

Unit 1: Numbers to 20 and Data

Unit 1 Project: Concert Calculations

Unit 1 Learning Mindset Focus: Challenge Me / Sets Achievable Stretch Goals

Module 1: Fluency for Addition and Subtraction within 20

Recommended Pacing with Assessments: 11 Days

Module 1 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children represented and solved problems involving addition and subtraction.	Children fluently add within 20 using mental strategies and properties.	Children will solve two-step word problems using the four operations.
Children added and subtracted within 20.	Children fluently subtract within 20 using mental strategies.	Children will fluently add and subtract within 1,000 using strategies and algorithms.

Module 1 Vocabulary

addends	the numbers that are added in an addition problem
count back	start from a number and count back to subtract
count on	start from a number and count forward to add
difference	the answer to a subtraction problem
doubles	an addition fact that includes two of the same number, such as $5 + 5$
related facts	addition and subtraction facts which share the same three numbers
sum	the answer to an addition problem

Lesson 1.1 Use Doubles Facts to Add

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Mathematical Practices and Processes

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can use doubles facts to find sums for other facts.

Learning Objective

Use doubles facts as a strategy for finding sums for near doubles facts.

Language Objective

Explain how to use doubles facts as a strategy to find sums for other facts.

Vocabulary

Review: doubles, sum

Lesson Materials

two-color counters, MathBoard, connecting cubes

Lesson 1.2 Develop Fluency with Addition Using Mental Strategies and Properties

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can add in any order, add zero, and use strategies to find sums.

Learning Objective

Recall sums for basic facts using strategies and properties.

Language Objective

Explain ways to recall sums within 20 by using addition properties and strategies.

Vocabulary

Review: addends, count on, related facts

Lesson Materials

connecting cubes, two-color counters, MathBoard

Lesson 1.3 Relate Addition and Subtraction

Connect Concepts and Skills – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can write and solve related addition and subtraction facts.

Learning Objective

Use the inverse relationship of addition and subtraction to recall basic facts.

Language Objective

Explain how to use addition facts to find the difference in a subtraction fact.

Vocabulary

Review: difference

Lesson Materials

connecting cubes, two-color counters, MathBoard

Lesson 1.4 Develop Fluency with Subtraction Using Mental Strategies

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can use related addition facts or count back to find differences.

Learning Objective

Recall differences for basic facts using mental strategies.

Language Objective

Explain how to recall differences within 20 by using related addition facts, such as counting back.

Vocabulary

Review: count back

Lesson Materials

connecting cubes, two-color counters, MathBoard

Lesson 1.5 Use the Make a Ten Strategy to Add

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and make use of structure.

I Can Objective

I can make a ten to find sums.

Learning Objective

Recall sums for addition facts using the make a ten strategy.

Language Objective

Explain how to recall sums for addition facts within 20 by making different amounts equal to 10.

Lesson Materials

connecting cubes, ten frame, two-color counters, MathBoard

Lesson 1.6 Use a Tens Fact to Subtract

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can use a number line and tens facts to find differences.

Learning Objective

Find differences on a number line to develop the mental strategy of decomposing to simplify facts.

Language Objectives

- Explain how to find differences within 20 using a number line.
- Explain how to break apart a number to get to ten.

Lesson Materials

connecting cubes, Number Line 0–20 (Teacher Resource Masters), two-color counters, MathBoard

Lesson 1.7 Add 3 Numbers Using Mental Strategies and Properties

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Mathematical Practices and Processes

- Attend to precision.
- Use appropriate tools strategically.

I Can Objective

I can find the sum of three numbers.

Learning Objective

Find sums of three addends by applying the Commutative and Associative Properties of Addition.

Language Objective

Explain how to add three addends within 20 using mental strategies and properties.

Lesson Materials

connecting cubes, two-color counters

Unit 1: Numbers to 20 and Data

Unit 1 Project: Concert Calculations

Unit 1 Learning Mindset Focus: Challenge Me / Sets Achievable Stretch Goals

Module 2: Equal Groups

Recommended Pacing with Assessments: 7 Days

Module 2 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children counted to 120, starting at any number less than 120. Children related counting to addition. Children added within 20. Children used addition strategies such as counting on.	Children determine whether a group of objects has an odd or even number of members. Children write an equation to express an even number as a sum of two equal addends. Children use addition to find the total number of objects arranged in rectangular arrays. Children write an equation to express the total as a sum of equal addends.	Children will interpret products of whole numbers. Children will use multiplication to solve problems involving equal groups and arrays.

Module 2 Vocabulary

addends	the numbers added together to find the sum
addition equation	number sentence that uses the equal sign and plus sign to show two amounts are equal
even	number sentence that uses the equal sign and plus sign to show two amounts are equal
odd	numbers show pairs with 1 object left over

Lesson 2.1 Identify Even and Odd Numbers

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and make use of structure.

I Can Objective

I can decide if a group of objects has an even or an odd number of objects by making pairs or counting by twos.

Learning Objective

Classify numbers up to 20 as even or odd.

Language Objectives

- Explain what even and odd numbers are.
- Tell how even numbers and odd numbers are different.

Vocabulary

New: even, odd

Lesson Materials

counters, connecting cubes

Lesson 2.2 Write Equations to Represent Even Numbers

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

Mathematical Practices and Processes

- Attend to precision.
- Model with mathematics.

I Can Objective

I can write an equation to model an even number as the sum of two equal addends.

Learning Objective

Write equations with equal addends to represent even numbers.

Language Objectives

- Explain how an even number can be shown as the sum of two equal addends.
- Explain that equations with two equal addends will always have even sums.

Vocabulary

Review: addition equation, addends

Lesson Materials

counters, connecting cubes

Lesson 2.3 Represent Equal Groups

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can use tools or drawings to show equal groups of objects and find how many objects in all.

Learning Objective

Represent and solve problems involving equal groups.

Language Objectives

- Explain the meaning of equal groups.
- Use equal groups of objects to solve problems.

Lesson Materials

counters, connecting cubes, square tiles

Lesson 2.4 Add to Find the Total Number of Objects in Arrays

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Mathematical Practices and Processes

- Model with mathematics.
- Look for and make use of structure.

I Can Objective

I can write an addition equation to find the total number of objects in equal groups.

Learning Objective

Write equations using repeated addition to find the total number of objects in arrays.

Language Objectives

- Explain the meaning of repeated addition.
- Explain how to use repeated addition to find the total number of objects in arrays.

Lesson Materials

counters, connecting cubes, square tiles

Lesson 2.5 Practice with Arrays

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Mathematical Practices and Processes

- Look for and make use of structure.
- Model with mathematics.

I Can Objective

I can write an addition equation to find the total number of objects in equal groups shown in other ways.

Learning Objective

Practice writing equations using repeated addition to find the total number of objects in arrays.

Language Objectives

- Explain how objects can be shown in arrays.
- Explain how to use repeated addition to write equations.

Unit 1: Numbers to 20 and Data

Unit 1 Project: Concert Calculations

Unit 1 Learning Mindset Focus: Challenge Me / Sets Achievable Stretch Goals

Module 3: Data

Recommended Pacing with Assessments and Performance Task: 8 Days

Module 3 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children organized, represented, and interpreted data in picture graphs, tally charts, or bar graphs with up to three categories. Children asked and answered questions by using data from picture graphs, tally charts, or bar graphs.	Children collect and record data in a tally chart. Children draw a picture graph and bar graph (with single-unit scale) to represent a data set with up to four categories. Children solve simple put-together, take-apart, and compare problems using information presented in a picture graph or a bar graph.	Children will draw a scaled picture graph and a scaled bar graph to represent a set of data. Children will solve one- and two-step “how many more” and “how many fewer” problems using a bar graph.

Module 3 Vocabulary

bar graph	a graph that uses bars to show data
picture graph	a graph that uses pictures to show data
tally chart	a chart that uses tally marks to record data
tally mark	a mark that shows one piece of data
data	information
key	the part of a graph that tells how many each picture stands for
survey	a way to collect data or information

Lesson 3.1 Collect and Record Data

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Mathematical Practices and Processes

- Construct viable arguments and critique the reasoning of others.
- Attend to precision.

I Can Objective

I can collect data, record the data in a tally chart, and use the tally chart to solve problems.

Learning Objective

Collect data in a survey and record that data in a tally chart.

Language Objectives

- Explain what a survey is.
- Explain how to use tally marks to record data.

Vocabulary

Review: tally chart, tally mark

New: data, survey

Lesson Materials

paper bag with between 10 and 12 crayons;
connecting cubes

Lesson 3.2 Interpret Picture Graphs

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can read a picture graph and use it to solve problems.

