how to regroup tens to subtract 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 10-5 to have students represent and solve a 3-digit subtraction problem that requires regrouping 1 ten for 10 ones.

Another way to do this is to use the Activity-Based Exploration 10-5 to have students explore using base-ten blocks to represent and solve 3-digit subtraction equations that require regrouping.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 6: 10-6 Regroup Tens and Hundreds

Teaching Point: *Today I am going to teach you how to regroup tens and hundreds to subtract 3-digit numbers.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 10-6 to have students represent and solve a 3-digit subtraction problem involving regrouping a hundred and a ten.

Another way to do this is to use the Activity-Based Exploration 10-6 to have students explore regrouping with base-ten blocks to solve 3-digit subtraction equations.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 7: 10-7 Adjust Numbers to Subtract 3-Digit Numbers

Teaching Point: *Today I am going to teach you how to adjust 3-digit numbers to make friendlier numbers to subtract.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 10-7 to have students adjust numbers to solve 3-digit subtraction equations.

Another way to do this is to use the Activity-Based Exploration 10-7 to have students explore adjusting numbers to solve subtraction equations with 3-digit numbers

Suggestion: Use Blank Open Number Lines and number cubes to support students with concrete materials.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 8: 10-8 Explain Subtraction Strategies

Teaching Point: *Today I am going to teach you to explain subtraction strategies that you are using to solve 3-digit subtraction problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is use the Guided Exploration 10-8 to have students explain 3 strategies for subtracting 3-digit numbers and think about when each is an efficient method.

Another way to do this is to use the Activity-Based Exploration 10-8 to have students explore different strategies for subtracting 3-digit numbers and think about when each strategy is an efficient method.

Suggestion: Have an anchor chart of all subtraction strategies taught displayed for students to refer to as they explain the steps they took to solve the problem.

Bloom's Levels: Analyze

Webb's DOK: 2

Engaging Experience 9: 10-9 Solve Problems Involving Addition and Subtraction

Teaching Point: *Today I am going to teach you how to use addition and subtraction strategies to solve one- and two- step word problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is use the Guided Exploration 10-9 to have students represent one and two-step problems using addition and subtraction equations and use different strategies to solve them.

Another way to do this is to use the Activity-Based Exploration 10-9 to have students explore using representations to make sense of a word problem and then use addition and subtraction strategies to solve the problem.

Suggestion: Have base-ten blocks available to provide additional support solving word problems.

Bloom's Levels: Understand

Webb's DOK: 2

Math Probe: Solve a Problem to Identify the Correct Addition or Subtraction Equation that is Representing the Situation.

Teaching Point: *Today we are going to interpret problems and identify which subtraction or addition equation represents the situation.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 10 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 10 in ConnectEd and then open the Unit Resources to download the cards.

Unit Review and Fluency Check:

Teaching Point: *Today I am going to review with you the strategies (decomposing, adjusting numbers, counting forward/backward on a number line, base-ten shorthand) you can use to find the difference of 3-digit subtraction problems within 1000. We will also review addition and subtraction word problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.10, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is have students complete the unit review to prepare for unit assessment.

Another way to do this is have students complete the Unit 10 Fluency Practice where students will practice using 10 to add and subtract.

Suggestion: There is enough time to complete the Unit Review and Fluency Practice on the review day.

Bloom's Levels: Apply

Webb's DOK: 3

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of subtracting 3-digit numbers within 1000 and solving word problems that involve 3-digit addition and subtraction.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.NBT.B.8

Supporting: 2.NBT.B.6, 2.NBT.B.10, 2.NBT.B.11

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 10 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 10 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 10

"Race to the Finish Line!" – Subtracting 3-Digit Numbers Within 1000

Welcome to **The Great Subtraction Race!** You're part of a team of racers in a **big race** to the finish line, but there's a challenge ahead: the track is filled with subtraction obstacles! Your job is to use your subtraction strategies to overcome each obstacle and move forward. Ready, set, go!

