

Course Title:	Content Area:	Grade Level:	Credit (if applicable)
Grade 2 Math	Math	2	
Course Description:			
<p>The big ideas in IM Grade 2 include: extending understanding of the base-ten number system; building fluency with addition and subtraction; using standard units of measure; and describing and analyzing shapes. The materials, particularly units that focus on addition and subtraction, include problem types such as Add To, Take From, Put Together or Take Apart, Compare, Result Unknown, and so on. These problem types are based on common addition and subtraction situations, as outlined in Table 1 of the “Mathematics Glossary” section of the Common Core State Standards (NGA & CCSSO).</p>			
Aligned Core Resources:		Connection to the <i>BPS Vision of the Graduate</i>	
<p>Illustrative Mathematics 360</p>		<p>Collaboration Assume shared responsibility for collaborative work and value the individual contributions made by each team member.</p> <p>Social and Cross Cultural Skills Know when it is appropriate to listen and when to speak.</p> <p>Empathy Demonstrating understanding of others perspectives and needs by listening with an open mind.</p> <p>Information Literacy Evaluate information accurately and creatively for the issue or problem at hand.</p> <p>Communication Articulates thoughts and ideas effectively using oral, written and non-verbal communication skills in a variety of forms and contexts.</p> <p>Listen effectively to decipher meaning including knowledge, values, attitudes and intentions. Use communication for a range of purposes.</p> <p>Goal Directed Set goals with tangible and intangible success criteria.</p> <p>Persist to accomplish difficult tasks.</p> <p>Content Mastery Develop and draw from a baseline understanding of knowledge in academic disciplines from our Bristol curriculum.</p> <p>Critical Thinking and Problem-Solving Make sound judgments and decisions. Identify, define, and solve authentic problems and essential questions.</p> <p>Transfer knowledge to other situations.</p>	

Additional Course Information: <i>Knowledge/Skill Dependent courses/prerequisites</i>	Link to Completed Equity Audit
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N/A	Grade 2 Math Completed Equity Audit
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Standard Matrix

M-Major Cluster, S-Supporting Cluster, A-Additional Cluster

District Learning Expectations and Standards	U1	U2	U3	U4	U5	U6	U7	U8	U9
Operations and Algebraic Thinking									
Represent and solve problems involving addition and subtraction.									
2.OA.A.1 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.	M	M	M	M		M			M
Add and subtract within 20.									
2.OA.B.2 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.	M	M	M		M			M	M
Work with equal groups of objects to gain foundations for multiplication.									
2.OA.C.3 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.								S	
2.OA.C.4 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.								S	
Number and Operations in Base Ten									
Understand place value.									
2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:					M	M	M		M
2.NBT.A.1.A 100 can be thought of as a bundle of ten tens — called a "hundred."					M				
2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.	M	M	M	M	M	M	M	M	

2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.					M	M	M		M
2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.					M		M		
Use place value understanding and properties of operations to add and subtract.									
2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	M	M	M	M		M	M		M
2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.		M				M	M		
2.NBT.B.7 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.							M	M	M
2.NBT.B.8 Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.					M	M	M	M	
2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.		M					M		M
Measurement and Data									
Measure and estimate lengths in standard units.									
2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.			M			M			M
2.MD.A.2 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.			M						
2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.			M						
2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.			M						M

Relate addition and subtraction to length.									
2.MD.B.5 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.			M	M					M
2.MD.B.6 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.			M	M	M				
2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.						S			
2.MD.C.8 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?						S			
Represent and interpret data.									
2.MD.D.9 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.			S						S
2.MD.D.10 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.	S	S					S		
Geometry									
Reason with shapes and their attributes.									
2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.1 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.						A			
2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.								A	
2.G.A.3 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.						A			

Unit Links

[Unit 1: Adding, Subtracting and Working with Data](#)

[Unit 2: Adding and Subtracting within 100](#)

[Unit 3: Measuring Length](#)

[Unit 4: Addition and Subtraction on a Number Line](#)

[Unit 5: Numbers to 1,000](#)

[Unit 6: Geometry, Time and Money](#)

[Unit 7: Add and Subtract within 1,000](#)

[Unit 8: Equal Groups](#)

Unit Title:

Unit 1: Adding, Subtracting and Working with Data

Unit Narrative

In this unit, students begin the year-long work to develop fluency with sums and differences within 20, building on concepts of addition and subtraction from grade 1. They learn new ways to represent and solve problems involving addition, subtraction, and categorical data. In grade 1, students added and subtracted within 20 using strategies based on properties of addition and place value. They developed fluency with sums and differences within 10. Students also gained experience in collecting, organizing, and representing categorical data. Students are introduced to picture graphs and bar graphs as a way to represent categorical data. They ask and answer questions about situations described by the data. The structure of the bar graphs paves the way for a new representation, the tape diagram. Students learn that tape diagrams can be used to represent and make sense of problems involving the comparison of two quantities. The diagrams also help to deepen students' understanding of the relationship between addition and subtraction. This opening unit also offers opportunities to introduce mathematical routines and structures for centers, and to develop a shared understanding of what it means to do math and to be a part of a mathematical community.

Relevant Standards: Bold indicates priority

2.OA.A.1 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.

2.OA.B.2 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.

2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2.MD.D.10 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.

Essential Question(s):

- How do we decide what operation to use when solving a real-world problem?
- How can we show mathematical situations in word problems?
- What does the equal sign mean in an equation?
- Why is it important to learn basic facts?
- Why do we collect, organize, represent and analyze data?

Enduring Understanding(s):

- Recognizing how a real-world situation fits into a common operation category helps to solve the problem.
- Real-world and mathematical situations can be represented using drawings and equations.
- An unknown can be in any position in a mathematical situation.
- The equal sign tells us that the quantities on either side have the same value or balance.
- Knowing the basic facts helps us to solve more difficult computation problems accurately and efficiently.

- Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler.
- Subtraction is the opposite of or “undoes” addition.
- We collect, organize, represent, and analyze data in order to answer a question or solve a problem.
- We can organize data in specific ways to help us interpret the data more easily.

Demonstration of Learning:

CFA 1: **Lesson 3**
 CFA 2: **Lesson 9**
 CFA 3: **Lesson 10**
 CFA 4: **Lesson 13**
 CFA 5: **Lesson 15**
 Checkpoints
 Unit Assessment

Pacing for Unit

25 days (14 required lessons, 11 flex, 2 assessment and reaction)

Family Overview (link below)

[Unit 1 Family Support Video](#)
[Unit 1 Family Support Materials \(all languages\)](#)

Integration of Technology:

Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning.

Unit-specific Vocabulary:

Aligned Unit Materials, Resources, and Technology (beyond core resources):

add	fluently	subtract
addend	horizontal	sum
bar graph	label	symbol
compare	operations	table
compose	picture graph	tape diagram
data	place value	title
decompose	relationship	unknown
difference	represent	unknown number
equation	solve	vertical
expression	strategies	

ST Math
 District - approved online resources

***Bold** - Appears in student glossary for IM Unit 1

Opportunities for Interdisciplinary Connections:	Anticipated Conceptions:
<p>Literacy Create word problems based on class read-alouds (e.g., "If there were 12 animals in the forest and 5 ran away...")</p> <p>Science Make observations, gather data from their investigations, and then organize and represent that data using charts, graphs, or tables to understand and explain their scientific findings.</p> <ul style="list-style-type: none"> • Survey classroom pets, plants, or insects; graph results (favorite animals, types of seeds planted) • Record daily weather observations (sunny, rainy, cloudy) and create graphs to find patterns • Use tally marks and graphs to record observations from science experiments or nature walks <p>Social Studies Graph student preferences for activities, foods, or decorations during different cultural celebrations</p> <p>PE Count and compare jumps, hops, or steps; create graphs showing "who jumped the farthest"</p>	<ul style="list-style-type: none"> • Students might rely on a keyword or phrase in a problem to suggest an operation that will lead to an incorrect solution. For example, they might think that the word more always means that addition must be used to find a solution. • Students may not completely solve a multi-step problem believing they are finished after completing one part. • Students may misunderstand the meaning of the equal sign even if they have proficient computational skills. • Students may not attend to the place value of the digits and believe that the 4 in 46 represents 4, not 40. This may also cause them to make errors in composing and decomposing tens. • Students may not have a conceptual understanding of place value so they would think $61 - 47 = 26$, because they subtract the 7 in 47 from the 1 in 61 instead of decomposing a ten. • When answering a question such as, "How many students in the class were born in January or in February?", students may not understand that they need to combine these data points to determine the total.
Connections to Prior Units: Dependency Diagram	Connections to Future Units:
1.1 Adding, Subtracting and Working with Data	2.2 Addition and Subtraction within 100 2.3 Measuring Length
Differentiation through Universal Design for Learning	
UDL Indicator	Teacher Actions:
<p>Engagement (7.1) Optimize choice and autonomy and develop agency in the learning process.</p> <ul style="list-style-type: none"> • Embed choices that align with the learning goal, such as: <ul style="list-style-type: none"> ○ The content to explore ○ The tools used for exploration or production ○ The opportunities for practicing and assessing learning ○ The sequence or timing for completion of tasks • Use a collaborative approach among learners and educators to co-design learning goals, activities, and tasks. <p>Representation (1.2) Support multiple ways to perceive information and share information in more ways than images and text alone.</p>	<p>See Illustrative Math Teachers Guide for identified "Access for Students with Disabilities" by lesson and activity.</p>

<ul style="list-style-type: none"> Use touch equivalents (tactile graphics or objects of reference) for key visuals that represent concepts. Provide physical objects and spatial models to convey perspective or interaction. <p>Action and Expression (5.2) Use multiple tools for construction, composition, and creativity and share thoughts and ideas using tools that complement the learning goal.</p> <ul style="list-style-type: none"> Use sentence starters or sentence strips. Use virtual or concrete mathematics manipulatives (e.g., base-10 blocks, algebra blocks). 	
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Supporting Multilingual/English Learners

Related *CELP standards:*

Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can fluently add and subtract within 20.	I can show my thinking by pointing, drawing, or using numbers and use words like plus, minus, or equals with support.	I can use math words like plus, minus, equals, and total to describe my thinking and write simple sentences about my strategy.	I can explain my thinking using math vocabulary and complete sentences to describe how I solved the problem and why my strategy works.
I can represent and interpret using data picture and bar graphs.	I can find information in picture and bar graphs and answer simple questions using words, numbers, or pictures.	I can read picture and bar graphs and explain what the data shows using short sentences.	I can represent data in picture and bar graphs and explain what the data means using math vocabulary.
I can represent and solve a variety of word problems using addition and subtraction.	I can use pictures, numbers, and simple words to show addition and subtraction in word problems.	I can use pictures, numbers and words to show addition and subtraction word problems and explain my thinking using simple sentences, pictures, or equations.	I can represent different types of addition and subtraction word problems and explain my thinking using math vocabulary.