Learning Objective

Interpret data in picture graphs and use that information to solve problems.

Language Objectives

- Explain how a picture graph uses pictures to show data.
- Explain how to find the number of pictures for each category.

Vocabulary

Review: picture graph

New: key

Lesson Materials

connecting cubes

Lesson 3.3 Draw Picture Graphs to Represent Data

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can draw a picture graph to show data, and then use the graph to solve problems.

Learning Objective

Draw picture graphs to represent data.

Language Objective

Explain how to draw pictures in a picture graph to represent data.

Lesson Materials

connecting cubes, two-color counters

Lesson 3.4 Interpret Bar Graphs

Connect Concepts and Skills – 1 Day Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can read a bar graph and use it to solve problems.

Learning Objective

Interpret data in bar graphs and use that information to solve problems.

Language Objectives

- Explain how to interpret data shown in a bar graph.
- Explain how to use data in a bar graph to solve problems.

Vocabulary

Review: bar graph

Lesson Materials

color tiles, connecting cubes

Lesson 3.5 Draw Bar Graphs to Represent Data

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can draw a bar graph to show data, and then use the graph to solve problems.

Learning Objective

Draw bar graphs to represent data.

Language Objective

Explain how to draw bars to represent data in a bar graph.

Lesson Materials

two-color counters, connecting cubes

Unit 2: Place Value

Unit 2 Project: By the Sea

Unit 2 Learning Mindset Focus: Bounce Back / Adjusts to Change

Module 4: Understand Place Value

Recommended Pacing with Assessments: 7 Days

Module 4 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children understood that 10 can be thought of as a bundle of ten ones.	Children understand that the three digits in a three-digit number represent amounts of hundreds, tens, and ones. Children fluently add and subtract within 20 using strategies. Children read and write numbers to 1000 using base-ten numerals and expanded form.	Children will fluently add and subtract within 1000 using strategies and algorithms based on place value.

Module 4 Vocabulary

ten	a quantity that is equivalent to 10 ones
hundred	a quantity that is equivalent to 100 ones or 10 tens
thousand	a quantity that is equivalent to 10 hundreds

Lesson 4.1 Group Tens as Hundreds

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

100 can be thought of as a bundle of ten tens—called a “hundred.”

The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

Mathematical Practices and Processes

- Attend to precision.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can group tens as hundreds and write a number as tens and hundreds.

Learning Objective

Understand that each group of 10 tens is equivalent to 1 hundred.

Language Objectives

- Explain how to group 10 tens as hundreds.
- Use tens to write hundreds in different ways.

Vocabulary

Review: ten

New: hundred

Lesson Materials

base-ten blocks, connecting cubes, MathBoards

Lesson 4.2 Understand Three-Digit Numbers

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

Mathematical Practices and Processes

- Attend to precision.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can write a three-digit number in different ways.

Learning Objective

Write three-digit numbers that are represented by groups of tens.

Language Objectives

- Explain how to use the number of tens to write three-digit numbers.
- Explain how to show tens to make three-digit numbers.

Lesson Materials

base-ten blocks, connecting cubes, MathBoards

Lesson 4.3 Represent Three-Digit Numbers

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can use drawings and concrete models to show three-digit numbers.

Learning Objective

Use concrete and visual models to represent three-digit numbers.

Language Objective

- Explain how to use concrete models to show three-digit numbers.
- Describe drawings made to show three-digit numbers.

Lesson Materials

base-ten blocks, connecting cubes, MathBoards

Lesson 4.4 Represent Numbers with Hundreds, Tens, and Ones

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can write the three-digit number that is shown by a concrete model.

Learning Objective

Apply place value concepts to write three-digit numbers that are represented by concrete models.

Language Objectives

- Explain how to use place value to interpret concrete models of three-digit numbers.
- Explain how to use place value to write numbers in different ways.

Lesson Materials

base-ten blocks, connecting cubes, MathBoards

Lesson 4.5 Place Value to 1,000

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

Mathematical Practices and Processes

- Construct viable arguments and critique the reasoning of others.
- Look for and make use of structure.

I Can Objective

I can describe the values of digits in numbers to 1,000.

Learning Objective

Use place value to describe the values of digits in numbers to 1,000.

Language Objectives

- Explain the place value of digits for numbers within 1,000.
- Use place value to tell the value of each digit in three-digit numbers up to 1,000.

Vocabulary

New: thousand

Lesson Materials

base-ten blocks, MathBoards, connecting cubes

Unit 2: Place Value

Unit 2 Project: By the Sea

Unit 2 Learning Mindset Focus: Bounce Back / Adjusts to Change

Module 5: Read, Write, and Show Numbers to 1,000

Recommended Pacing with Assessments: 7 Days

Module 5 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children understood that the two digits of a two-digit number represent amounts of tens and ones.	Children read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.	Children will use place value understanding to round whole numbers to the nearest 10 or 100.

Module 5 Vocabulary

hundreds	the place value that describes how many groups of 100 there are
ones	the place value that describes how many ones there are
tens	the place value that describes how many groups of 10 there are

Lesson 5.1 Use Expanded Form

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can describe a three-digit number as hundreds, tens, and ones.

Learning Objective

Write three-digit numbers in expanded form.

Language Objectives

- Explain how to write three-digit numbers in expanded form.
- Explain how to use place value to write three-digit numbers as hundreds, tens, and ones.

Vocabulary

Review: hundreds, tens, ones

Lesson Materials

base-ten blocks, connecting cubes, MathBoards

Lesson 5.2 Use Number Names

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can write the number name for a three-digit number.

Learning Objective

Read and write three-digit numbers using number names.

Language Objectives

- Explain how to read three-digit number names using place value.
- Explain how to write three-digit number names using place value.

Lesson Materials

connecting cubes, base-ten blocks, MathBoard

Lesson 5.3 Different Ways to Write Numbers

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.

Mathematical Practices and Processes

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can write a three-digit number from a number name in different ways.

Learning Objective

Write three-digit numbers as hundreds, tens, and ones in expanded form and in standard form.

Language Objectives

- Explain how to write three-digit numbers in expanded form and standard form.
- Explain how to draw quick pictures of number names.

Lesson Materials

connecting cubes, base-ten blocks, MathBoard

Lesson 5.4 Different Ways to Show Numbers

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can show the value of a three-digit number in different ways.

Learning Objective

Apply place-value concepts to find equivalent representations of three-digit numbers.

Language Objective

- Explain how to use the place value of a three-digit number to identify equivalent representations.
- Explain how to use place value to show and write three-digit numbers.

Lesson Materials

base-ten blocks, connecting cubes, MathBoard

Lesson 5.5 Read, Write, and Show Numbers

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can find a three-digit number and draw or write it in different ways.

Learning Objective

Apply place-value concepts to show and write a three-digit number in different ways.

Language Objective

Explain how to use place value to write a three-digit number in different ways.

Unit 2: Place Value

Unit 2 Project: By the Sea

Unit 2 Learning Mindset Focus: Bounce Back / Adjusts to Change

Module 6: Use Place Value

Recommended Pacing with Assessments and Performance Task: 8 Days

Module 6 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children counted to 120 from any given number less than 120. Children read, wrote, and represented numbers to 120. Children subtracted decade numbers up to 90. Children found ten more and ten less than two-digit numbers.	Children count within 1000 by ones, fives, tens, and hundreds. Children use mental math to add 10 or 100 to given numbers up to 900. Children compare two-digit numbers using symbols.	Children will fluently add and subtract within 1,000.

Module 6 Vocabulary

is equal to (=)	a symbol used to compare two numbers having the same value
is greater than (>)	a symbol used to compare two numbers when the first number has the greater value
is less than (<)	a symbol used to compare two numbers when the first number has the lesser value
pattern	an arrangement following a rule or rules

Lesson 6.1 Count within 1,000

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Count within 1000; skip-count by 5s, 10s, and 100s.

Mathematical Practices and Processes

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can count within 1,000 by ones, fives, tens, and hundreds.

Learning Objective

Extend counting sequences within 1,000, counting by 1s, 5s, 10s, and 100s.

Language Objectives

- Explain how to count by ones, fives, tens, and hundreds within 1000.
- Use counting by 5s, 10s, and 100s to describe the solution to problems.

Vocabulary

New: pattern

Lesson Materials

counters, MathBoard, pencil, crayons

Lesson 6.2 Add and Subtract 10 or 100

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can add and subtract 10 or 100 from a three-digit number.

Learning Objective

Identify 10 more, 10 less, 100 more, or 100 less than a given number.

Language Objectives

- Explain how to use place value to find 10 more and 10 less and 100 more and 100 less than a given number.
- Explain how to use mental math to find 10 more and 10 less and 100 more and 100 less than a given number.