Step 1: Set Up the Race Track

- Create a **race track** on the board or a large sheet of paper with spaces numbered 1 to 10 (or more depending on how many problems you want to include).
- Each space represents a challenge or obstacle in the race. For example:
 - Space 1: "**Subtract 325 from 842**"
 - Space 2: "**Subtract 487 from 903**"
 - Space 3: "**Subtract 134 from 752**"
 - Space 4: "**Subtract 568 from 982**"
- Students will solve each subtraction problem and move forward when they get the correct answer.

Step 2: Subtraction Strategies Review

Before the race begins, make sure students are familiar with **different subtraction strategies**. Some strategies might include:

1. **Counting Backwards:** Start from the larger number and count backwards.
2. **Breaking Apart Numbers (Decomposition):** Break the numbers into hundreds, tens, and ones, then subtract each part.
3. **Using the Relationship Between Addition and Subtraction:** Think of subtraction as the opposite of addition. If they know $300 + 400 = 700$, they can subtract $700 - 400 = 300$.

Step 3: The Race Begins!

1. Give each student (or team) a set of subtraction problems to solve as they "race" through the track.
2. For each subtraction problem, they must use one of the strategies to solve it.
3. Once they solve a problem, they move their team forward on the track by one space.
4. If a team gets the answer wrong, they need to go back one space and try again.

Step 4: Bonus Challenges (Optional)

- **Timed Race:** Set a timer and challenge students to solve as many subtraction problems as they can before the time runs out.
- **Challenge the Teacher:** Have the students come up with their own subtraction problems for the teacher to solve and race through the track too!
- **Team Work:** If working in pairs or teams, students can take turns solving the problems and then **check each other's answers**.

Step 5: Reflect & Celebrate! 🎉

After the race, take some time for reflection:

- What strategy worked best for you?
- Was there a problem that was tricky? How did you solve it?
- Celebrate everyone's efforts and crown the winner(s) as the Grand Subtraction Champion(s)!

This experience makes subtraction interactive, strategic, and fun—and it helps reinforce 3-digit subtraction skills in a hands-on, game-like format.

You may choose to administer Cumulative Benchmark Assessment #3 before beginning Unit 11.

Unit 11: Data Analysis

Subject: Math

Grade: 2

Name of Unit: Data Analysis

Length of Unit: 10 days

Overview of Unit:

In this unit, students build on their prior knowledge about different ways to organize and represent data. Students will gather, organize, and analyze data throughout the unit.

Once students understand data and tally charts, they will begin representing data in different ways including picture graphs, bar graphs, and line plots. Students will use the representation to analyze and make conclusions about the data.

Students create and analyze picture graphs using simple pictures and a key. They then use their understanding of picture graphs to build bar graphs to answer questions. Finally, students are introduced to line plots. They collect measurement data, represent it on a line plot and then analyze the data.

Students will also continue to build measurement skills by measuring common objects to the nearest inch, foot, and meter. Students will answer questions about the measurement data represented relating to tallest, longer, shortest, and smallest measurements.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game board and cards
- Materials needed:
 - Picture Graph (Teaching Resource)
 - Bar Graphs (Teaching Resource)
 - Connecting Cubes
 - Brown Paper Bags
 - Base-Ten Tens Rods
 - Centimeter Ruler
 - Inch Rulers
 - Measuring Tape
 - Tally Chart (Teaching Resource)
 - Paper
 - Line Plot (Teaching Resource)

Essential Question:

- How can picture graphs, bar graphs, and line plots help me interpret data?

Enduring Understandings:

- Data can be collected, organized, and represented clearly to communicate information.
- Graphs are visual tools that help us organize and understand data.
- Different types of graphs show data in different ways.
- Graphs help us compare amounts, see patterns or trends, and draw conclusions.
- We can use graphs to answer questions and solve problems.
- Data can be collected, organized, and represented clearly to communicate information.