Lesson Sequence	Learning Target and Success Criteria
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[Unit 1 Planning Map](#)

Section A	<p>Learning Target: I can fluently add and subtract within 20.</p> <p>Success Criteria:</p> <p>Lesson 1</p> <p><input type="checkbox"/> Explain (orally) strategies for adding and subtracting within 10</p> <p>Lesson 2</p>
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	<ul style="list-style-type: none"> <input type="checkbox"/> Find the value of an unknown addend for a sum of 10. <input type="checkbox"/> Write an addition or subtraction equation to represent the cube train. <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) a strategy for finding the number that makes an equation with a sum of 20 true. <p>Lesson 4</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for adding and subtracting within 20 <p>Lesson 5</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for adding within 50.
Section B	<p>Learning Target: I can represent and interpret data using picture and bar graphs.</p> <p>I can represent and solve a variety of word problems using addition and subtraction.</p> <p>Success Criteria:</p> <p>Lesson 7</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare and contrast (orally & in writing) ways to represent the same data. <input type="checkbox"/> Create (using words & other representations) a representation of the data. <p>Lesson 8</p> <ul style="list-style-type: none"> <input type="checkbox"/> Determine (orally and in writing) if a question can be answered by a given picture graph. <input type="checkbox"/> Answer questions about data. <input type="checkbox"/> Interpret (orally) data represented in a picture graph. <p>Lesson 9</p> <ul style="list-style-type: none"> <input type="checkbox"/> Interpret (orally & in writing) data represented in a bar graph. <input type="checkbox"/> Use the features of a bar graph to answer questions. <p>Lesson 10</p> <ul style="list-style-type: none"> <input type="checkbox"/> Represent given data using a picture graph and a bar graph. <p>Lesson 11</p> <ul style="list-style-type: none"> <input type="checkbox"/> Write questions that can be answered about data represented in picture graphs and bar graphs. <input type="checkbox"/> Explain (orally and in writing) how to use the features of picture graphs and bar graphs to answer questions.
Section C	<p>Learning Target: I can represent and solve a variety of word problems using addition and subtraction.</p> <p>Success Criteria:</p> <p>Lesson 13</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use a bar graph to solve problems and represent comparisons with an equation. <input type="checkbox"/> Use “more” and “fewer” to compare (orally & in writing) data represented in a bar graph. <p>Lesson 14</p> <ul style="list-style-type: none"> <input type="checkbox"/> Understand a tape diagram and what it represents <input type="checkbox"/> Interpret (orally) a tape diagram that represents a comparison <p>Lesson 15</p> <ul style="list-style-type: none"> <input type="checkbox"/> Match (orally & in writing) tape diagrams, equations, and story problems that represent the same relationships. <p>Lesson 16</p> <ul style="list-style-type: none"> <input type="checkbox"/> Solve compare problems with an unknown <input type="checkbox"/> Use a tape diagram to interpret and solve story problems with an unknown.

Unit Title:	
Unit 2: Adding and Subtracting within 100	
Unit Narrative	
<p>Previously, students added and subtracted numbers within 100 using strategies they learned in grade 1, such as counting on and counting back, and with the support of tools, such as connecting cubes. In this unit, students add and subtract within 100 using strategies based on place value, the properties of operations, and the relationship between addition and subtraction. Students begin by using any strategy to find the value of sums and differences that do not involve composing or decomposing a ten. They are then introduced to base-ten blocks as a tool to represent addition and subtraction and move towards strategies that involve composing and decomposing tens. Students develop their understanding of grouping by place value, and begin to subtract one- and two-digit numbers from two-digit numbers by decomposing a ten as needed. They apply properties of operations and practice reasoning flexibly as they arrange numbers to facilitate addition or subtraction. At the end of the unit, students apply their knowledge of addition and subtraction within 100 to solve one- and two-step story problems of all types, with unknowns in all positions. To support reasoning about place value when adding and subtracting, students may choose to use connecting cubes, base-ten blocks, tape diagrams, or other representations learned in earlier units and grades.</p>	
Relevant Standards: Bold indicates priority	
<p><u>2.OA.A.1</u> 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.</p> <p><u>2.OA.B.2</u> 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.</p> <p><u>2.NBT.B.5</u> Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p><u>2.NBT.B.6</u> Add up to four two-digit numbers using strategies based on place value and properties of operations.</p> <p><u>2.NBT.B.8</u> Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p> <p><u>2.NBT.B.9</u> Explain why addition and subtraction strategies work, using place value and the properties of operations.</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> • How do we decide what operation to use when solving a real-world problem? • How can we show mathematical situations in word problems? • What does the equal sign mean in a number sentence? • Why is it important to learn basic facts? 	<ul style="list-style-type: none"> • Recognizing how a real-world situation fits into a common operation category helps to solve the problem. • Real-world and mathematical situations can be represented using drawings and equations. • An unknown can be in any position in a mathematical situation. • The equal sign tells us that the quantities on either side have the same value or balance. • Knowing the basic facts helps us to solve more difficult computation problems accurately and efficiently.

	<ul style="list-style-type: none"> • Understanding place value enables us to represent, compare and order numbers and perform computations. • Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. • Subtraction is the opposite of or “undoes” addition. 															
Demonstration of Learning:	Pacing for Unit															
CFA 1: Lesson 1 CFA 2: Lesson 3 CFA 3: Lesson 8 CFA 4: Lesson 9 CFA 5: Lesson 11 CFA 6: Lesson 14 Checkpoints Unit Assessment	22 days (13 required lessons, 7 flex, 2 assessment and reaction)															
Family Overview (link below)	Integration of Technology:															
Unit 2 Family Support Video Unit 2 Family Support Materials (all languages)	Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning.															
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):															
<table border="1" data-bbox="110 1125 797 1436"> <tr> <td>addition</td> <td>equation</td> <td>sum</td> </tr> <tr> <td>addend</td> <td>expression</td> <td>symbol</td> </tr> <tr> <td>compose</td> <td>fewer</td> <td>value</td> </tr> <tr> <td>decompose</td> <td>more</td> <td></td> </tr> <tr> <td>difference</td> <td>subtract</td> <td></td> </tr> </table> <p>*Bold - Appears in student glossary for IM Unit 2</p>	addition	equation	sum	addend	expression	symbol	compose	fewer	value	decompose	more		difference	subtract		ST Math District - approved online resources
addition	equation	sum														
addend	expression	symbol														
compose	fewer	value														
decompose	more															
difference	subtract															
Opportunities for Interdisciplinary Connections:	Anticipated Conceptions:															
<p>ELA Students write and illustrate addition/subtraction word problems with real classroom contexts (pets, toys, siblings). Emphasize story problem language: "Add to," "Take from," "Compare."</p> <p>Science Compare objects to determine which object will sustain different states of matter. (Unit 1 - 4th Little Pig)</p>	<ul style="list-style-type: none"> • Students may not attend to the place value of the digits and believe that the 4 in 46 represents 4, not 40. This may also cause them to make errors in composing and decomposing tens. • Students might rely on a keyword or phrase in a problem to suggest an operation that will lead to an incorrect solution. For example, they might think that the word more always means that addition must be used to find a solution. 															

<p>Music Count beats in simple songs or melodies. Practice adding/subtracting measures or note sequences.</p> <p>PE Keep track of points during relay races, fitness challenges, or gym games. Solve addition/subtraction problems related to the data collection. (i.e. Team A scored 34 points, Team B scored 27. What's the difference?)</p>	<ul style="list-style-type: none"> • Students may not completely solve a multi-step problem believing they are finished after completing one part. • Students may misunderstand the meaning of the equal sign even if they have proficient computational skills. • Students may not have a conceptual understanding of place value so they would think $61 - 47 = 26$, because they subtract the 7 in 47 from the 1 in 61 instead of decomposing a ten. • Students may not understand the terminology within story problems and be able to decipher if they will need to add or subtract. The meaning of more than /fewer than causes confusion.
<p>Connections to Prior Units: Dependency Diagram</p>	<p>Connections to Future Units:</p>
<p>1.5 Adding within 100</p>	<p>2.3 Measuring Length 2.6 Geometry, Time and Money 2.7 Add and Subtract within 1,000</p>
<p>Differentiation through <i>Universal Design for Learning</i></p>	
<p>UDL Indicator</p>	<p>Teacher Actions:</p>
<p>Engagement (7.1) Optimize choice and autonomy and develop agency in the learning process.</p> <ul style="list-style-type: none"> • Connect the Learning Targets to students' personnel interested by allowing them to author addition and subtraction story problems and solve them with classmates. • Utilize Think-Pair-Share to allow students to share their thinking with a partner first before sharing out in a larger group to reduce social anxiety and increase confidence. <p>Representation 3.2 Highlight and explore patterns, critical features, big ideas, and relationships</p> <ul style="list-style-type: none"> • Clarify links between information provided in texts and any accompanying representation of that information in illustrations, equations, charts, or diagrams • Use multiple examples and non-examples to emphasize critical features • Use cues and prompts to draw attention to critical features. • Highlight previously learned skills that can be used to solve unfamiliar problems. <p>Action and Expression (5.2) Use multiple tools for construction, composition, and creativity and share thoughts and ideas using tools that complement the learning goal.</p> <ul style="list-style-type: none"> • Use sentence starters or sentence strips. • Use virtual or concrete mathematics manipulatives (e.g., base-10 blocks, algebra blocks). 	<p>See Illustrative Math Teachers Guide for identified "Access for Students with Disabilities" by lesson and activity.</p>

Supporting Multilingual/English Learners

Related CELF standards:

Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can add and subtract within 100 using a variety of strategies	I can add and subtract within 100 and explain my thinking with support.	I can add and subtract within 100 and explain my thinking using simple words and sentences.	I can add and subtract within 100 and explain my thinking using math vocabulary.
I can represent and solve a variety of word problems using addition and subtraction.	I can solve addition and subtraction word problems and use simple words, pictures or gestures to explain my thinking.	I can solve addition and subtraction word problems and explain my thinking using simple sentences, sentence frames or some math vocabulary.	I can solve addition and subtraction word problems and explain my thinking using math vocabulary.