Lesson Materials

place-value chart, base-ten blocks (hundreds, tens, ones), MathBoard, pencil

Lesson 6.3 Identify and Extend Number Patterns

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

Mathematical Practices and Processes

- Construct viable arguments.
- Look for and make use of structure.

I Can Objective

I can complete a pattern that counts by tens or hundreds.

Learning Objective

Extend number patterns by counting by tens or hundreds.

Language Objectives

- Explain how to count by tens and hundreds.
- Explain how to use place value to find 10 more and 10 less and 100 more and 100 less than a given number.

Lesson Materials

base-ten blocks (hundreds, tens, ones), place-value chart, MathBoard, pencil

Lesson 6.4 Compare Three-Digit Numbers

Connect Concepts and Skills – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and make use of structure.

I Can Objective

I can use concrete and visual models to compare two 3-digit numbers.

Learning Objective

Solve problems involving number comparisons by using concrete and visual models.

Language Objectives

- Explain how to use concrete and visual models to show numbers within 1,000.
- Describe how to use concrete and visual models to compare numbers within 1,000.

Lesson Materials

base-ten blocks (hundreds, tens), three-digit number cards, MathBoard, pencil

Lesson 6.5 Use Symbols to Compare Numbers

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can compare two 3-digit numbers using $>$, $<$, and $=$.

Learning Objective

Compare three-digit numbers using $>$, $=$, and $<$ symbols.

Language Objectives

- Explain how to compare numbers using is greater than ($>$), is equal to ($=$), and is less than ($<$) symbols.
- Describe how to know if three-digit numbers are greater than, equal to, and less than other numbers.

Vocabulary

Review: is equal to ($=$), is greater than ($>$), is less than ($<$)

Lesson Materials

base-ten blocks (hundreds, tens, ones),
connecting cubes, three-digit number cards,
symbols cards, MathBoard, pencil

Unit 3: Money and Time

Unit 3 Project: Stickers for Sale

Unit 3 Learning Mindset Focus: Bounce Back / Monitors Knowledge and Skills

Module 7: Coins

Recommended Pacing with Assessments: 8 Days

Module 7 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children represented the two digits in a two-digit number as tens and ones.	Children identify the value of coins. Children count by tens. Children compute the value of any combination of coins within one dollar. Children show coin amounts in different ways.	Children will multiply one-digit whole numbers by multiples of 10. Children will use understanding of place value to round whole numbers to the nearest 10 or 100.

Module 7 Vocabulary

ones	the place value that describes how many ones there are
tens	the place value that describes how many groups of 10 there are
cent sign (¢)	a symbol that represents cents
dime	a coin worth 10 cents
greatest value	worth the most
least value	the smallest amount
nickel	a coin worth 5 cents
penny	a coin worth 1 cent
quarter	a coin worth 25 cents

Lesson 7.1 Relate Place Value to Coins

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and make use of structure.

I Can Objective

I can show and write money amounts using tens and ones.

Learning Objective

Explore the relationship between place value and coins (dimes and pennies).

Language Objectives

- Explain the relationship between dimes and pennies.
- Explain how to use tens and ones to describe dimes and pennies.

Vocabulary

Review: ones, tens

New: cent sign (¢), dime, penny

Lesson Materials

base-ten blocks, play coins (dimes, pennies), MathBoard

Lesson 7.2 Identify and Find the Value of Coins

Connect Concepts and Skills – 2 Days

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can identify and find the total value of a group of coins.

Learning Objective

Identify and find the total value of combinations of quarters, dimes, nickels, and pennies.

Language Objectives

- Explain the value of nickels and quarters in terms of cents.
- Explain how to combine coins, order coins, and find the total value by counting on.

Vocabulary

New: nickel, quarter

Lesson Materials

play coins (quarters, dimes, nickels, pennies), paper bag

Lesson 7.3 Compute the Value of Coin Combinations

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Mathematical Practices and Processes

- Construct viable arguments and critique the reasoning of others.
- Look for and make use of structure.

I Can Objective

I can order coins to find the total value of a group of coins.

Learning Objective

Order combinations of coins by value and then find the total value.

Language Objectives

- Explain how to order coins from greatest to least value.
- Explain why coins are ordered from greatest to least value before counting on to find the total value.

Vocabulary

New: greatest value, least value

Lesson Materials

paper bag, play coins (quarters, dimes, nickels, pennies)

Lesson 7.4 Show Amounts in Different Ways

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can use different coins to show the same money amount in different ways.

Learning Objective

Identify and apply the relative values of the different coins to each other.

Language Objectives

- Explain how to relate the value of a coin to the value of other coins.
- Explain how to show the same money amount using different coins.

Lesson Materials

play coins (quarters, dimes, nickels, pennies)

Unit 3: Money and Time

Unit 3 Project: Stickers for Sale

Unit 3 Learning Mindset Focus: Bounce Back / Monitors Knowledge and Skills

Module 8: Dollar Amounts

Recommended Pacing with Assessments: 6 Days

Module 8 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children identified and found the value of coins. Children found the total value of a group of coins. Children showed money amounts using different combinations of coins.	Children solve one- and two-step word problems involving dollar bills or coins.	Children will use decimal notation for fractions with denominators of 10 or 100. Children will use the four operations to solve word problems involving money.

Module 8 Vocabulary

cent	the smallest value of money
dime	a coin worth 10 cents
nickel	a coin worth 5 cents
penny	a coin worth 1 cent
quarter	a coin worth 25 cents
decimal point	a symbol used to separate dollars from cents
dollar	a coin or bill worth 100 cents
dollar sign \$	a symbol that represents dollars

Lesson 8.1 Relate the Value of Coins to One Dollar

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can solve word problems that relate a combination of coins to one dollar.

Learning Objective

Show the value of one dollar in different ways using coins.

Language Objective

Explain the relationship between coins and one dollar.

Vocabulary

Review: cent, penny, nickel, dime, quarter
New: decimal point, dollar, dollar sign

Lesson Materials

play dollars, play coins, pencil

Lesson 8.2 Compute the Value of Dollar Combinations

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Mathematical Practices and Processes

- Construct viable arguments and critique the reasoning of others.
- Attend to precision.

I Can Objective

I can find the total value of a combination of dollar bills.

Learning Objective

Use the value of different bill denominations to find the total value for a combination of bills and solve problems involving bills.

Language Objective

Explain strategies for finding the total of a combination of dollars.

Lesson Materials

play bills, pencil

Lesson 8.3 Solve Problems Involving Money

Apply and Practice – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can solve word problems involving coins and bills.

Learning Objective

Use strategies to solve word problems involving money.

Language Objective

Explain how to count on coins or dollars to solve word problems involving money.

Lesson Materials

dollars, coins, pencil

Unit 3: Money and Time

Unit 3 Project: Stickers for Sale

Unit 3 Learning Mindset Focus: Bounce Back / Monitors Knowledge and Skills

Module 9: Time

Recommended Pacing with Assessments and Performance Task: 8 Days

Module 9 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children told and wrote time to the hour and half hour using analog and digital clocks.	Children tell and write time to the nearest 5 minutes. Children tell and write time using a.m. and p.m.	Children will tell and write time to the nearest minute. Children will measure time intervals in minutes. Children will use a.m. and p.m. to describe time.

Module 9 Vocabulary

hour hand	the short hand on an analog clock
minute hand	the long hand on an analog clock
a.m.	times after midnight and before noon
half past	30 minutes after the hour
hour	a unit of time equal to 60 minutes
midnight	12:00 at night
minute	a unit of time equal to 60 seconds
noon	12:00 in the daytime
p.m.	times after noon and before midnight
quarter past	15 minutes after the hour

Lesson 9.1 Tell and Write Time to 5 Minutes

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Mathematical Practices and Processes

- Attend to precision.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can draw hands on a clock and write time on a clock to the nearest 5 minutes.

Learning Objective

Tell and write time from analog and digital clocks to the nearest 5 minutes.

Language Objective

Explain how to tell and write time to the nearest 5 minutes.

Vocabulary

Review: hour hand, minute hand
New: hour, minute

Lesson Materials

analog clocks with movable hands, pencil

Lesson 9.2 Different Ways to Tell and Write Time

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Use appropriate tools strategically.

I Can Objective

I can use different ways to write and say the time shown on a clock.

Learning Objective

Read digital and analog clocks, and use phrases to describe times to five minutes.

Language Objectives

- Explain different phrases to tell time to the nearest 5 minutes, such as half past, quarter past, 25 minutes after.
- Read the time to the nearest 5 minutes using a variety of phrases.