Priority Standards:

- **2.DS.A.4** Solve problems using information presented in line plots, picture graphs and bar graphs
- **2.DS.A.5** Draw conclusions from line plots, picture graphs and bar graphs

Supporting Standards:

- **2.DS.A.1** Create a line plot to represent a set of numeric data, given a horizontal scale marked in whole numbers
- **2.DS.A.2** Generate measurement data to the nearest whole unit, and display the data in a line plot
- **2.DS.A.3** Draw a picture graph or a bar graph to represent a data set with up to four categories

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.DS.A.4	Solve problems using information presented in line plots, picture graphs or bar graphs	Understand how data is visually represented and interpreted in line plots, picture graphs, and bar graphs. Use graphs to compare data and solve problems through mathematical operations like put-together, take-apart, and compare Describe the data using numbers and math vocabulary.	Apply	3
2.DS.A.5	Draw conclusions from line plots, picture graphs, and bar graphs.	Understand how to create and read line plots, picture graphs, and bar graphs Use graphs to interpret and analyze data Make logical inferences based on data	Apply	3

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
• Unit 11 Readiness Diagnostic • Unit 11 Math Probe • Exit Tickets • Daily Work	• Unit 11 Review • Unit 11 Fluency Check • Unit 11 Performance Task • Unit 11 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
information	category
represent	data
quantities	key
restate	picture graph
comparison	tally chart
organize	tally marks
arrangement	title
challenge	bar graph
determine	centimeters
accomplish	inches
observations	line plot

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR5:Co-Craft Questions and Problems

MLR8: Discussion Supports

Number Routines:

- Decompose It
- About How Much?
- Find the Missing Values

Sense-Making Routines:

BOE Approved 6-12-25

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Notice and Wonder: Tell me everything you can.

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station	Game Station 	Students build proficiency with data analysis. • Picture Graph Task Cards 11-1 • Bar Graph Task Cards 11-2 • Bar Graph Task Cards 11-3 • Collect Measurement Data Task Cards 11-4 • Analyze Line Plots Task Cards 11-5 • Analyze Line Plots Task Cards 11-6
	Digital Game 	Factory Sort Students practice place value. 11-1
	Have students complete at least one of the Use It! activities for this unit.	
	STEM Project Card 	Studying Flowers Students use a tally chart to collect information about plants and make a picture graph and bar graph with the data. 11-3
	Connection Card 	Musical Fountains Students use a song to design a water display. They record the water height using a line plot. 11-6
Application Station	Real World Card 	Keeping Money Safe Students do a survey about how people keep their money safe. They make a tally chart and picture graph for the responses. 11-1

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to explore the importance of labeling a set of data.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Mystery Data* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Mystery Data* unit opener.

Bloom's Levels: Understand

DOK: 2

Engaging Experience 1: 11-1 Understand Picture Graphs

Teaching Point: *Today I am going to teach you how to draw a picture graph and explain how to use it to represent data.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.3

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 11-1 to have students develop understanding of the features and key terms for data representation: category, data, key, title, and tally marks as they use a tally chart to create a picture graph.

Another way to do this is to use the Activity-Based Exploration 11-1 to have students use a tally chart to create a picture graph.

Bloom's Levels: Understand

Webb's DOK: 2

Engaging Experience 2: 11-2 Understand Bar Graphs

Teaching Point: *Today I am going to teach you how to draw a bar graph to represent data and how to read and interpret the information shown in a bar graph.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.3

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 11-2 to have students use a tally chart to create a bar graph.

Another way to do this is to use the Activity-Based Exploration 11-2 to have students explore using connecting cubes to represent data from a tally chart to help them understand and create bar graphs.

Bloom's Levels: Understand

Webb's DOK: 2

Engaging Experience 3: 11-3 Solve Problems Using Bar Graphs

Teaching Point: *Today I am going to teach you how to use a bar graph to solve problems.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.3

Detailed Description/Instructions:

One way to do this is use the Guided Exploration 11-3 to have students use a bar graph to solve problems with data.

Another way to do this is to use the Activity-Based Exploration 11-3 to have students explore making comparisons with stacks of connecting cubes to help understand how to compare data in a bar graph.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 4: 11-4 Collect Measurement Data

Teaching Point: *Today I am going to teach you how to collect measurement data by measuring the length of objects and explain how to organize and describe the data you collect.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.1, 2.DS.A.2

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 11-4 to have students learn how to organize measurement data into a tally chart. Then they collect and organize their own measurement data into a class tally chart.