Lesson Sequence

Learning Target and Success Criteria

[Unit 2 Planning Map](#)

Section A	<p>Learning Targets: <i>I can add and subtract within 100 using a variety of strategies.</i></p> <p><i>I can represent and solve a variety of word problems using addition and subtraction.</i></p> <p>Success Criteria:</p> <p>Lesson 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare and contrast (orally) strategies for finding an unknown difference that involve addition and subtraction. <input type="checkbox"/> Explain (orally) strategies for solving addition or subtraction problems (that do not involve composing or decomposing a ten). <p>Lesson 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) different strategies used to find an unknown addend (including those based on place value). <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Solve story problems and compare and contrast (orally) strategies (including those based on place value).
Section B	<p>Learning Targets: I can add and subtract within 100 using a variety of strategies.</p> <p>I can represent and solve a variety of word problems using addition and subtraction.</p> <p>Success Criteria:</p> <p>Lesson 5</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) a strategy for subtracting a one-digit number from a two-digit number. <input type="checkbox"/> Interpret (orally and using other representations) subtraction strategies where you decompose a ten. <p>Lesson 6</p>

	<ul style="list-style-type: none"> <input type="checkbox"/> Compare and contrast (orally) strategies and recording methods for subtraction. <input type="checkbox"/> Describe (orally) how a base-ten diagram and equations show the same subtraction strategy. <p>Lesson 7</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) a strategy for subtracting 2 two-digit numbers. <p>Lesson 8</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare and contrast (orally) strategies and recording methods for subtraction. <input type="checkbox"/> Explain (orally) a strategy for subtracting 2 two-digit numbers. <p>Lesson 9</p> <ul style="list-style-type: none"> <input type="checkbox"/> Match (orally) addition and subtraction expressions and base-ten diagrams that represent the same value. <input type="checkbox"/> Solve addition or subtraction problems using any strategy
<p>Section C</p>	<p>Learning Target: I can represent and solve a variety of word problems using addition and subtraction.</p> <p>Success Criteria:</p> <p>Lesson 11</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare and contrast (orally) representations used to make sense of and solve comparison story problems. <input type="checkbox"/> Represent and solve comparison story problems <p>Lesson 12</p> <ul style="list-style-type: none"> <input type="checkbox"/> Match (orally and in writing) story problems and tape diagrams that represent the same relationships. <input type="checkbox"/> Represent and solve story problems <p>Lesson 13</p> <ul style="list-style-type: none"> <input type="checkbox"/> Match (orally) story problems and equations that represent the same quantities and relationships. <input type="checkbox"/> Represent story problems with equations. <input type="checkbox"/> Solve story problems using any strategy <p>Lesson 14</p> <ul style="list-style-type: none"> <input type="checkbox"/> Represent and solve one- and two-step Add To, Result Unknown problems. <p>Lesson 15</p> <ul style="list-style-type: none"> <input type="checkbox"/> Understand (in written and spoken language) that the word "estimate" means “best guess” and not an exact answer when solving word problems. <input type="checkbox"/> Determine (orally and in writing) whether an estimate for the answer to a story problem is reasonable.

Unit Title:	
Unit 3: Measuring Length	
Unit Narrative	
<p>This unit introduces students to standard units of lengths in the metric and customary systems. In grade 1, students expressed the lengths of objects in terms of multiple copies of a shorter object laid end to end without gaps or overlaps. The length of the shorter object serves as the unit of measurement. Students learn about standard units of length: centimeters, meters, inches, and feet. They examine how different measuring tools represent length units, learn how to use measurement tools, and measure and estimate the lengths of objects. Along the way, students notice that the length of the same object can be described with different measurements and relate this to differences in the size of the unit used to measure. Throughout the unit, students solve one- and two-step story problems involving addition and subtraction of lengths. To make sense of and solve these problems, they use previously learned strategies for adding and subtracting within 100, including strategies based on place value. To close the unit, students learn that line plots can be used to represent numerical data. They create and interpret line plots that show measurement data and use them to answer questions about the data. Students relate the structure of a line plot to the tools they use to measure lengths. This prepares students for the work in the next unit, where they interpret numbers on the number line as lengths from 0. The number line is an essential representation that will be used in future grades and throughout students' mathematical experiences.</p>	
Relevant Standards: Bold indicates priority	
<p><u>2.OA.A.1</u> 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,</p> <p><u>2.MD.A.1</u> Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes</p> <p><u>2.MD.A.2</u> 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.</p> <p><u>2.MD.A.3</u> Estimate lengths using units of inches, feet, centimeters, and meters.</p> <p><u>2.MD.A.4</u> Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</p> <p><u>2.MD.B.5</u> 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.</p> <p><u>2.MD.B.6</u> 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.</p> <p><u>2.MD.D.9</u> 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.</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> • Why do we use standard units of measurement? • How do we decide on a unit of measure and a tool when measuring an object? • How are the size of the unit and the resulting measure related? 	<ul style="list-style-type: none"> • Standard units help us communicate a measure to others in a consistent way. • The unit of measure and tool must have the same attribute (e.g. length) we are measuring and be the most appropriate for the given situation. • There is a relationship between the size of the unit and the number of units required to cover the length.

<ul style="list-style-type: none"> • Why do we collect, organize, represent and analyze data? • How do we decide what operation to use when solving a real-world problem? 	<ul style="list-style-type: none"> • Length is measured by using an appropriate tool. Numerals on a measuring tool indicate the number of length units. • Addition and subtraction strategies can be used to solve real-world measurement problems. A symbol can be used to represent an unknown number. • We collect, organize, represent, and analyze data in order to answer a question or solve a problem. 																		
Demonstration of Learning:	Pacing for Unit																		
CFA 1: Lesson 3 CFA 2: Lesson 5 CFA 3: Lesson 6 CFA 4: Lesson 8 CFA 5: Lesson 9 CFA 6: Lesson 12 CFA 7: Lesson 15 Checkpoints Unit Assessment	23 days (14 required lessons, 7 flex, 2 assessment and reaction)																		
Family Overview (link below)	Integration of Technology:																		
Family Support Video Family Support vocabulary in ALL Languages	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>																		
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):																		
<table border="1" data-bbox="110 1188 797 1560"> <tr> <td>bar graph</td> <td>feet</td> <td>meter</td> </tr> <tr> <td>centimeter</td> <td>foot</td> <td>picture graph</td> </tr> <tr> <td>compose</td> <td>inch</td> <td>ruler</td> </tr> <tr> <td>data</td> <td>line plot</td> <td>unit</td> </tr> <tr> <td>decompose</td> <td>length</td> <td></td> </tr> <tr> <td>estimate</td> <td>measure</td> <td></td> </tr> </table> <p>*Bold - Appears in student glossary for IM Unit 3</p>	bar graph	feet	meter	centimeter	foot	picture graph	compose	inch	ruler	data	line plot	unit	decompose	length		estimate	measure		ST Math District - approved online resources
bar graph	feet	meter																	
centimeter	foot	picture graph																	
compose	inch	ruler																	
data	line plot	unit																	
decompose	length																		
estimate	measure																		
Opportunities for Interdisciplinary Connections:	Anticipated Conceptions:																		
ELA Record and illustrate measurement terms to help students understand academic vocabulary. Science: Measure heights of plants in a classroom or school garden as they grow over time; record data in a bar	<ul style="list-style-type: none"> • Students may believe that the numbers on a ruler are counting the tick marks instead of the units or spaces between the marks. • Some students might think that they can only measure length with a ruler starting at the left edge or 0 instead of starting at another number and 																		