Vocabulary

New: half past, quarter past

Lesson Materials

analog clocks with movable hands, pencil

Lesson 9.3 Practice Telling and Writing Time

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Look for and make use of structure.

I Can Objective

I can tell and write time to the nearest 5 minutes in three different ways.

Learning Objective

Practice telling and writing time to the nearest five minutes.

Language Objectives

- Explain how to tell and write times to the nearest 5 minutes.
- Use various phrases to describe the time to the nearest 5 minutes.

Lesson Materials

analog clocks with movable hands, pencil

Lesson 9.4 Tell and Write Time with A.M. and P.M.

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can tell and write time to the nearest five minutes using a.m. and p.m.

Learning Objective

Practice telling and writing time, using a.m. and p.m.

Language Objectives

- Describe time in terms of a.m. and p.m.
- Distinguish between 12:00 noon and 12:00 midnight.

Vocabulary

New: a.m., midnight, noon, p.m.

Lesson Materials

analog clocks with movable hands, pencil

Unit 4: Two-Digit Addition and Subtraction

Unit 4 Project: Hospital Helpers

Unit 4 Learning Mindset Focus: Try Again / Getting Unstuck

Module 10: Addition and Subtraction Counting Strategies

Recommended Pacing with Assessments: 5 Days

Module 10 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children added within 100, using concrete models, visual models, and strategies.	Children fluently add and subtract within 100 using strategies based on place value. Children add up to four two-digit numbers using strategies based on place value.	Children will fluently add and subtract within 1,000 using strategies and algorithms.

Module 10 Vocabulary

ones	the place value that describes how many ones there are
tens	the place value that describes how many groups of 10 there are

Lesson 10.1 Use a Hundred Chart

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Add up to four two-digit numbers using strategies based on place value and properties of operations.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can add or subtract by counting on or counting back on a hundred chart.

Learning Objective

Use a hundred chart as a tool for two-digit addition and subtraction.

Language Objective

Explain how to use place value to add and subtract two-digit numbers on a hundred chart.

Vocabulary

Review: ones, tens

Lesson Materials

MathBoard, base-ten blocks, crayon, pencil

Lesson 10.2 Use a Number Line

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Add up to four two-digit numbers using strategies based on place value and properties of operations.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can add or subtract by counting on or counting back on a number line.

Learning Objective

Use a number line as a tool for two-digit addition and subtraction.

Language Objective

Explain how to use counting strategies to add and subtract two-digit numbers on a number line.

Lesson Materials

base-ten blocks, Open Number Line (Teacher Resource Masters), MathBoard, pencil

Lesson 10.3 Use Counting Strategies

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Add up to four two-digit numbers using strategies based on place value and properties of operations.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Use appropriate tools strategically.

I Can Objective

I can rewrite addition problems and find the sum.

Learning Objective

Use a hundred chart and a number line as tools for two-digit addition and subtraction.

Language Objective

Explain how to use different tools and strategies to solve two-digit addition and subtraction, including place value and counting on a number line and open number line.

Unit 4: Two-Digit Addition and Subtraction

Unit 4 Project: Hospital Helpers

Unit 4 Learning Mindset Focus: Try Again / Getting Unstuck

Module 11: Addition and Subtraction Grouping Strategies

Recommended Pacing with Assessments: 7 Days

Module 11 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children used addition and subtraction within 20 to solve word problems. Children added and subtracted within 20, demonstrating fluency for addition and subtraction within 10. Children added within 100, including adding a two-digit number and a one-digit number.	Children fluently add and subtract within 100 using strategies based on place value, properties of operations, or the relationship between addition and subtraction.	Children will fluently add and subtract within 1,000, using strategies and algorithms.

Module 11 Vocabulary

add	to join one set to another
addend	any of the numbers that are added
subtract	to take away objects from a group or to compare groups

Lesson 11.1 Decompose Ones to Add

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Model with mathematics.
- Attend to precision.

I Can Objective

I can break apart an addend to make a new group of ten to solve addition equations.

Learning Objective

Find a sum by decomposing a one-digit addend to make a two-digit addend a multiple of 10.

Language Objectives

- Explain how to make a ten.
- Explain how to make a new group of ten to make it easier to add.

Vocabulary

Review: add, addend

Lesson Materials

two-color counters, base-ten blocks (tens and ones), MathBoard

Lesson 11.2 Decompose Ones to Subtract

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Model with mathematics.

I Can Objective

I can break apart ones to make a tens number when I subtract.

Learning Objective

Find a difference by decomposing a one-digit subtrahend to subtract it from a two-digit number.

Language Objectives

- Explain how to identify the parts of a subtraction equation.
- Explain how to decompose a one-digit number to find differences by using the make a ten strategy.

Vocabulary

Review: subtract

Lesson Materials

connecting cubes, MathBoard, crayons

Lesson 11.3 Decompose Numbers to Add

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Model with mathematics.
- Use appropriate tools strategically.

I Can Objective

I can draw a model and write an equation to show how I break apart an addend to make the next tens number.

Learning Objective

Use decomposing a number as a strategy to add two-digit numbers.

Language Objective

Explain how to use decomposing a number as a strategy to find the sum of two-digit numbers.

Lesson Materials

MathBoard, base-ten blocks (tens and ones)

Lesson 11.4 Decompose Addends as Tens and Ones

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Attend to precision.
- Model with mathematics.

I Can Objective

I can solve an addition problem by breaking apart the addends into tens and ones.

Learning Objective

Apply place-value understanding when decomposing numbers to solve two-digit addition.

Language Objectives

- Explain how to use place value to decompose two-digit numbers.
- Explain place-value strategies that can be used to add two-digit numbers.

Lesson Materials

base-ten blocks (tens and ones), MathBoard, number cube

Lesson 11.5 Decompose Numbers to Subtract

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Attend to precision.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can solve a subtraction problem by breaking apart a number into tens and ones.

Learning Objective

Apply place-value understanding when decomposing numbers to solve two-digit subtraction.

Language Objectives

- Explain how to use place value to decompose two-digit numbers.
- Explain how to use place-value strategies to subtract two-digit numbers.

Lesson Materials

base-ten blocks (tens and ones), Number Cards 1–100 (Teacher Resource Masters), MathBoard, crayons

Unit 4: Two-Digit Addition and Subtraction

Unit 4 Project: Hospital Helpers

Unit 4 Learning Mindset Focus: Try Again / Getting Unstuck

Module 12: Represent and Record Addition and Subtraction

Recommended Pacing with Assessments: 10 Days

Module 12 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children used addition and subtraction within 20 to solve word problems. Children added within 100, including adding a two-digit number and a one-digit number.	Children fluently add and subtract within 100. Children explain why addition and subtraction strategies work.	Children will fluently add and subtract within 1,000.

Module 12 Vocabulary

addends	any of the numbers that are added
regroup	an action that involves changing a number from one form to an equivalent form

Lesson 12.1 Represent Regrouping for Addition

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can represent addition of two-digit numbers with and without regrouping.

Learning Objective

Represent two-digit addition with regrouping ones as tens using visual models.

Language Objective

Explain regrouping 10 ones as 1 ten may be necessary to add numbers.

Vocabulary

New: regroup

Lesson Materials

base-ten blocks, place-value chart, MathBoard, pencil

Lesson 12.2 Represent Regrouping for Subtraction

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Reason abstractly and quantitatively.

I Can Objective

I can represent subtraction of two-digit numbers with and without regrouping.

Learning Objective

Represent two-digit subtraction with regrouping 1 ten as 10 ones.

Language Objective

Explain why regrouping 1 ten as 10 ones may be necessary to find a difference.

Lesson Materials

base-ten blocks, place-value chart, MathBoard, pencil

Lesson 12.3 Represent and Record Two-Digit Addition

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can represent and record two-digit addition with and without regrouping.

Learning Objective

Use place-value charts to represent and record two-digit addition.

Language Objective

Explain how to use place-value charts to show and record two-digit addition.

Vocabulary

Review: addend

Lesson Materials

base-ten blocks, place-value chart, MathBoard, pencil

Lesson 12.4 Represent and Record Two-Digit Subtraction

Connect Concepts and Skills – 2 Days

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Use appropriate tools strategically.

I Can Objective

I can represent and record two-digit subtraction with and without regrouping.

Learning Objective

Use concrete models to represent two-digit subtraction and connect the concrete model to the subtraction algorithm.

Language Objective

Explain how to use place-value charts to show and record two-digit subtraction.

Lesson Materials

base-ten blocks, place-value chart, number line, MathBoard, pencil

Lesson 12.5 Add Two-Digit Numbers

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Explain why addition and subtraction strategies work, using place value and the properties of operations.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can record the steps when adding two-digit numbers.

Learning Objective

Understand how to record two-digit addition with and without regrouping.