Another way to do this is the Activity-Based Exploration 11-4 to explore collecting measurement data and organizing their data into a tally chart.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 5: 11-5 Understand Line Plots

Teaching Point: *Today I am going to teach you how to interpret the measurement data on a graph.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.1, 2.DS.A.2

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 11-5 to have students interpret the measurement data on a line plot.

Another way to do this is to use the Activity-Based Exploration 11-5 to have students explore interpreting measurement data on a line plot.

Bloom's Levels: Understand
Webb's DOK: 2

Math Probe: Understand How Line Plots Are Used to Record, Organize and Compare Data

Teaching Point: *Today we are going to determine if a given statement correctly describes what is shown in the line plot*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 11 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 11 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 6: 11-6 Show Data on a Line Plot

Teaching Point: *Today I am going to teach you how to make a line plot to show the measurement of lengths of objects.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.1, 2.DS.A.2

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 11-6 to have students learn how to make a line plot to display a list of lengths of objects.

Another way to do this is to use the Activity-Based Exploration 11- 6 to have students learn how to make a line plot to display a list of measurement data.

Suggestions: Have objects available if you wish students to collect their own measurement data. Students can collect data on shoe sizes, pencil lengths, crayon lengths, etc.

Bloom's Levels: Apply

Webb's DOK: 2

Unit Review and Fluency Check:

Teaching Point: *Today I am going to review with you how to represent data using the different types of graphs (line plot, picture graph, and bar graphs) and how to interpret the data represented on the graphs.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.1, 2.DS.A.2, 2.DS.A.3

Detailed Description/Instructions:

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 11 Fluency Practice where students will practice choosing a strategy to add within 100.

Suggestion: There is enough time to complete the Unit Review and Fluency Practice on the review day.

Bloom's Levels: Apply

Webb's DOK: 2

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our learning of representing and interpreting data using different types of graphs.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.DS.A.4, 2.DS.A.5

Supporting: 2.DS.A.1, 2.DS.A.2, 2.DS.A.3

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 11 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 11 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 11

Sorting the Harvest! 🥕🍅

The Garden Wizard harvested the following fruits and vegetables:

- 10 apples
- 7 carrots
- 5 tomatoes
- 8 strawberries

Before answering questions, have students create a bar graph with the given data.

1. How many total items did the Garden Wizard harvest?

• _____

2. Which type of fruit or vegetable does he have the most of?

• _____

3. Which type of fruit or vegetable does he have the least of?

• _____

Bonus:

Draw a picture of your favorite fruit or vegetable from the garden! 🍓🍏🥕

Unit 12: Geometric Shapes and Equal Shares

Subject: Math

Grade: 2

Name of Unit: Geometric Shapes and Equal Shares

Length of Unit: 11 days

Overview of Unit:

In this unit, students build upon earlier work identifying attributes of 2- and 3-dimensional shapes and classifying shapes according to their attributes. Students identify shapes by their attributes. They apply vocabulary skills when they identify a shape by knowing that its name may contain a prefix that corresponds to the number of sides and vertices it has. Students draw 2D shapes based on given attributes.

Students partition shapes into equal shares of halves, thirds, and fourths. They develop an early fraction language for their work in Grade 3. Students also partition rectangles into rows and columns of equal-sized squares, recognizing that equal shares of identical wholes need not have the same shape.

Getting Ready for the Unit:

- Watch the *Expert Insights* video to familiarize yourself with the content of the unit
- Send home the Family Letter for the unit (OPTIONAL)
- Prepare math station game boards and cards
- Materials needed:
 - 2-Dimensional Shapes (Teaching Resource)
 - Geoboards ([Virtual Geoboards](#))
 - Number Cubes
 - Straightedges
 - Geometric Solids (cones, cubes, cylinders, rectangular prisms, spheres)
 - Real-Life Solids
 - Paper Circles, Rectangles, and Squares
 - Scissors
 - String and Tape
 - Spinner Labeled 2,3,4
 - 1-Inch Grid Paper
 - 1-Inch Square Tiles
 - Color tiles

Essential Question:

- How can I name, draw, and partition geometric shapes?