<p>graph and solve comparison problems.</p> <p>Social Studies: Research occupations that rely on measurement (construction workers, carpenters, architects, tailors)</p> <p>Measure furniture, desks, doorways, and classroom dimensions in centimeters and meters to understand space and community.</p> <p>PE Measure jump distances, height of jumps, or distances students can throw. Create a bar graph to represent the data.</p>	<p>determining the number of length units used from end to end.</p> <ul style="list-style-type: none"> • Students may assume that a key word or phrase in a problem suggests the same operation will be used every time. • Students may try to represent categorical data (i.e. “Favorite Pets” or “Pizza Toppings”) on a line plot. • When creating a line plot, students may not space the tick marks equally along the line and may also omit numbers not included in the data set.
<p>Connections to Prior Units: Dependency Diagram</p>	<p>Connections to Future Units:</p>
<p>1.6 Length Measurements within 120 Units</p>	<p>2.4 Addition and Subtraction on the Number Line</p>
<p>Differentiation through Universal Design for Learning</p>	
<p>UDL Indicator</p>	<p>Teacher Actions:</p>
<p>Engagement 7.2 Invite personal response, evaluation, and self-reflection to content and activities.</p> <ul style="list-style-type: none"> • Embed choices that align with the learning goal, such as: <ul style="list-style-type: none"> ○ The content to explore ○ The tools used for exploration or production ○ The type of rewards or recognition available ○ The opportunities for practicing and assessing learning ○ The design or graphics of layouts, etc. ○ The sequence or timing for completion of tasks <p>Representation 2.3 Cultivate understanding and respect across languages and dialects</p> <ul style="list-style-type: none"> • Define domain-specific vocabulary (e.g., “map key” in social studies) using both domain-specific and common terms. • Embed visual, non-linguistic supports for vocabulary clarification (e.g., pictures, videos, etc.). • Use multiple examples and non-examples to emphasize critical features. <p>Action and Expression 5.3 Build fluencies with graduated support for practice and performance</p> <ul style="list-style-type: none"> • Use prompts to “show and explain your work” • Use scaffolds that can be gradually released with increasing independence and skills (e.g., embedded into digital reading and writing software). • Solve problems using a variety of strategies. • Use sentence starters or sentence strips. • Use physical manipulatives 	<p>See Illustrative Math Teachers Guide for identified “Access for Students with Disabilities” by lesson and activity.</p>

Supporting Multilingual/English Learners

Related *CELP standards:*

Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can estimate and measure length using a variety of tools.	I can measure objects and explain my thinking by pointing, using gestures or my native language.	I can measure objects and use a sentence frame to help me explain my thinking.	I can measure objects and justify why my measurement is reasonable using math vocabulary.
I can describe the relationship between the size of the units used and the resulting measurements when measuring the same object.	I can explain why it takes more or less of a unit to measure the same object by pointing, using gestures or my native language	I can explain why it takes more or less of a unit to measure the same object by using simple sentences and/or sentence frames.	I can explain why it takes more or less of a unit to measure the same object by using math vocabulary and complete sentences.
I can represent and solve a variety of word problems using addition and subtraction.	I can solve addition and subtraction word problems and use simple words, pictures or gestures to explain my thinking.	I can solve addition and subtraction word problems and explain my thinking using simple sentences, sentence frames or some math vocabulary.	I can solve addition and subtraction word problems and explain my thinking using math vocabulary.
I can create line plots to display measurement data and use the data to solve problems.	I can create a line plot with measurement data and answer simple questions with support.	I can create a line plot with measurement data and answer simple questions about the data.	I can create a line plot with measurement data and use them to solve and explain problems.

Lesson Sequence

Learning Target and Success Criteria

[Unit 3 Planning Map](#)

Section A	<p>Learning Targets: <i>I can estimate and measure length using a variety of tools.</i></p> <p><i>I can represent and solve a variety of word problems using addition and subtraction.</i></p> <p>Success Criteria:</p> <p>Lesson 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use same-sized length units to measure the length of objects <input type="checkbox"/> Express (orally) the length as the number of objects without gaps or overlaps. <p>Lesson 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Choose tools and explain (orally) how to use them to measure the length of objects in centimeters. <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create a centimeter ruler and describe (orally) how it represents lengths in centimeters. <input type="checkbox"/> Explain (orally) how to determine how much longer one object is than another. <p>Lesson 4</p>
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	<ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) how to estimate the length of an object. <input type="checkbox"/> Use a ruler to measure the length of objects and express the length in centimeters. <p>Lesson 5</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use rulers and meter sticks to measure length in centimeters and meters. <p>Lesson 6</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create and solve (Compare, Larger Unknown and Compare, Smaller Unknown) story problems about length. <input type="checkbox"/> Match (orally) tape diagrams and (Compare) story problems.
<p>Section B</p>	<p>Learning Targets: <i>I can estimate and measure length using a variety of tools.</i></p> <p><i>I can describe the relationship between the size of the units used and the resulting measurements when measuring the same object.</i></p> <p><i>I can represent and solve a variety of word problems using addition and subtraction.</i></p> <p>Success Criteria:</p> <p>Lesson 8</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use a ruler to measure length in inches. <p>Lesson 9</p> <ul style="list-style-type: none"> <input type="checkbox"/> Understand that it takes more smaller units than larger units to measure the same length. <p>Lesson 10</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain how to measure an object when starting from a non-zero tick mark on a ruler. <p>Lesson 11</p> <ul style="list-style-type: none"> <input type="checkbox"/> Interpret tape diagrams that represent (take from) problems about length. <p>Lesson 12</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain strategies for representing and solving two-step (take from and compare) problems about length.
<p>Section C</p>	<p>Learning Targets: <i>I can create line plots to display measurement data and use the data to solve problems.</i></p> <p>Success Criteria:</p> <p>Lesson 14</p> <ul style="list-style-type: none"> <input type="checkbox"/> Interpret the features of a line plots to answer questions about measurement data. <p>Lesson 15</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create a line plot to represent measurement data. <p>Lesson 16</p> <ul style="list-style-type: none"> <input type="checkbox"/> Interpret line plots with a scale that does not start at 0.

Unit Title:	
Unit 4: Addition and Subtraction on a Number Line	
Unit Narrative	
<p>In this unit, students are introduced to the number line, an essential representation that will be used throughout students' K–12 mathematical experience. They learn to use number lines to represent whole numbers, sums, and differences. In a previous unit, students learned to measure length with rulers. Here, they see that the tick marks and numbers on the number line are like those on a ruler: both show equally spaced numbers that represent lengths from 0. Students use this understanding of structure to locate and compare numbers on number lines and to estimate numbers represented by points on number lines. Students then learn conventions for representing addition and subtraction on a number line: using arrows pointing to the right for adding and arrows pointing to the left for subtracting. Students also use number lines to represent addition and subtraction methods discussed in Number Talks, such as counting on, counting back by place, and decomposing a number to get to a ten. The reasoning here deepens students' understanding of the relationship between addition and subtraction. The number lines in this unit show a tick mark for every whole number in the given range, though not all may be labeled with the numeral. As students become more comfortable with this representation, they may draw number lines that show only the numbers needed to solve the problems, which is acceptable.</p>	
Relevant Standards: Bold indicates priority	
<p><u>2.OA.A.1</u> 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.</p> <p><u>2.NBT.A.2</u> Count within 1000; skip-count by 5s, 10s, and 100s.</p> <p><u>2.NBT.B.5</u> Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p><u>2.MD.B.5</u> 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.</p> <p><u>2.MD.B.6</u> 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.</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> • How do we decide what operation to use when solving a real-world problem? • How do we use tools like number lines to help solve math problems? • How can a number line be used to represent numbers and equations? • How are addition and subtraction connected? • What are other strategies we can use to add and subtract on the number line? 	<ul style="list-style-type: none"> • Recognizing how a real-world situation fits into a common operation category helps to solve the problem. • An unknown can be in any position in a mathematical situation. • Skip counting by a specific number creates a repeating pattern. • Understanding place value enables us to represent, compare and order numbers and perform computations.

	<ul style="list-style-type: none"> • Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. • Students will understand that addition and subtraction are related operations • Students will understand that drawings, equations, and symbols can represent mathematical thinking and help explain solutions. • On a number line, the size of the part is measured by the distance from zero to the numbered point. 																											
Demonstration of Learning:	Pacing for Unit																											
CFA 1: Lesson 3 CFA 2: Lesson 4 CFA 3: Lesson 5 CFA 4: Lesson 8 CFA 5: Lesson 9 CFA 6: Lesson 11 CFA 7: Lesson 13 Checkpoints Unit Assessment	21 days (12 required lessons, 7 flex, 2 assessment and reaction)																											
Family Overview (link below)	Integration of Technology:																											
Unit 4 Family Support Video Unit 4 Family Support Materials (all languages)	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>																											
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):																											
<table border="1"> <tr> <td>addend</td> <td>equation</td> <td>number line</td> </tr> <tr> <td>addition</td> <td>estimate</td> <td>more</td> </tr> <tr> <td>arrow</td> <td>expression</td> <td>right</td> </tr> <tr> <td>centimeter</td> <td>fewer</td> <td>subtract</td> </tr> <tr> <td>compose</td> <td>inch</td> <td>sum</td> </tr> <tr> <td>data</td> <td>jump</td> <td>tick mark</td> </tr> <tr> <td>decompose</td> <td>left</td> <td>unknown</td> </tr> <tr> <td>difference</td> <td>length</td> <td>value</td> </tr> <tr> <td>diagram</td> <td>line Plot</td> <td></td> </tr> </table>	addend	equation	number line	addition	estimate	more	arrow	expression	right	centimeter	fewer	subtract	compose	inch	sum	data	jump	tick mark	decompose	left	unknown	difference	length	value	diagram	line Plot		ST Math District - approved online resources
addend	equation	number line																										
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decompose	left	unknown																										
difference	length	value																										
diagram	line Plot																											
* Bold - Appears in student glossary for IM Unit 4																												