Language Objective

Explain how to use the addition algorithm to add two-digit numbers with and without regrouping.

Lesson 12.6 Subtract Two-Digit Numbers

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Explain why addition and subtraction strategies work, using place value and the properties of operations.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can record the steps when subtracting two-digit numbers.

Learning Objective

Understand how to record two-digit subtraction with and without regrouping.

Language Objective

Explain how to use the subtraction algorithm to subtract two-digit numbers with and without regrouping.

Lesson Materials

pencil

Unit 4: Two-Digit Addition and Subtraction

Unit 4 Project: Hospital Helpers

Unit 4 Learning Mindset Focus: Try Again / Getting Unstuck

Module 13: Develop Addition and Subtraction Fluency

Recommended Pacing with Assessments: 9 Days

Module 13 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children used addition and subtraction within 20 to solve word problems.	Children fluently add and subtract within 100. Children add and subtract within 1,000. Children add up to 4 two-digit numbers. Children explain why addition and subtraction strategies work.	Children will fluently add and subtract within 1,000.

Module 13 Vocabulary

ones	the value of a digit in the ones position
tens	the value of a digit in the tens position; 1 ten = 10 ones

Lesson 13.1 Rewrite Addition Problems

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can rewrite addition problems and find the sum.

Learning Objective

Rewrite addition problems given in horizontal form as vertical addition algorithm and find the sum.

Language Objective

Explain how to rewrite addition problems given in horizontal form using the vertical algorithm.

Vocabulary

Review: ones, tens

Lesson 13.2 Rewrite Subtraction Problems

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can rewrite subtraction problems and find the difference.

Learning Objective

Rewrite subtraction problems given in horizontal form as vertical subtraction algorithm and find the difference.

Language Objective

Explain how to rewrite subtraction problems given in horizontal form using the vertical algorithm.

Lesson 13.3 Use Addition and a Number Line to Subtract

Apply and Practice – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Mathematical Practices and Processes

- Model with mathematics.
- Use appropriate tools strategically.

I Can Objective

I can use addition to find the difference between numbers on a number line.

Learning Objective

Use the relationship between addition and subtraction to find the difference.

Language Objective

Explain how to use the relationship between addition and subtraction to find differences.

Lesson 13.4 Add 3 Two-Digit Numbers Using Strategies and Properties

Apply and Practice – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Add up to four two-digit numbers using strategies based on place value and properties of operations.

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Explain why addition and subtraction strategies work, using place value and the properties of operations.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can find sums for 3 two-digit numbers by using addition strategies and properties.

Learning Objective

Use strategies of addition to find the sum of 3 two-digit numbers.

Language Objective

Explain how to use strategies to add 3 two-digit numbers.

Lesson 13.5 Add 4 Two-Digit Numbers Using Strategies and Properties

Apply and Practice – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Add up to four two-digit numbers using strategies based on place value and properties of operations.

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Explain why addition and subtraction strategies work, using place value and the properties of operations.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can find sums for 4 two-digit numbers by using addition strategies and properties.

Learning Objective

Use strategies of addition to find the sum of 4 two-digit numbers.

Language Objective

Explain how to use strategies to add 4 two-digit numbers using the standard addition algorithm.

Unit 4: Two-Digit Addition and Subtraction

Unit 4 Project: Hospital Helpers

Unit 4 Learning Mindset Focus: Try Again / Getting Unstuck

Module 14: Algebra

Recommended Pacing with Assessments: 10 Days

Module 14 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children used addition and subtraction within 20 to solve word problems. Children understood subtraction as an unknown addend problem. Children added and subtracted within 20, demonstrating fluency for addition and subtraction within 10. Children determined the unknown number in an addition or subtraction equation relating to three whole numbers.	Children use addition and subtraction within 100 to solve one- and two-step word problems. Children determine the unknown whole number in an equation relating four or more whole numbers. Children fluently add and subtract within 100.	Children will solve two-step word problems using the four operations. Children will represent problems using equations with a letter standing for the unknown quantity. Children will fluently add and subtract within 1000.

Module 14 Vocabulary

addition equation	number sentence that uses the equal sign and plus sign to show two amounts are equal
subtraction equation	number sentence that uses the equal sign and minus sign to show two amounts are equal

Lesson 14.1 Use Drawings to Represent Addition and Subtraction Situations

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical Practices and Processes

- Model with mathematics.

I Can Objective

I can represent addition and subtraction word problems with bar models and equations.

Learning Objective

Use bar models to represent and solve addition and subtraction problems.

Language Objectives

- Describe how to use bar models to represent and solve addition and subtraction problems.
- Explain how to complete equations to represent addition and subtraction problems.

Vocabulary

Review: addition equation, subtraction equation

Lesson Materials

MathBoard, connecting cubes, two-color counters, pencil

Lesson 14.2 Use Equations to Represent Addition and Subtraction Situations

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical Practices and Processes

- Model with mathematics.

I Can Objective

I can use equations to represent and solve addition and subtraction word problems.

Learning Objective

Use equations to represent and solve addition and subtraction problems.

Language Objective

- Explain how to use equations and bar models to represent addition and subtraction situations.
- Explain how to write an equation (using a symbol for the unknown number) to represent a problem.

Lesson Materials

MathBoard, connecting cubes, crayons, pencil

Lesson 14.3 Use Drawings and Equations to Represent Two-Digit Addition

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Model with mathematics.

I Can Objective

I can use bar models and equations to represent and solve two-digit addition word problems.

Learning Objective

Use drawings to write equations to represent addition situations.

Language Objectives

- Explain how to use equations and bar models to represent addition situations.
- Explain how to write an equation (using a symbol for the unknown number) to represent a problem.

Lesson Materials

MathBoard, connecting cubes, base-ten blocks, pencil

Lesson 14.4 Use Drawings and Equations to Represent Two-Digit Subtraction

Connect Concepts and Skills – 2 Days

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical Practices and Processes

- Model with mathematics.

I Can Objective

I can use bar models and equations to represent and solve two-digit subtraction word problems.

Learning Objective

Use drawings to write equations to represent subtraction situations.

Language Objectives

- Explain how to use equations and bar models to represent subtraction situations.
- Explain how to write an equation (using a symbol for the unknown number) to represent a problem.

Lesson Materials

MathBoard, connecting cubes, base-ten blocks, pencil

Unit 4: Two-Digit Addition and Subtraction

Unit 4 Project: Hospital Helpers

Unit 4 Learning Mindset Focus: Try Again / Getting Unstuck

Module 15: Addition and Subtraction Word Problems

Recommended Pacing with Assessments and Performance Task: 7 Days

Module 15 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children used addition and subtraction with 20 to solve word problems. Children added and subtracted within 20, demonstrating fluency for addition and subtraction within 10. Children added within 100, including adding a two-digit number and a one-digit number.	Children use addition and subtraction within 100 to solve one- and two-step word problems.	Children will use multiplication and division within 100 to solve word problems. Children will solve two-step word problems using the four operations and represent problems with equations with a letter standing for the unknown.

Module 15 Vocabulary

equation	a number sentence
operation	a mathematical process, including addition and subtraction, used to solve a problem

Lesson 15.1 Addition and Subtraction Word Problems

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Model with mathematics.

I Can Objective

I can write an equation and use it to solve addition word problems.

Learning Objective

Represent addition situations with equations using a symbol for the unknown.

Language Objective

Explain how to write addition equations to solve word problems, using key terms including equation, plus, and is equal to.

Vocabulary

Review: equation
New: operation

Lesson Materials

base-ten blocks, MathBoard, number cubes, index cards

Lesson 15.2 Solve Subtraction Word Problems

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical Practices and Processes

- Model with mathematics.
- Reason abstractly and quantitatively.

I Can Objective

I can write an equation and use it to solve a subtraction word problem.

Learning Objective

Represent subtraction situations with equations using a symbol for the unknown.

Language Objective

Explain how to write subtraction equations to solve word problems, using key terms including equation, minus, and is equal to.

Lesson Materials

MathBoard, number cubes, number cards, index cards

Lesson 15.3 Solve Multistep Addition and Subtraction Problems

Apply and Practice – 2 Days

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Model with mathematics.

I Can Objective

I can solve multistep addition and subtraction word problems.

Learning Objective

Evaluate word problems to decide what operations to use to solve multistep problems.

Language Objective

Explain how to write equations to solve multistep word problems.