Enduring Understandings:

- Two-dimensional shapes can be classified and sorted based on their attributes. You can use these attributes to draw a specific 2-dimensional shape.
- Polygons can be described by the number of sides and angles and have specific names based on the number of sides and angles.
- You can describe a cube by talking about faces, edges, and vertices.
- A whole can have equal shares called halves, thirds, and fourths.
- You can show halves, thirds, and fourths of the same whole in different ways that don't have to have the same shape.

Priority Standards:

- **2.GM.A.3** Partition circles and rectangles into two, three or four equal shares, and describe the share and the whole.
 - a. Demonstrate that equal shares of identical wholes need not have the same shape
- **3.GM.A.1** Understand that shapes in different categories may share attributes and that the shared attributes can define a larger category.

Supporting Standards:

- **2.GM.A.1** Recognize and draw shapes having specified attributes, such as a given number of angles or sides
 - a. Identify triangles, quadrilaterals, pentagons, hexagons, circles and cubes
 - b. Identify the faces of three-dimensional objects
- **2.GM.A.2** Partition a rectangle into rows and columns of same-size squares and count to find the total number of squares

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
2.GM.A.3a	Equal shares of the same whole need not have the same shape	Partition (divide) circles and rectangles into two, three or four equal shares, and describe the shares and the whole Describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths Understand and show that equal parts can be different shapes but still equal in size.	Analyze	3

Standard	Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
3.GM.A.1	Shapes in different categories may share attributes and the shared attributes can define a larger category.	Identify attributes of various shapes (i.e. number of sides and number of angles) Compare shapes to find shared attributes Categorize shapes into larger groups based on shared attributes (i.e. all squares are quadrilaterals because they have four sides and 4 angles)	Apply	2

Assessment Options:

Formative Assessment Options <i>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</i>	Summative Assessment Options <i>(Administered at the end of a unit or topic to assess mastery of learning objectives.)</i>
• Unit 12 Readiness Diagnostic • Unit 12 Math Probe • Exit Tickets • Daily Work	• Unit 12 Review • Unit 12 Fluency Check • Unit 12 Performance Task • Unit 12 Assessment (Form A or B)

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
identify	angle
in common	attribute
describe	pentagon
notice	polygon
recognize	quadrilateral
compare	hexagon
determine	triangle
explain	apex
relate	base
align	edge
arrange	face
	rectangular prism
	vertex
	equal shares
	fourths
	halves
	partition
	thirds
	column
	repeated addition
	row
	skip count

Math Language Routines:

MLR1: Stronger and Clearer Each Time

MLR2: Collect and Display

MLR3: Critique, Correct, and Clarify

MLR5:Co-Craft Questions and Problems

MLR7:Compare and Connect

MLR8: Discussion Supports

Number Routines:

- Which Benchmark is it Closest To?
- Where Does it Go?
- About How Much?
- Greater Than or Less Than

Sense-Making Routines:

- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: What do you notice? What do you wonder?
- Notice and Wonder: Tell me everything you can.
- Which Doesn't Belong

Workstations

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. You may choose which learning stations to use and for how long according to the needs of your students.

Activity	Description	Use After Lesson
Game Station 	Game Station Students build proficiency with geometric shapes and equal shares.	
	Identify and Draw Triangles and Quadrilaterals Task Cards	12-1
	Identify and Draw Pentagons and Hexagons Task Cards	12-2
	3-Dimensional Shapes Race	12-3
	Equal Shares Task Cards	12-4
	Compare and Divide Shapes Task Cards	12-5
	Partition Rectangles Concentration	12-6
Digital Station 	Digital Game Special Delivery Students add and subtract within 200.	12-1
Have students complete at least one of the Use It! activities for this unit.		
Application Station 	STEM Project Card Assembly Line Students design an assembly line to draw, partition, and color shapes.	12-4
	Connection Card Write a Book Students write a book to teach others about 2-dimensional and 3-dimensional shapes.	12-3
	Real World Card Lots of Digital Tools Students make a picture collage of digital tools and describe how the tools can help and how the tools are used.	12-5

Differentiated Practice and Application Suggestions:

<i>Reinforce Understanding</i>	<i>Build Proficiency</i>	<i>Extend Thinking</i>
• Targeted Intervention • Small Group • Take Another Look • Reinforce Understanding • ALEKS Adventure	• Practice It! • Own It! • Interactive Additional Practice • Spiral Review • Additional Practice • ALEKS Adventure	• Use It! • Websketch Exploration • Extend Thinking • ALEKS Adventure

Diagnostic Assessment and Ignite!