Opportunities for Interdisciplinary Connections:	Anticipated Conceptions:	
<p>ELA Determine the meaning of words and phrases in word problems. Use these ideas to help solve the problem.</p> <p>Social Studies Create classroom timelines showing events in order and connect to number lines. "We went to the library 3 days ago" = jumping backward on a number line.</p> <p>Physical Education Measure how far students can jump, throw, or run, then use number lines to compare distances or show improvements.</p>	<ul style="list-style-type: none"> • Students may incorrectly think that subtraction is commutative, i.e. $8-5=5-8$. • Students may think that the unknown in an equation has to fall after the equal sign. • Students sometimes believe that the equal sign indicates the answer comes next or calls for doing the mathematical operation. • Students may confuse the direction of the arrows when representing both addition and subtraction problems on the number line. • Students might rely on a key word or phrase in a problem to suggest an operation that will lead to an incorrect solution. For example, they might think that the word left always means that subtraction must be used to find a solution. 	
Connections to Prior Units: Dependency Diagram	Connections to Future Units:	
2.3 Measuring Length	2..5 Numbers to 1,000	
Differentiation through Universal Design for Learning		
UDL Indicator	Teacher Actions:	
<p>Engagement 7.2 Optimize relevance, value, and authenticity</p> <ul style="list-style-type: none"> • Vary activities and sources of information so they can be: <ul style="list-style-type: none"> ○ Personalized and contextualized to learners’ lives ○ Culturally relevant and sustaining ○ Socially relevant ○ Age and ability appropriate ○ Appropriate for different racial, cultural, ethnic, and gender groups • Design activities so learning outcomes are authentic, communicate to real audiences, and reflect a purpose that is clear to the participants. • Provide tasks that allow for active participation, exploration, and experimentation. <p>Representation 3.1 Connect prior knowledge to new learning</p> <ul style="list-style-type: none"> • Anchor instruction by linking to and activating relevant prior knowledge (e.g., using visual imagery, concept anchoring, or concept mastery routines). • Use advanced organizers (e.g., KWL methods, concept maps). • Pre-teach critical prerequisite concepts through demonstration or models. <p>Action & Expression 5.2 Use multiple tools for construction, composition, and creativity</p> <ul style="list-style-type: none"> • Use sentence starters or sentence strips. • Use virtual or concrete mathematics manipulatives (e.g., base-10 blocks, algebra blocks). 	<p>See Illustrative Math Teachers Guide for identified “Access for Students with Disabilities” by lesson and activity.</p>	

Supporting Multilingual/English Learners

Related *CELP standards:*

Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can represent whole numbers within 100 as lengths from 0 on a number line.	I can explain that numbers show the distance from 0 with support.	I can explain that the number shows the distance from 0 using simple vocabulary.	I can explain that a number represents its distance from 0 using math vocabulary.
I can represent sums and differences on a number line.	I can represent addition on a number line by moving forward and subtraction by moving backward using simple gestures, pointing or my native language.	I can represent addition on a number line by moving forward and subtraction by moving backward using simple sentences and pictures.	I can represent sums and differences on a number line and explain how my jumps show the sum or difference.
I can represent and solve a variety of word problems using addition and subtraction.	I can solve addition and subtraction word problems and use simple words, pictures or gestures to explain my thinking.	I can solve addition and subtraction word problems and explain my thinking using simple sentences, sentence frames or some math vocabulary.	I can solve addition and subtraction word problems and explain my thinking using math vocabulary.

Lesson Sequence

Learning Target and Success Criteria

[Unit 4 Planning Map](#)

Section A	<p>Learning Targets: <i>I can represent whole numbers within 100 as lengths from 0 on a number line.</i></p> <p>Success Criteria:</p> <p>Lesson 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create a number line and describe (orally) its features. <input type="checkbox"/> Represent whole numbers by drawing points and labeling tick marks on a number line. <p>Lesson 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe (orally) the structure of a number line. <input type="checkbox"/> Explain how to revise a number line. <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) how to locate a whole number on a number line that does not label each number. <input type="checkbox"/> Interpret (orally) number lines with unlabeled tick marks, including those that do not start at 0. <p>Lesson 4</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) that on the number line numbers “to the right” represent values that are greater than numbers “to the left” represent values that are less than numbers “to the right” <input type="checkbox"/> Use a number line to compare two whole numbers and show the comparison using $>$, $<$, $=$. <p>Lesson 5</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for estimating the location of whole numbers on a number line. <p>Lesson 6</p>
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	<input type="checkbox"/> Identify (orally) and represent whole numbers on a number line.
Section B	<p>Learning Targets: <i>I can represent sums and differences on a number line.</i></p> <p><i>I can represent and solve a variety of word problems using addition and subtraction.</i></p> <p>Success Criteria:</p> <p>Lesson 7 <input type="checkbox"/> Match (orally and in writing) addition and subtraction expressions and number line diagrams.</p> <p>Lesson 8 <input type="checkbox"/> Create equations to represent number line diagrams that show addition and subtraction. <input type="checkbox"/> Represent addition and subtraction on a number line diagram.</p> <p>Lesson 9 <input type="checkbox"/> Represent strategies for finding an unknown difference using a number line diagram.</p> <p>Lesson 10 <input type="checkbox"/> Use a number line to represent addition and subtraction strategies based on place value (that do not require composing or decomposing a ten).</p> <p>Lesson 11 <input type="checkbox"/> Explain (using words or other representations) addition and subtraction strategies that may involve composing or decomposing a ten.</p> <p>Lesson 12 <input type="checkbox"/> Represent addition and subtraction situations using the number line and equations with a symbol for the unknown.</p> <p>Lesson 13 <input type="checkbox"/> Represent and solve (Add To) story problems with an unknown in all positions.</p> <p>Lesson 14 <input type="checkbox"/> Represent addition and subtraction within 100 on a number line.</p>

Unit Title:	
Unit 5: Numbers to 1,000	
Unit Narrative	
<p>In this unit, students extend their knowledge of the units in the base-ten system to include hundreds. In grade 1, students learned that a ten is a unit made up of 10 ones, and two-digit numbers are formed using units of tens and ones. In this unit, students learn that a hundred is a unit made up of 10 tens, and three-digit numbers are formed using units of hundreds, tens, and ones. To make sense of numbers in different ways and to build flexibility in reasoning with them, students work with a variety of representations: base-ten blocks, base-ten diagrams or drawings, number lines, expressions, and equations. At the start of the unit, students express a quantity in terms of the number of units represented by base-ten blocks (3 hundreds, 14 tens, 22 ones). They practice composing larger units from smaller units and representing the value using the fewest number of each unit (4 hundreds, 6 tens, 2 ones). They connect the number of units to three-digit numerals (462). Next, students make sense of three-digit numbers on the number line. In a previous unit, students learned about the structure of the number line by representing whole numbers within 100 as lengths from 0. They get a sense of the relative distance of whole numbers within 1,000 from 0. Students learn to count to 1,000 by skip-counting on a number line by 10 and 100. They also locate, compare, and order three-digit numbers on a number line. Throughout the unit, the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 are referred to as multiples of 100. The same is true for multiples of 10. “Multiple” is not a word that students are expected to understand or use in grade 2. Students can describe the numbers as a number of tens or hundreds, such as “20 tens” or “3 hundreds.”</p>	
Relevant Standards: Bold indicates priority	
<p><u>2.NBT.A.1</u> Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.</p> <p>a) 100 can be thought of as a bundle of ten tens - called a “hundred.”</p> <p>b) 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).</p> <p><u>2.NBT.A.2</u> Count within 1000; skip-count by 5s, 10s, and 100s.</p> <p><u>2.NBT.A.3</u> Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</p> <p><u>2.NBT.A.4</u> Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.</p> <p><u>2.NBT.B.5</u> Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p><u>2.NBT.B.8</u> Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p> <p><u>2.MD.B.6</u> 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.</p>	
Essential Questions	Enduring Understanding(s):
<ul style="list-style-type: none"> • How is our number system organized? • How can understanding place value help us? • How can we compare numbers to understand which is greater or less? 	<ul style="list-style-type: none"> • Our number system is a base-ten system. Any group of 10 in a given place value can be represented as one in the next greater place value (10 ones is 1 ten, 10 tens is 1 hundred). • Understanding place value enables us to represent, compare and order numbers and perform computations.

	<ul style="list-style-type: none"> • The digit in the ones place will remain the same when finding 10 more or 10 less. • The digits in the tens place and the ones place will remain the same when finding 100 more or 100 less. • Number lines can help us visualize the magnitude of a number as the distance from zero. • We can use symbols ($<$, $>$, $=$) to show relationships between numbers. 																								
Demonstration of Learning:	Pacing for Unit																								
CFA 1: Lesson 3 CFA 2: Lesson 5 CFA 3: Lesson 6 CFA 4: Lesson 8 CFA 5: Lesson 11 CFA 6: Lesson 12 Checkpoints Unit Assessment	Unit Pacing: 19 days (11 required lessons, 6 flex, 2 assessment and reaction)																								
Family Overview (link below)	Integration of Technology:																								
Unit 5 Family Support Video Unit 5 Family Support Materials (all languages)	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>																								
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):																								
<table border="1" data-bbox="105 1218 795 1711"> <tr> <td>bar graph</td> <td>equation</td> <td>ones</td> </tr> <tr> <td>centimeter</td> <td>expanded form</td> <td>picture graph</td> </tr> <tr> <td>compare</td> <td>foot</td> <td></td> </tr> <tr> <td>compose</td> <td>hundred</td> <td></td> </tr> <tr> <td>data</td> <td>inch</td> <td></td> </tr> <tr> <td>decompose</td> <td>line plot</td> <td></td> </tr> <tr> <td>difference</td> <td>meter</td> <td></td> </tr> <tr> <td>digit</td> <td>number line</td> <td></td> </tr> </table> <p>*Bold - Appears in student glossary for IM Unit 5</p>	bar graph	equation	ones	centimeter	expanded form	picture graph	compare	foot		compose	hundred		data	inch		decompose	line plot		difference	meter		digit	number line		ST Math District - approved online resources
bar graph	equation	ones																							
centimeter	expanded form	picture graph																							
compare	foot																								
compose	hundred																								
data	inch																								
decompose	line plot																								
difference	meter																								
digit	number line																								