Lesson Materials

MathBoard, connecting cubes, Number Cards (Teacher Resource Masters), plus and minus cards

Unit 5: Three-Digit Addition and Subtraction

Unit 5 Project: Ticket Totals

Unit 5 Learning Mindset Focus: Challenge Me / Accepts Challenges

Module 16: Three-Digit Addition

Recommended Pacing with Assessments: 6 Days

Module 16 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children added within 100, including adding a two-digit number and a one-digit number, using concrete models or pictures and strategies based on place value.	Children add and subtract within 1,000. Children understand that in adding three-digit numbers, one adds hundreds and hundreds, tens and tens, ones and ones; and that sometimes it is necessary to compose tens or hundreds.	Children will fluently add within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Module 16 Vocabulary

hundreds	the place value that describes how many hundreds there are
ones	the place value that describes how many ones there are
regroup	to exchange amounts of equal value to rename a number
tens	the place value that describes how many groups of 10 there are

Lesson 16.1 Use Drawings to Represent Three-Digit Addition

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Use appropriate tools strategically.

I Can Objective

I can draw quick pictures to add three-digit numbers.

Learning Objective

Draw quick pictures to represent three-digit addition.

Language Objective

- Describe how to use concrete and visual models to represent addition without regrouping.
- Explain how to use an equation to represent addition of three-digit numbers with regrouping of ones or tens.

Vocabulary

Review: hundreds, ones, tens

Lesson Materials

MathBoard, base-ten blocks, place-value chart, pencil

Lesson 16.2 Decompose Three-Digit Addends

Connect Concepts and Skills – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can break apart addends to add hundreds, tens, and ones.

Learning Objective

Apply place-value concepts when decomposing numbers to solve three-digit addition problems.

Language Objective

- Explain how to use place value to decompose three-digit numbers.
- Describe how to use strategies based on place value to add 2 three-digit numbers.

Lesson Materials

MathBoard, base-ten blocks, place-value chart, crayon, pencil

Lesson 16.3 Represent Regrouping for Addition

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can represent and solve three-digit addition problems with regrouping.

Learning Objective

Record three-digit addition using the standard algorithm with possible regrouping of ones or tens.

Language Objectives

- Explain how to record three-digit addition using the standard algorithm with regrouping of ones or tens.
- Describe how to use the standard algorithm to solve three-digit addition problems with regrouping of ones or tens.

Vocabulary

Review: regroup

Lesson Materials

MathBoard, base-ten blocks, place-value chart, pencil, crayon

Lesson 16.4 Add Three-Digit Numbers

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Attend to precision.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can regroup ones and tens to find sums of three-digit numbers.

Learning Objective

Record three-digit addition using the standard algorithm with possible regrouping of both ones and tens.

Language Objective

- Explain how to record three-digit addition using the standard algorithm with regrouping of ones and tens.
- Describe how to use the standard algorithm to solve three-digit addition problems with regrouping of ones and tens.

Unit 5: Three-Digit Addition and Subtraction

Unit 5 Project: Ticket Totals

Unit 5 Learning Mindset Focus: Challenge Me / Accepts Challenges

Module 17: Three-Digit Subtraction

Recommended Pacing with Assessments and Performance Task: 9 Days

Module 17 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children subtracted within 100, including subtracting two-digit numbers. Children understood that in subtracting two-digit numbers, we subtract tens from tens and ones from ones, and that sometimes it is necessary to compose a ten.	Children subtract within 1,000. Children understand that in subtracting three-digit numbers, we subtract hundreds from hundreds, tens from tens, and ones from ones, and that sometimes it is necessary to compose or decompose tens or hundreds. Children explain why addition and subtraction strategies work.	Children will fluently add and subtract within 1,000.

Module 17 Vocabulary

hundred	the place value that describes how many groups of 100 there are
ones	the place value that describes how many ones there are
tens	the place value that describes how many groups of 10 there are

Lesson 17.1 Represent Three-Digit Subtraction

Connect Concepts and Skills – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can subtract a three-digit number without regrouping using a concrete model or a visual model.

Learning Objective

Solve problems involving three-digit subtraction by building concrete and visual models.

Language Objective

Explain how to use place value and concrete models to solve subtraction problems with three-digit numbers.

Vocabulary

Review: hundreds, tens, ones

Lesson Materials

base-ten blocks, Place-Value Chart (hundreds, tens, ones) (Teacher Resource Masters), MathBoard

Lesson 17.2 Represent Regrouping for Subtraction

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can subtract a three-digit number with regrouping using a concrete model or a visual model.

Learning Objective

Record three-digit subtraction using the standard algorithm with possible regrouping of hundreds.

Language Objective

Explain how to record three-digit subtraction using the standard algorithm with possible regrouping of hundreds.

Lesson Materials

base-ten blocks, Place-Value Chart (hundreds, tens, ones) (Teacher Resource Masters)

Lesson 17.3 Subtract Three-Digit Numbers

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can regroup hundred and tens to subtract three-digit numbers.

Learning Objective

Record three-digit subtraction using the standard algorithm with possible regrouping of both hundreds and tens.

Language Objective

Explain how to recognize when you need to regroup to subtract.

Lesson Materials

base-ten blocks, Place-Value Chart (hundreds, tens, ones) (Teacher Resource Masters), MathBoard

Lesson 17.4 Represent Regrouping with Zeros

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can represent and solve three-digit subtraction problems when there are zeros in the number I start with.

Learning Objective

Show regrouping for subtraction with three-digit numbers with zeros.

Language Objective

Use concrete and visual models to show how to regroup for subtraction when there is a zero in the hundreds place or tens place.

Lesson Materials

base-ten blocks, Place-Value Chart (hundreds, tens, ones) (Teacher Resource Masters), MathBoard

Lesson 17.5 Regrouping with Zeros

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can solve three-digit subtraction problems when there are zeros in the number I start with.

Learning Objective

Record three-digit subtraction using the standard algorithm when there are zeros in the minuend.

Language Objective

Explain how to use visual models to show how to regroup for subtraction when there are zeros in the minuend.

Lesson Materials

base-ten blocks, MathBoard

Lesson 17.6 Add and Subtract Three-Digit Numbers

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Explain why addition and subtraction strategies work, using place value and the properties of operations.

Mathematical Practices and Processes

- Construct viable arguments and critique the reasoning of others.
- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can regroup to solve addition and subtraction problems with three-digit numbers.

Learning Objective

Record three-digit addition and three-digit subtraction using the standard algorithm with possible regrouping in all place-value positions.

Language Objective

Explain how to record three-digit addition and three-digit subtraction using the standard algorithm with possible regrouping in all the place values.

Lesson Materials

base-ten blocks, MathBoard

Unit 6: Measurement: Length

Unit 6 Project: How Tall is Your Robot?

Unit 6 Learning Mindset Focus: Try Again / Sustains Attention

Module 18: Length in Inches, Feet, and Yards

Recommended Pacing with Assessments: 13 Days

Module 18 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children ordered objects by length. Children used nonstandard units to measure length Children organized, represented, and interpreted data.	Children estimate lengths using units of inches, feet, or yards. Children measure length to the nearest inch, foot, or yard. Children use appropriate tools to measure length. Children describe the inverse relationship between the size of the unit and the number of units. Children create a line plot to show lengths.	Children will measure and estimate liquid volumes using grams, kilograms, and liters. Children will generate measurement data and show the data by making a line plot.

Module 18 Vocabulary

estimate	make a reasonable guess
foot	a unit of length in the customary system of measurement; 1 foot = 12 inches
inch	a unit of length in the customary system of measurement
inch ruler	a tool to measure length in inch and feet units
line plot	a graph that records each piece of data on a number line
measuring tape	a tool that can be used to measure lengths and distances that are not flat or straight
ruler	a tool used to measure length
yard	a unit of length in the customary system of measurement; 1 yard = 3 feet = 36 inches
yardstick	a tool that has marks to show 3 feet and can be used to measure lengths and distances greater than 12 inches

Lesson 18.1 Estimate Lengths Using Inches

Connect Concepts and Skills – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Estimate lengths using units of inches, feet, centimeters, and meters.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can use 1-inch tiles to estimate lengths.

Learning Objective

Estimate the lengths of objects by mentally partitioning the lengths into inches.

Language Objectives

- Explain the meaning of estimate, in context.
- Explain that the length of a square tile is 1 inch, and use square tiles to estimate unknown lengths in inches.

Vocabulary

New: estimate, inch

Lesson Materials

MathBoard, square tiles, pencil

Lesson 18.2 Make and Use a Ruler

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Mathematical Practices and Processes

- Attend to precision.
- Use appropriate tools strategically.

I Can Objective

I can use 1-inch tiles to make a ruler to measure objects.

Learning Objective

Generate and use a paper ruler without and with numbers by using 1-inch tiles.

Language Objectives

- Explain how to use tiles to measure.
- Explain how to make a paper ruler.
- Explain how a paper ruler is easier to use than tiles to measure.