Teaching Point: *Today we are going to think critically about covering a triangle with shapes.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to begin with the paper/pencil Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Prove Me Wrong* unit opener.

Another way to do this is to begin with the online Readiness Diagnostic Assessment, then move on to the STEM in Action videos, and finally engage students with the Ignite *Prove Me Wrong* unit opener.

Suggestion: Prepare ahead of time by having pattern blocks available.

Bloom's Levels: Apply

DOK: 2

Engaging Experience 1: 12-1 Recognize 2-Dimensional Shapes by Their Attributes

Teaching Point: *Today I am going to teach you how to recognize 2-dimensional shapes.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 3.GM.A.1

Supporting: 2.GM.A.1

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 12-1 to have students identify polygons based on their defining attributes, such as the number of sides, angles, and vertices.

Another way to do this is to use the Activity-Based Exploration 12-1 to have students identify and compare defining attributes, such as the number of sides, angles, and vertices, of different polygons.

Suggestion: Students can review polygon names and attributes by viewing/listening to the [Polygons Song](#) by Numerock on YouTube.

Bloom's Levels: Understand
Webb's DOK: 2

Engaging Experience 2: 12-2 Draw 2-Dimensional Shapes from Their Attributes

Teaching Point: *Today I am going to teach you how to draw a 2-dimensional shape.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 3.GM.A.1

Supporting: 2.GM.A.1

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 12-2 to have students learn how to draw polygons based on given attributes.

Another way to do this is to use the Activity-Based Exploration 12-2 to have students explore drawing and identifying polygons based on given attributes.

Suggestions: Students can also build polygons or 2D shapes using toothpicks and either playdough or mini marshmallows. If you choose to use mini marshmallows, allow them to harden a bit before using.

Bloom's Levels: Understand
Webb's DOK: 3

Engaging Experience 3: 12-3 Recognize 3-Dimensional Shapes by Their Attributes

Teaching Point: *Today I am going to teach you how to recognize 3-dimensional shapes.*

Suggested Length of Time: 2 days

Standards Addressed

Priority: 3.GM.A.1

Supporting: 2.GM.A.1

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 12-3 to have students recognize 3-dimensional shapes based on attributes, such as the number of faces, edges, and vertices.

Another way to do this is to use the Activity-Based Exploration 12-3 to have students use geometric solids to identify 3-dimensional shapes based on attributes, such as the number of faces, edges, and vertices.

Suggestion: Create an anchor chart with students showing the number of edges, faces, and vertices each solid figure has. Students can fill in a chart to keep in their AVID binders or math notebooks.

Bloom's Levels: Understand
Webb's DOK: 2

shape	example	faces	vertices	edges
cube		6	8	12
sphere		0	0	0
cylinder		2	0	0
pyramid		5	5	8

Engaging Experience 4: 12-4 Understand Equal Shares

Teaching Point: *Today I am going to teach you how to identify equal shares and to partition 2-dimensional shapes into equal shares.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.A.3

Supporting: 2.GM.A.2

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 12-4 to have students partition circles, squares, and rectangles into two, three, or four equal shares and identify the equal shares as halves, thirds, and fourths.

Another way to do this is to use the Activity-Based Exploration 12-4 to have students use string to partition circles, squares, and rectangles into equal shares and identify them as halves, thirds, and fourths.

Bloom's Levels: Apply

Webb's DOK: 2

Math Probe: Understand How Models Can Represent Equal Shares

Teaching Point: *Today we are going to determine if a given shape is partitioned into four equal shares.*

Suggested Length of Time: 1 day

Detailed Description/Instructions:

One way to do this is to complete the Math Probe and to provide small group differentiated instruction.

Another way to do this is to complete the Math Probe and focus on Unit 12 vocabulary.