Opportunities for Interdisciplinary Connections:	Anticipated Conceptions:	
<p>ELA: Students can write numbers in word form and explain their thinking in math journals.</p> <p>Read math stories and review math vocabulary to strengthen students' understanding of vocabulary words.</p> <p>Science: Count animals in a habitat (bird counts, insect collections) and create story problems to solve. "If there are 243 birds in one forest and 156 in another, how many are there altogether?"</p> <p>Students can read and compare three-digit numbers while learning about ecosystems.</p> <p>Social Studies: Use three-digit numbers in a simple classroom store or market scenario. Price items in the hundreds (cents to dollars).</p> <p>Art: Create place value pictures using hundreds, tens, and ones.</p> <p>PE: Count and compare reps, steps, or scores. Compare numbers using the vocabulary terms "greater than, less than, or equal to."</p>	<p>Some students may not move beyond thinking of the number 358 as 300 ones plus 50 ones plus 8 ones to the concept of 8 ones, 5 tens and 3 hundreds.</p> <p>Students may use place value blocks incorrectly assuming the value of each block is one instead of using the values hundreds, tens, or ones.</p> <p>Students may mistakenly use bigger than or smaller than rather than greater than or less than when comparing numbers.</p> <p>Students may count the lines on a number line instead of counting the spaces to represent a number.</p>	
Connections to Prior Units: Dependency Diagram	Connections to Future Units:	
1.4 Numbers to 99	2.7 Adding and Subtracting within a 1,000	
Differentiation through Universal Design for Learning		
UDL Indicator	Teacher Actions:	
<p>Engagement 8.3 Foster collaboration, interdependence, and collective learning</p> <ul style="list-style-type: none"> • Create community agreements that emphasize learners' ideas for fostering collaboration, interdependence, and collective learning. • Create teams with clear goals, roles, expectations, and responsibilities. • Encourage questions to more fully understand concepts, ideas, and perspectives. <p>Representation 3.3 Cultivate multiple ways of knowing and making meaning</p> <ul style="list-style-type: none"> • Incorporate multiple ways of knowing, including storytelling, kinesthetics, problem solving, and relational learning through interpersonal experiences. • Use explicit prompts for each step in a sequential process to help learners develop a logical flow specific for their understanding and create a structure of complex tasks. • Use options for organizational methods and approaches (e.g., tables and 	<p>See Illustrative Math Teachers Guide for identified "Access for Students with Disabilities" by lesson and activity.</p>	

algorithms for processing mathematical operations), supporting the various cognitive approaches and enhancing comprehension .

- “Chunk” information into smaller elements, helping to prevent cognitive overload.

Action & Expression 5.2 Use multiple tools for construction, composition, and creativity

- Use sentence starters or sentence strips.
- Use virtual or concrete mathematics manipulatives (e.g., base-10 blocks, algebra blocks).

Supporting Multilingual/English Learners

Related *CELP standards*:

Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can read, write and represent numbers to 1,000.	I can read, write and represent numbers to 1,000 using gestures, pictures or my native language.	I can read, write and represent numbers to 1,000 using pictures, simple words and sentences.	I can read, write and represent numbers to 1,000 using math vocabulary and sentences.
I can compare and order three-digit numbers.	I can compare three-digit numbers using gestures, pictures or my native language.	I can compare three-digit numbers using pictures, simple words and sentences.	I can compare three-digit numbers using math vocabulary and sentences.
I can represent whole numbers up to 1,000 as lengths from 0 on a number line.	I can explain that numbers show the distance from 0 with support.	I can explain that the number shows the distance from 0 using simple vocabulary.	I can explain that a number represents its distance from 0 using math vocabulary.

Lesson Sequence	Learning Target and Success Criteria
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[Unit 5 Planning Map](#)

Section A	<p>Learning Targets: <i>I can read, write and represent numbers to 1,000.</i></p> <p>Success Criteria:</p> <p>Lesson 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for representing 100 with the greatest and fewest number of tens and ones. <p>Lesson 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe (orally) how tens and hundreds can represent the same number. <input type="checkbox"/> Represent multiples of 10 and 100 using base-ten blocks and base-ten diagrams. <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Represent a number within 1,000 in different ways (using words, numbers, pictures). <input type="checkbox"/> Represent a three-digit number using the fewest number of each unit.
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	<p>Lesson 4</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create a three-digit number given the number of hundreds, tens, and ones. <input type="checkbox"/> Describe (orally) relationships between the amount of each unit and the value written as a three-digit number. <p>Lesson 5</p> <ul style="list-style-type: none"> <input type="checkbox"/> Represent a three-digit number in expanded form. <p>Lesson 6</p> <ul style="list-style-type: none"> <input type="checkbox"/> Represent the same three-digit number in multiple ways. (including number names, expanded form, base-ten numerals, and a base-ten diagram)
<p>Section B</p>	<p>Learning Targets:</p> <p><i>I can compare and order three-digit numbers.</i></p> <p><i>I can represent whole numbers up to 1,000 as lengths from 0 on a number line.</i></p> <p>Success Criteria:</p> <p>Lesson 8</p> <ul style="list-style-type: none"> <input type="checkbox"/> Represent whole numbers up to 1,000 as lengths from 0 on a number line. <p>Lesson 9</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare 2 three-digit numbers using a number line. <input type="checkbox"/> Explain (orally) strategies for comparing three-digit numbers. <input type="checkbox"/> Use the symbols, $<$, $>$, and $=$ to compare three-digit numbers. <p>Lesson 10</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) how to use base-ten diagrams to compare three-digit numbers. <p>Lesson 11</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) methods for comparing three-digit numbers based on place value. <p>Lesson 12</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for ordering three-digit numbers based on place value understanding and their location on the number line.

Unit Title:	
Unit 6: Geometry, Time and Money	
Unit Narrative	
<p>In this unit, students transition from place value and numbers to geometry, time, and money. In grade 1, students distinguished between defining and nondefining attributes of shapes, including triangles, rectangles, trapezoids, and circles. Here, they continue to look at attributes of a variety of shapes and see that shapes can be identified by the numbers of sides and vertices (corners). Students then study three-dimensional (solid) shapes, and identify the two-dimensional (flat) shapes that make up the faces of these solid shapes. Next, students look at ways to partition shapes and create equal shares. They extend their knowledge of halves and fourths (or quarters) from grade 1 to now include thirds. Students compose larger shapes from smaller equal-size shapes and partition shapes into two, three, and four equal pieces. As they develop the language of fractions, students also recognize that a whole can be described as two halves, three thirds, or four fourths, and that equal-size pieces of the same whole need not have the same shape. Later, students use their understanding of halves and fourths (or quarters) to tell time. In grade 1, they learned to tell time to the half hour. Here, they relate a quarter of a circle to the features of an analog clock. They use “quarter past” and “quarter till” to describe time, and skip-count to tell time in 5-minute intervals. They also learn to associate the notations “a.m.” and “p.m.” with their daily activities. To continue to build fluency with addition and subtraction within 100, students conclude the unit with a money context. They skip-count, count on from the greatest value, and group like coins, and then add or subtract to find the value of a set of coins. Students also solve one- and two-step story problems involving sets of dollars and different coins, and use the symbols \$ and ¢.</p>	
Relevant Standards: Bold indicates priority	
<p>2.G.A.1 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.</p> <p>2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p> <p>2.G.A.3 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.</p> <p>2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p> <p>2.MD.C.8 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?</p> <p>2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.</p> <p>2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> • How can polygons be described and classified? • How does partitioning help us reason about shapes? • How are clocks useful? • How can we determine the value of coins and bills? • How can we represent a given amount of money? 	<ul style="list-style-type: none"> • Polygons can be described and classified using attributes, such as number of sides and angles. • Partitioning a shape into smaller parts allows us to describe the shape in different ways. • Clocks help us keep track of time and plan and sequence events. • Specific coins and bills each have a unique value that is determined by their markings. The size and color do not indicate a coin's value.

- A given amount of money can often be generated using different combinations of coins and bills, but the value will remain the same.

Demonstration of Learning:

Pacing for Unit

CFA 1: **Lesson 1**
 CFA 2: **Lesson 3**
 CFA 3: **Lesson 8**
 CFA 4: **Lesson 9**
 CFA 5: **Lesson 12**
 CFA 6: **Lesson 13**
 CFA 7: **Lesson 18**
 CFA 8: **Lesson 19**
 Checkpoints
 Unit Assessment

Unit Pacing: 26 days (16 required lessons, 6 optional lessons, 2 flex, 2 assessment and reaction)

Family Overview (link below)

Integration of Technology:

[Unit 6 Family Support Video](#)
[Unit 6 Family Support Materials \(all languages\)](#)

Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning

Unit-specific Vocabulary:

Aligned Unit Materials, Resources, and Technology (beyond core resources):

AM	equation	pentagon
A fourth of	estimate	penny
A third of	expression	place value
addition	face	quadrilateral
analog	feet/foot	rectangle
angle	fourths	relationship
attribute	halves	rhombus
centimeter	half of	row
circle	hands	ruler
clock	hexagon	skip count
column	hour	subtraction
compose	inch	symbols : \$ ¢
cube	length	thirds
cents	measure	time
decompose	meter	triangles

ST Math
 District - approved online resources

digital	minute	unit
dime	nickel	unknown
dollar	operations	whole
equal	PM	
equal shares	partition	

***Bold** - Appears in student glossary for IM Unit 6

Opportunities for Interdisciplinary Connections:

ELA

Read stories, such as *Alexander, Who Used to Be Rich Last Sunday*, and create/solve money story problems.

Connect *Flyleaf* and *Geode* texts to time (Garden Study, Seed Stash, Daytime Darkness, Finch Study) and geometric shapes found in nature

Science

Find shapes in flowers, snowflakes, spiderwebs, and honeycombs.

Identify solid shapes in nature (spheres, cubes, cylinders).

Check weather/temperature at different times of day

Social Studies

Identify shapes in community buildings and architecture.

Study geometric patterns in cultural quilts and textiles

Compare coins and currency from different countries.

Create timelines for school events and milestones.

Explore fair sharing: divide food, playground equipment, and class jobs equally

Art

Create tangram pictures and pattern block tessellations.