Vocabulary

New: ruler

Lesson Materials

MathBoard, 1-inch tiles, colored pencils, 1-inch graph paper

Lesson 18.3 Measure to the Nearest Inch

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can use a ruler to measure the length of an object to the nearest inch.

Learning Objective

Measure the lengths of objects to the nearest inch using an inch ruler.

Language Objective

- Explain the meaning of measure and inch ruler.
- Explain how to use and read a ruler so children can measure lengths of given objects in inches.
- Explain that 1 unit represents the space from the beginning of the ruler to the hash mark, not the hash mark itself.

Vocabulary

New: inch ruler

Lesson Materials

MathBoard, square tiles, crayon, pencil

Lesson 18.4 Make Line Plots to Show Measurement Data

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.
- Reason abstractly and quantitatively.

I Can Objective

I can measure the length of objects in inches and show the data on a line plot.

Learning Objective

Measure the lengths of objects and use a line plot to display the measurement data.

Language Objectives

- Explain the purpose of a line plot.
- Explain how to create a line plot.
- Explain how to use a line plot to show the lengths of objects.

Vocabulary

New: line plot

Lesson Materials

MathBoard, inch ruler, chenille sticks, pencil

Lesson 18.5 Estimate Lengths Using Feet

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Estimate lengths using units of inches, feet, centimeters, and meters.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can use 12-inch rulers to estimate the length of an object in feet.

Learning Objective

Estimate the lengths of objects by mentally partitioning the lengths into feet.

Language Objectives

- Explain the length of 1 foot in inches.
- Describe how to use a 12-inch ruler as a benchmark foot length to estimate unknown lengths in feet.

Vocabulary

New: foot

Lesson Materials

MathBoard, inch ruler, crayon, pencil

Lesson 18.6 Measure in Inches and Feet

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can measure objects to the nearest inch and the nearest foot, and describe how measuring in feet is different from measuring in inches.

Learning Objective

Measure the lengths of objects in both inches and feet to explore the inverse relationship between size and number of units.

Language Objectives

- Explain the inverse relationship between size and the number of units when measuring the length of objects in feet units and inch units.
- Describe how to use a ruler to measure length in both inch units and feet units.

Lesson Materials

MathBoard, square tiles, marker, pencil

Lesson 18.7 Measure to the Nearest Yard

Connect Concepts and Skills – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Use appropriate tools strategically.

I Can Objective

I can estimate and measure length to the nearest yard.

Learning Objective

Estimate the lengths of objects by mentally partitioning the lengths into 3-foot sections (yards).

Language Objectives

- Explain the meaning of yard and the tool used to measure yard units (yardstick).
- Discuss how to mentally partition lengths into 3-foot sections to estimate unknown lengths in yards.

Vocabulary

New: yard, yardstick

Lesson Materials

MathBoard, inch ruler, yardstick, crayon, pencil

Lesson 18.8 Choose Appropriate Tools

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Use appropriate tools strategically.

I Can Objective

I can decide which measuring tool to use to measure lengths of different objects.

Learning Objective

Select appropriate tools for measuring different lengths.

Language Objectives

- Explain what a measuring tape is and how it differs from a yardstick.
- Explain how to select the best tool to measure a specific object.

Vocabulary

New: measuring tape

Lesson Materials

inch ruler, yardstick, measuring tape

Unit 6: Measurement: Length

Unit 6 Project: How Tall is Your Robot?

Unit 6 Learning Mindset Focus: Try Again / Sustains Attention

Module 19: Length in Centimeters and Meters

Recommended Pacing with Assessments: 6 Days

Module 19 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children learned how to use a ruler to measure length to the nearest inch. Children recognized that the ruler is a tool that can be used to measure the attribute of length. Children learned the importance of the zero point and end point and that the length measure is a span between two points. Children recognized that units are marked on a ruler in equal-length intervals and fit together with no gaps or overlaps.	Children measure length to the nearest centimeter or meter. Children use appropriate tools to measure length. Children estimate lengths using centimeters or meters.	Children will measure and estimate liquid volumes and masses of objects. Children will solve one-step word problems involving masses or volumes.

Module 19 Vocabulary

centimeter	a unit of length in the metric system of measurement
centimeter ruler	a tool to measure length in centimeters
meter	a unit of length in the metric system of measurement; 1 meter = 100 centimeters
meter stick	a tool to measure length in centimeters and meters

Lesson 19.1 Estimate Lengths Using Centimeters

Connect Concepts and Skills – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Estimate lengths using units of inches, feet, centimeters, and meters.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can use an object with a known length to estimate the length of another object.

Learning Objective

Estimate lengths of objects in centimeters by comparing them to known lengths.

Language Objectives

- Explain how to use unit cubes to estimate length in centimeters.
- Describe how to use a known length to estimate an unknown length.

Vocabulary

New: centimeter

Lesson Materials

MathBoard, string, unit cubes, pencil

Lesson 19.2 Measure to the Nearest Centimeter

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can measure length to the nearest centimeter using a centimeter ruler.

Learning Objective

Measure lengths of objects to the nearest centimeter using a centimeter ruler.

Language Objective

- Explain how to use a centimeter ruler to measure length.
- Describe how to use a centimeter ruler to measure objects of unknown length to the nearest centimeter.

Vocabulary

New: centimeter ruler

Lesson Materials

MathBoard, unit cubes, centimeter ruler, pencil

Lesson 19.3 Estimate Lengths Using Meters

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Estimate lengths using units of inches, feet, centimeters, and meters.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and make use of structure.

I Can Objective

I can estimate the length of an object in meters.

Learning Objective

Estimate the lengths of objects in meters.

Language Objectives

- Explain the meaning of meter and the tool used to measure meter units (meter stick).
- Explain how to estimate the lengths of objects in meters.

Vocabulary

New: meter stick, meter

Lesson Materials

MathBoard, string, meter stick, pencil

Lesson 19.4 Measure in Centimeters and Meters

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.

I Can Objective

I can measure an object in meters and centimeters, and describe how measuring in meters is different from measuring in centimeters.

Learning Objective

Measure the lengths of objects in both centimeters and meters to explore the inverse relationship between size and number of units.

Language Objectives

- Explain how to measure the lengths of objects in centimeters and meters.
- Describe how to use a centimeter ruler and a meter stick to measure objects to the nearest centimeter or meter.

Lesson Materials

centimeter ruler, meter stick, pencil

Unit 6: Measurement: Length

Unit 6 Project: How Tall is Your Robot?

Unit 6 Learning Mindset Focus: Try Again / Sustains Attention

Module 20: Relate Addition and Subtraction to Length

Recommended Pacing with Assessments and Performance Task: 8 Days

Module 20 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children ordered objects by length.	Children use addition and subtraction within 100 to solve word problems involving length.	Children will understand a fraction as a number on the number line.
Children compared lengths indirectly.	Children represent whole numbers as lengths on a number line.	Children represent fractions on a number line diagram.
Children expressed length as a whole number of length units.	Children measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	
Children measured length by placing length units end to end with no gaps or overlaps.		

Module 20 Vocabulary

centimeter	a unit of length in the metric system of measurement
inches	a unit of length in the customary system of measurement

Lesson 20.1 Relate Inches to a Number Line

Connect Concepts and Skills – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can solve two-digit addition and subtraction problems using an inch ruler or a yardstick as a number line.

Learning Objective

Explore the relationship between inch units on an inch ruler or a yardstick and units on a number line and use an inch ruler or a yardstick to solve addition and subtraction problems.

Language Objectives

- Explain the relationship between inch units on a ruler and units on a number line.
- Explain how to use an inch ruler or a yardstick to solve addition and subtraction problems.

Vocabulary

Review: inches

Lesson Materials

inch ruler, yardstick, crayon

Lesson 20.2 Add and Subtract Lengths in Inches

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Model with mathematics.
- Look for and make use of structure.

I Can Objective

I can use a number line to represent and solve addition and subtraction problems about lengths in inches.

Learning Objective

Solve addition and subtraction problems involving the lengths of objects in inches by using a visual model.

Language Objectives

- Explain how to draw on a diagram of a number line to solve problems involving length.
- Explain using a diagram of a number line to solve addition and subtraction problems involving the lengths of objects.

Lesson Materials

inch ruler, yardstick, base-ten blocks

Lesson 20.3 Relate Centimeters to a Number Line

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Mathematical Practices and Processes

- Construct viable arguments and critique the reasoning of others.
- Look for and make use of structure.

I Can Objective

I can solve two-digit addition and subtraction problems using a centimeter ruler or a meter stick as a number line.