Suggestion: Use vocabulary cards from Reveal. Go to Unit 12 in ConnectEd and then open the Unit Resources to download the cards.

Engaging Experience 5: 12-5 Relate Equal Shares

Teaching Point: *Today I am going to teach you how to partition a shape into halves, thirds, or fourths in more than one way and how to relate shapes with equal shares.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.A.3

Supporting: 2.GM.A.2

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 12-5 to have students partition circles and rectangles into two, three, or four equal shares and relate the equal shares.

Another way to do this is to use the Activity-Based 12-5 to have students use string to partition circles and rectangles into two, three, or four equal shares and relate the equal shares.

Bloom's Levels: Apply
Webb's DOK: 2

Engaging Experience 6: 12-6 Partition a Rectangle into Rows and Columns

Teaching Point: *Today I am going to teach you how to partition rectangles into rows and columns of squares of equal size and to count the squares in the partitioned rectangle to find the total number of squares.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.A.3

Supporting: 2.GM.A.2

Detailed Description/Instructions:

One way to do this is to use the Guided Exploration 12-6 to have students partition rectangles into rows and columns of equal-sized squares and skip count to find the total number of squares.

Another way to do this is to use the Activity-Based Exploration 12-6 to have students explore partitioning rectangles into rows and columns of equal-sized squares and find the total number of squares.

Bloom's Levels: Apply
Webb's DOK: 2

Unit Review and Fluency Check:

Teaching Point: *Today I am going to review with you identifying 2D and 3D shapes based on their attributes, as well as equal shares and partitioning shapes into equal shares.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.A.3.a, 3.GM.A.1

Supporting: 2.GM.A.1, 2.GM.A.2

Detailed Description/Instructions:

One way to do this is have students complete the Unit Review to prepare for the unit assessment.

Another way to do this is have students complete the Unit 12 Fluency Practice where students will practice choosing a strategy to subtract within 100.

Suggestion: There is enough time to complete the Unit Review and Fluency Practice on the review day.

Bloom's Levels: Apply
Webb's DOK: 2

Unit Assessment and Performance Task

Teaching Point: *Today we are going to demonstrate our understanding of 2-D and 3-D shapes based on their attributes, as well as our understanding of equal shares and how to partition shapes into different equal shares.*

Suggested Length of Time: 1 day

Standards Addressed

Priority: 2.GM.A.3.a, 3.GM.A.1

Supporting: 2.GM.A.1, 2.GM.A.2

Detailed Description/Instructions:

One way to do this is to have students complete the paper /pencil Unit 12 Assessment (Form A or B) and Performance Task

Another way to do this is to have students complete the digital Unit 12 Assessment (Form A or B) and Performance Task

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Scenario - Unit 12

The Magical Pizza Party! 🍕 ✨

Scenario:

The **Pizza Wizard** is hosting a magical pizza party and needs your help to make sure everyone gets an equal share of pizza! The wizard has lots of different shapes of pizzas and wants to divide them into equal slices so everyone can enjoy. You'll need to use your knowledge of shapes and fractions to help out!

1. Dividing the Magic Pizza 🍕

The **Pizza Wizard** has a **round pizza** and needs to cut it into **equal slices** for the party. He decides to cut it into **4 equal slices**.

- What shape is each slice?
- How many slices do you get if you cut the pizza into 4 equal parts?

2. The Shape-Sorting Challenge 🔺 🔵

The **Pizza Wizard** also has **different-shaped pizzas** and needs help identifying their shapes. Below are the pizzas he has. Draw the pizza and put it into equal slices.

- A square pizza
- A circle pizza
- A triangle pizza
- A rectangle pizza

3. Equal Shares Pizza Party 🍕

The **Pizza Wizard** wants to serve each guest an equal share of his pizzas. He has **12 guests** at the party and has a **whole pizza** to share.

- If the **pizza is cut into 12 equal slices**, how many slices does each guest get?
- What if there are **24 slices** instead? How many slices would each guest get now?

Bonus:

The wizard also has **2 rectangle pizzas**. How can he divide these into **equal shares** for 4 people? Draw a picture to show your answer.