Create shape collages from magazines. Label sides and corners

Create rubbings of coins to notice details and symbols

Anticipated Conceptions:

Some students might confuse the hour and minute hands. For the time of 3:45, they may say the time is 9:15. Also, some students name the numeral closest to the hands, regardless of whether this is appropriate. For instance, for the time of 3:45 they say the time is 3:09 or 9:03.

Students may attempt to maneuver the minute or hour hands counterclockwise. An example would be rotating the minute hand from 12 to 9 to show the minute as :45 instead of going around completely.

Students might count coins as individual objects. Also some students think that the value of a coin is directly related to its size, so the bigger the coin, the more it is worth.

The colors of the coins may confuse the students as well as any combination of older money vs the examples from the text. Examples to help would be to discuss the key features on each coin. Dime says 'dime' while the Nickel has a building on the back of it.

Students may confuse quarter hours with monetary quarters stating that there are either 100 minutes in an hour or 60 cents in a dollar.

Some students may think that a shape is named differently due to its orientation. They may see a rectangle with the longer side as the base, but claim that the same rectangle with the shorter side as the base is a different shape.

Students may believe that a shape divided into three parts represents thirds even though they are not equal parts.



Connections to Prior Units: Dependency Diagram		Connections to Future Units:	
1.7 Geometry and Time 2.2 Adding and Subtracting within 100		3.5 Fractions as Numbers 3.7 Two-dimensional Shapes and Perimeter	
Differentiation through Universal Design for Learning			
UDL Indicator		Teacher Actions:	
<p>Engagement 8.5 Offer action-oriented feedback</p> <ul style="list-style-type: none"> Offer feedback that encourages perseverance, focuses on development of efficacy and self-awareness, and encourages the use of specific supports and strategies in the face of challenge. Offer feedback that emphasizes effort, improvement, and achieving a goal rather than on relative performance.) <p>Representation 2.1 Clarify vocabulary, symbols, and language structures</p> <ul style="list-style-type: none"> Pre-teach vocabulary and symbols, especially in ways that promote connection to the learners’ experience and prior knowledge. Offer graphic symbols with alternative text descriptions. Highlight how complex terms, expressions, or equations are composed of simpler words or symbols. <p>Action and Expression 6.3 Organize information and resources</p> <ul style="list-style-type: none"> Use graphic organizers and templates for data collection and organizing information. Use prompts for categorizing, systematizing, and discovering themes and patterns. Use checklists and guides for note-taking. 		See Illustrative Math Teachers Guide for identified “Access for Students with Disabilities” by lesson and activity.	
Supporting Multilingual/English Learners			
Related CELP standards:			
Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can identify and draw shapes with specific attributes.	I can name and draw shapes with specific attributes using gestures, sentence frames and/or my native language.	I can name and draw shapes with specific attributes using simple words.	I can name and draw shapes with specific attributes using math vocabulary.
I can partition shapes into halves, thirds and fourths.	I can partition shapes into equal parts and explain my thinking with prompting and support.	I can partition shapes into equal parts and explain my thinking using simple sentences and words.	I can partition shapes into equal parts and explain my thinking using math vocabulary.
I can identify and describe halves, thirds and fourths.	I can identify and describe halves, thirds and fourths and explain my thinking with prompting and support.	I can identify and describe halves, thirds and fourths and explain my thinking using simple sentences and words.	I can identify and describe halves, thirds and fourths and explain my thinking using math vocabulary.
I can tell time to the nearest five minutes.	I can tell time to the nearest 5 minutes using gestures, sentence frames and/or my native	I can tell time to the nearest 5 minutes using simple sentences and words.	I can tell time to the nearest 5 minutes using math vocabulary.

	language.		
I can determine the value of a collection of coins.	I can determine the value of a collection of coins with prompting and support.	I can determine the value of a collection of coins using simple words and sentences.	I can determine the value of a collection of coins using math vocabulary.
I can represent and solve a variety of word problems using addition and subtraction.	I can solve addition and subtraction word problems and use simple words, pictures or gestures to explain my thinking.	I can solve addition and subtraction word problems and explain my thinking using simple sentences, sentence frames or some math vocabulary.	I can solve addition and subtraction word problems and explain my thinking using math vocabulary.

Lesson Sequence	Learning Target and Success Criteria
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[Unit 6 Planning Map](#)

Section A	<p>Learning Targets: <i>I can identify and draw shapes with specific attributes.</i></p> <p>Success Criteria:</p> <p>Lesson 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe (orally) the attributes of triangles, quadrilaterals, pentagons and hexagons. <p>Lesson 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Draw and identify (orally and in writing) shapes that have a given number of sides or corners. <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe (orally) the attributes of shapes and name (orally and in writing) quadrilaterals, pentagons, and hexagons. <input type="checkbox"/> Identify (orally and in writing) shapes that have given side lengths and draw shapes with specific side lengths.
Section B	<p>Learning Targets: <i>I can partition shapes into halves, thirds and fourths.</i></p> <p><i>I can identify and describe halves, thirds and fourths.</i></p> <p>Success Criteria:</p> <p>Lesson 6</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create a shape composed of equal sized smaller shapes and identify (orally and in writing) the shapes <p>Lesson 7</p> <ul style="list-style-type: none"> <input type="checkbox"/> Partition rectangles and circles into halves, thirds, and fourths. <input type="checkbox"/> Explain (orally) strategies for creating equal-sized parts. <p>Lesson 8</p> <ul style="list-style-type: none"> <input type="checkbox"/> Partition circles and rectangles into “halves,” “thirds,” and “fourths” and name the equal-sized piece. <input type="checkbox"/> Explain (orally) how equal parts of the same whole can look different but still be the same size and have the same name. <p>Lesson 9</p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe (orally) an equal sized piece using the phrases “half of,” “a third of,” and “a quarter

	<p>of” a shape.</p> <p><input type="checkbox"/> Describe (orally) two halves, three thirds, and four fourths as one “whole”.</p>
<p>Section C</p>	<p>Learning Targets: <i>I can tell time to the nearest five minutes.</i></p> <p>Success Criteria:</p> <p>Lesson 11</p> <p><input type="checkbox"/> Determine (orally) the time shown on an analog clock (15- and 30-minute intervals).</p> <p>Lesson 12</p> <p><input type="checkbox"/> Determine (orally and in writing) the time on a clock to the nearest 5 minutes, and explain (orally) a strategy for telling time.</p> <p>Lesson 13</p> <p><input type="checkbox"/> Explain (orally) how to determine if a time should be labeled as “a.m.” or “p.m.”</p>
<p>Section D</p>	<p>Learning Targets: <i>I can determine the value of a collection of coins.</i></p> <p><i>I can represent and solve a variety of word problems using addition and subtraction.</i></p> <p>Success Criteria:</p> <p>Lesson 15</p> <p><input type="checkbox"/> Identify the symbol “¢” for cents.</p> <p><input type="checkbox"/> Identify (orally and in writing) the names of coins and explain (orally) a strategy for finding the value of a collection of coins.</p> <p>Lesson 16</p> <p><input type="checkbox"/> Represent (using words or other formats) collections of coins that have the same value.</p> <p>Lesson 17</p> <p><input type="checkbox"/> Identify the symbol “\$” for dollars.</p> <p><input type="checkbox"/> Recognize a dollar as a unit of money with the same value as 100 cents.</p> <p><input type="checkbox"/> Find the value of a collection of coins that has a value greater than 100 cents.</p> <p><input type="checkbox"/> Represent an amount of money given as a dollar and some cents by drawing collections of bills and coins.</p> <p>Lesson 18</p> <p><input type="checkbox"/> Explain (orally) strategies for solving (Add To and Take From) story problems involving money.</p> <p>Lesson 19</p> <p><input type="checkbox"/> Explain (orally) strategies for solving two-step (Put Together/Take Apart and Compare) story problems.</p> <p><input type="checkbox"/> Match (orally) diagrams and story problems</p> <p>Lesson 20</p> <p><input type="checkbox"/> Solve two-step story problems (within 100) and explain (orally) strategies for determining if an answer is reasonable.</p>

Unit Title:	
Unit 7: Adding and Subtracting within 1,000	
Unit Narrative	
<p>In this unit, students add and subtract within 1,000, with and without composing and decomposing a base-ten unit. Previously, students added and subtracted within 100, using methods such as counting on, counting back, and composing or decomposing a ten. Here, they apply the methods they know and their understanding of place value and three-digit numbers to find sums and differences within 1,000. Initially, students add and subtract, without composing or decomposing a ten or a hundred. Instead, they rely on methods based on the relationship between addition and subtraction and the properties of operations. They make sense of sums and differences, using counting sequences, number relationships, and representations (number lines, base-ten blocks, base-ten diagrams, and equations). As the unit progresses, students work with numbers that prompt them to compose and decompose one or more units, eliciting strategies based on place value. When adding and subtracting by place, students first compose or decompose only a ten, then either a ten or a hundred, and finally both a ten and a hundred. They also make sense of and connect different ways to represent place-value strategies. For example, students make sense of a written method for subtracting 145 from 582 by connecting it to a base-ten diagram and their experiences with base-ten blocks. Students learn to recognize when composition or decomposition is a useful strategy for adding or subtracting by place. In the later half of the unit, they encounter lessons that encourage them to think flexibly and to use strategies that make sense to them, based on number relationships, properties of operations, and the relationship between addition and subtraction.</p>	
Relevant Standards: Bold indicates priority	
<p><u>2.NBT.A.1</u> Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.</p> <p><u>2.NBT.A.2</u> Count within 1000; skip-count by 5s, 10s, and 100s.</p> <p><u>2.NBT.A.3</u> Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</p> <p><u>2.NBT.A.4</u> Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p> <p><u>2.NBT.B.5</u> Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p><u>2.NBT.B.6</u> Add up to four two-digit numbers using strategies based on place value and properties of operations.</p> <p><u>2.NBT.B.7</u> 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.</p> <p><u>2.NBT.B.8</u> Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p> <p><u>2.NBT.B.9</u> Explain why addition and subtraction strategies work, using place value and the properties of operations.</p> <p>2.MD.D.10 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.</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> How is our number system organized? How can understanding place value help us? 	<ul style="list-style-type: none"> Our number system is a base-ten system. Any group of 10 in a given place value can be represented as one in the next greater place value (10 ones is 1 ten, 10 tens is 1 hundred).