Learning Objective

Explore the relationship between units on a centimeter ruler or a meter stick and units on a number line and use a centimeter ruler or a meter stick to solve addition and subtraction problems.

Language Objectives

- Explain the relationship between units on a centimeter ruler or a meter stick and units on a number line.
- Explain how to use a centimeter ruler or a meter stick to solve addition and subtraction problems involving length.

Vocabulary

Review: centimeter

Lesson Materials

standard pocket folders, centimeter ruler, meter stick, base-ten blocks (unit cubes)

Lesson 20.4 Add and Subtract Lengths in Centimeters

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can use a number line to represent and solve addition and subtraction problems about length in centimeters.

Learning Objective

Solve addition and subtraction problems involving the lengths of objects in centimeters by using a number line diagram.

Language Objectives

- Explain how to use a visual model to solve addition and subtraction situations for metric lengths.
- Explain how to use a visual model to solve problems involving length.

Lesson Materials

base-ten blocks (unit cubes), centimeter ruler

Lesson 20.5 Measure and Compare Lengths in Centimeters

Apply and Practice – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can measure and then find the difference in the lengths of two objects.

Learning Objective

Measure and then find the difference in the centimeter lengths of two objects.

Language Objectives

- Explain how to find the difference of the lengths of two objects in centimeters.
- Explain how to identify which object is longer or shorter.

Lesson Materials

centimeter ruler

Unit 7: Geometry and Fractions

Unit 7 Project: Design a Mosaic

Unit 7 Learning Mindset Focus: Get Help / Identifies Need for Help

Module 21: Two- and Three-Dimensional Shapes

Recommended Pacing with Assessments: 8 Days

Module 21 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children distinguished between defining attributes versus nondefining attributes of shapes. Children drew shapes to possess defining attributes.	Children recognize and draw shapes having specified attributes. Children identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	Children will understand that shapes in different categories may share attributes. Children will understand that shared attributes can define a larger category. Children will recognize and draw quadrilaterals.

Module 21 Vocabulary

angle	where two sides of a shape meet
edge	where two faces of a three-dimensional shape meet
face	the flat surface of a three-dimensional shape
hexagon	a two-dimensional shape with six sides
pentagon	a two-dimensional shape with five sides
quadrilateral	a two-dimensional shape with four sides
side	one of the lines that form a two-dimensional shape
vertex	a point where two sides of a polygon meet or three or more edges of a three-dimensional shape meet
vertices	the corner points of a three-dimensional shape

Lesson 20.1 Identify and Draw Three-Dimensional Shapes

Build Understanding – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Mathematical Practices and Processes

- Construct viable arguments and critique the reasoning of others.
- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can describe and compare the attributes of three-dimensional shapes.

Learning Objective

Identify and describe three-dimensional shapes according to the number of faces, edges, and vertices.

Language Objectives

- Explain the meaning of face, edge, and vertex in the context of three-dimensional shapes.
- Use the number of faces, edges, and vertices to describe three-dimensional shapes.

Vocabulary

New: edge, face, vertex, vertices

Lesson Materials

boxes, markers, MathBoards, three-dimensional shapes, dot paper

Lesson 20.2 Identify and Draw Two-Dimensional Shapes

Build Understanding – 2 Days

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can describe and compare the attributes of two-dimensional shapes.

Learning Objective

Name three-, four-, five-, and six-sided shapes according to the number of sides and vertices.

Language Objective

- Explain the meaning of sides and vertices in the context of two-dimensional shapes.
- Use the number of sides and vertices to describe two-dimensional shapes.

Vocabulary

New: hexagon, pentagon, quadrilateral, side, vertex

Lesson Materials

two-dimensional shapes, index cards, MathBoards

Lesson 20.3 Find and Count Angles in Two-Dimensional Shapes

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Mathematical Practices and Processes

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can find and count angles in two-dimensional shapes.

Learning Objective

Identify angles in two-dimensional shapes.

Language Objectives

- Explain the meaning of angle in the context of two-dimensional shapes.
- Describe the angles in two-dimensional shapes.

Vocabulary

New: angle

Lesson Materials

dot paper, two-dimensional shapes, MathBoards

Lesson 20.4 Sort Two-Dimensional Shapes by Sides and Angles

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Mathematical Practices and Processes

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

I Can Objective

I can compare two-dimensional shapes by the number of sides and angles.

Learning Objective

Sort two-dimensional shapes according to their attributes.

Language Objective

Explain how to sort two-dimensional shapes by attributes.

Lesson Materials

two-dimensional shapes, MathBoards

Unit 7: Geometry and Fractions

Unit 7 Project: Design a Mosaic

Unit 7 Learning Mindset Focus: Get Help / Identifies Need for Help

Module 22: Understand Fractions

Recommended Pacing with Assessments and Performance Task: 10 Days

Module 22 Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children distinguished between defining attributes versus nondefining attributes of shapes. Children drew shapes to possess defining attributes.	Children recognize and draw shapes having specified attributes. Children identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	Children will understand that shapes in different categories may share attributes. Children will understand that shared attributes can define a larger category. Children will recognize and draw quadrilaterals.

Module 22 Vocabulary

columns	objects vertically arranged, one on top of the other
equal shares	shares of a whole that are the same size
rows	objects arranged horizontally, side by side
whole	all of the shares that make up one shape
fourth of	one of four equal shares of a whole
fourths	four equal shares of a whole
half of	one of two equal shares of a whole
halves	two equal shares of a whole
quarter of	one of four equal shares of a whole
third of	one of three equal shares of a whole
thirds	three equal shares of a whole

Lesson 22.1 Partition Rectangles

Build Understanding – 1 Day

Professional Learning Video

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Mathematical Practices and Processes

- Use appropriate tools strategically.
- Attend to precision.

I Can Objective

I can find the total number of color tiles that will cover a rectangle.

Learning Objective

Partition rectangles into same-sized squares and find the total number of these squares.

Language Objectives

- Explain how to partition rectangles into same-sized squares.
- Count the number of same-sized squares that cover a rectangle.

Vocabulary

Review: rows, columns

Lesson Materials

color tiles, MathBoards

Lesson 22.2 Identify and Describe Equal Shares

Build Understanding – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Partition circles and rectangles into two, three, or four equal shares, 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. Recognize that equal shares of identical wholes need not have the same shape.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can identify and name shares of shapes as halves, thirds, and fourths.

Learning Objective

Identify and name equal shares of circles and rectangles as halves, thirds, or fourths.

Language Objectives

- Explain the meaning of halves, thirds, and fourths in context.
- Use the terms halves, thirds, and fourths to identify equal shares of circles and rectangles.

Vocabulary

Review: equal shares, whole

New: halves, thirds, fourths

Lesson Materials

color tiles, MathBoards

Lesson 22.3 Draw Equal Shares

Build Understanding – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Partition circles and rectangles into two, three, or four equal shares, 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. Recognize that equal shares of identical wholes need not have the same shape.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Attend to precision.

I Can Objective

I can draw to show halves, thirds, and fourths of a shape.

Learning Objective

Partition circles and rectangles to show halves, thirds, or fourths.

Language Objectives

- Verify children understand the meaning of halves, thirds, and fourths, in context.
- Explain how to partition shapes into halves, thirds, and fourths.

Lesson Materials

crayons, MathBoards

Lesson 22.4 Show and Describe and Equal Share

Build Understanding – 2 Days

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Partition circles and rectangles into two, three, or four equal shares, 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. Recognize that equal shares of identical wholes need not have the same shape.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can draw and color to show a half of, a third of, or a fourth of a shape.

Learning Objective

Identify and describe one equal share as a half of, a third of, or a fourth of a whole.

Language Objectives

- Explain the meaning of half of, third of, fourth of, and quarter of using visual models of circles and rectangles.
- Identify one equal part as a half of, third of, or fourth of a whole.

Vocabulary

New: half of, third of, fourth of, quarter of

Lesson Materials

MathBoards

Lesson 22.5 Different Ways to Show Equal Shares

Connect Concepts and Skills – 1 Day

Conceptual	Conceptual and Procedural	Procedural
Build Understanding	Connect Concepts and Skills	Apply and Practice

Mathematics Standards

Partition circles and rectangles into two, three, or four equal shares, 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. Recognize that equal shares of identical wholes need not have the same shape.

Mathematical Practices and Processes

- Attend to precision.
- Look for and make use of structure.

I Can Objective

I can draw to show the same wholes as equal shares in two different ways.

Learning Objective

Use visual models to show that equal shares of the same wholes do not need to have the same shape.

Language Objective

- Explain that equal shares of the same whole do not need to have the same shape.
- Use visual models to show and explain that equal shares can be made by dividing the same whole in different ways.

Lesson Materials

MathBoards