<ul style="list-style-type: none"> • How do the properties of operations make computation simpler? 	<ul style="list-style-type: none"> • Understanding place value enables us to represent, compare and order numbers and perform computations. • Properties of operations allow us to reorder, decompose and/or compose numbers in order to make computation simpler. • Subtraction is the opposite of or “undoes” addition. • The digit in the ones place will remain the same when finding 10 more or 10 less. • The digits in the tens place and the ones place will remain the same when finding 100 more or 100 less. 															
Demonstration of Learning:	Pacing for Unit															
CFA 1: Lesson 2 CFA 2: Lesson 3 CFA 3: Lesson 10 CFA 4: Lesson 16 Checkpoints Unit Assessment	Unit Pacing: 23 days (14 required lessons, 7 flex, 2 assessment and reaction)															
Family Overview (link below)	Integration of Technology:															
Unit 7 Family Support Video Unit 7 Family Support Materials (all languages)	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>															
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):															
<table border="1" data-bbox="110 1283 794 1591"> <tr> <td>addition</td> <td>equation</td> <td>sum</td> </tr> <tr> <td>addend</td> <td>expression</td> <td>symbol</td> </tr> <tr> <td>compose</td> <td>fewer</td> <td>value</td> </tr> <tr> <td>decompose</td> <td>more</td> <td></td> </tr> <tr> <td>difference</td> <td>subtract</td> <td></td> </tr> </table> <p>*Bold - Appears in student glossary for IM Unit 7</p>	addition	equation	sum	addend	expression	symbol	compose	fewer	value	decompose	more		difference	subtract		ST Math District - approved online resources
addition	equation	sum														
addend	expression	symbol														
compose	fewer	value														
decompose	more															
difference	subtract															
Opportunities for Interdisciplinary Connections:	Anticipated Conceptions:															
ELA Students write and illustrate addition/subtraction word problems with real classroom contexts (pets, toys, siblings). Emphasize story problem language: "Add to," "Take from," "Compare."	Students may not have a conceptual understanding of place value so that they would think 234 is 2+3+4 rather than 200+30+4 and may not see the relevance of the zeros. Students may not have a conceptual understanding of															

<p>Science Collect data from science experiments and solve addition and subtraction problems using the data.</p> <p>Social Studies Noticing years between events, identifying different historic dates and solving problems using this information.</p> <p>PE Keep track of the score in games (basketball, soccer) and create and solve story problems using the data.</p>	<p>place value so they would think $561 - 147 = 426$, because they subtract the 7 in 147 from the 1 in 561 instead of regrouping.</p> <p>When adding three-digit numbers, students may not know what to do with newly composed tens or hundreds. They may try to write both digits in a single place or ignore the newly composed units.</p> <p>When subtracting three-digit numbers, students may not correctly decompose from a higher place value.</p> <p>When students are composing a new ten or hundred, students may miss the composed number when counting to get their final answer.</p>
<p>Connections to Prior Units: Dependency Diagram</p>	<p>Connections to Future Units:</p>
<p>2.2 Adding and Subtracting Within 100 2.5 Numbers to 1,000</p>	<p>3.3 Wrapping Up Addition and Subtraction Within a 1,000</p>
<p>Differentiation through Universal Design for Learning</p>	
<p>UDL Indicator</p>	<p>Teacher Actions:</p>
<p>Engagement 8,2 Optimize challenge and support</p> <ul style="list-style-type: none"> • Presume competence and nurture a belief in the capabilities of every learner. • Offer options with varying modes of complexity or difficulty. • Offer options for tools and scaffolds that align with the learning goal and promote agency. • Emphasize process, effort, and progress in meeting standards as alternatives to external evaluation and competition. <p>Representation 2.1 Clarify vocabulary, symbols, and language structures</p> <ul style="list-style-type: none"> • Pre-teach vocabulary and symbols, especially in ways that promote connection to the learners' experience and prior knowledge. • Offer graphic symbols with alternative text descriptions. • Highlight how complex terms, expressions, or equations are composed of simpler words or symbols <p>Action & Expression 5,4 Enhance capacity for monitoring progress</p> <ul style="list-style-type: none"> • Use prompts to guide self-monitoring and reflection. • Use representations of progress (e.g., before-and-after photos, graphs and charts showing progress over time, process portfolios). • Explore the different types of feedback that are most useful according to specific preferences, goals, and contexts. • Use templates that guide self-reflection on quality and completeness. 	<p>See Illustrative Math Teachers Guide for identified "Access for Students with Disabilities" by lesson and activity.</p>

Supporting Multilingual/English Learners

Related *CELP standards:*

Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can add and subtract within 1,000 using a variety of strategies.	I can add and subtract within 1,000 and explain my thinking with support.	I can add and subtract within 1,000 and explain my thinking using simple words and sentences.	I can add and subtract within 1,000 and explain my thinking using math vocabulary.

Lesson Sequence

Learning Target and Success Criteria

[Unit 7 Planning Map](#)

Section A	<p>Learning Targets: <i>I can add and subtract within 1,000 using a variety of strategies.</i></p> <p>Success Criteria:</p> <p>Lesson 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify (orally and in writing) unknown numbers that complete a count by 10 or 100. <p>Lesson 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Represent adding and subtracting multiples of 10 or 100 with base-ten blocks, base-ten diagrams and equations. <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for finding the value of an unknown addend (within 1,000). <p>Lesson 4</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare (orally) methods for adding and subtracting within 1,000 (that do not include composing or decomposing units when adding by place). <input type="checkbox"/> Use different strategies to find sums and differences (within 1,000) and show your thinking.
Section B	<p>Learning Targets: <i>I can add and subtract within 1,000 using a variety of strategies.</i></p> <p>Success Criteria:</p> <p>Lesson 6</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) how to determine whether a ten will be composed when adding (a three-digit number and a two-digit number by place). <input type="checkbox"/> Find sums within 1,000, and describe (orally) patterns in the digits when a ten is composed. <p>Lesson 7</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally and using other representations) how to determine whether a ten or a hundred will be composed when adding (within 1,000). <input type="checkbox"/> Explain (orally) strategies for adding a three-digit number and a two-digit number. <p>Lesson 8</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare (orally) strategies for adding within 1,000. <input type="checkbox"/> Explain (orally) strategies for adding two-digit and three-digit numbers (including composing two units). <p>Lesson 9</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare (orally and in writing) strategies for adding three-digit numbers. <input type="checkbox"/> Explain (orally) strategies for adding two-digit and three-digit numbers (including composing two units). <p>Lesson 10</p>

	<ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for finding the value of an unknown addend (within 1,000). <input type="checkbox"/> Explain (orally) strategies for adding two-digit and three-digit numbers (including composing two units).
<p>Section C</p>	<p>Learning Targets: <i>I can add and subtract within 1,000 using a variety of strategies.</i></p> <p>Success Criteria:</p> <p>Lesson 12</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) how to use base-ten blocks to represent subtraction (within 1,000, including when a unit will be decomposed). <input type="checkbox"/> Explain (orally) strategies for subtracting within 1,000 (when a ten would be decomposed when subtracting by place). <p>Lesson 13</p> <ul style="list-style-type: none"> <input type="checkbox"/> Interpret (orally) base-ten diagrams that represent subtraction strategies (based on place value). <input type="checkbox"/> Use place-value strategies to subtract within 1,000 (when a ten or a hundred is decomposed), and explain (orally) the strategy. <p>Lesson 14</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for subtracting (a two-digit number from a three-digit number, based on place value). <input type="checkbox"/> Explain (orally) how to determine when one or more units will be decomposed when subtracting (by place). <p>Lesson 15</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for subtracting 2 three-digit numbers (that include decomposing two units). <input type="checkbox"/> Interpret (orally and using other representations) a written method for subtracting by place (that includes decomposing two units). <p>Lesson 16</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for subtracting within 1,000 (based on place value or the properties of operations). <input type="checkbox"/> Interpret (orally) subtraction strategies (based on place value and the properties of operations).

Unit Title:	
Unit 8: Equal Groups	
Unit Narrative	
<p>In this unit, students develop an understanding of equal groups, building on their experiences with skip-counting and with finding the sums of equal addends. The work here serves as the foundation for multiplication and division in grade 3 and beyond. Students begin by analyzing even and odd numbers of objects. They learn that any even number can be split into 2 equal groups or into groups of 2, with no objects left over. Students use visual patterns to identify whether numbers of objects are even or odd. Next, students learn about rectangular arrays. They describe arrays using mathematical terms, such as “rows” and “columns.” Students see the total number of objects as a sum of the objects in each row and as a sum of the objects in each column, which they express by writing equations with equal addends. Students also recognize that there are many ways of seeing the equal groups in an array. Later, students transition from working with arrays that contain discrete objects to equal-size squares within a rectangle. Students build rectangular arrays using inch tiles and partition rectangles into rows and columns of equal-size squares. The work here sets the stage for the concept of area in grade 3.</p>	
Relevant Standards: Bold indicates priority	
<p>2.OA.C.3 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.</p> <p>2.OA.C.4 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.</p> <p>2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p> <p>2.OA.B.2 Fluently add and subtract within 20 using mental strategies. nBy end of Grade 2, know from memory all sums of two one-digit numbers. See standard 1.OA.6 for a list of mental strategies.</p> <p>2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.</p>	
Essential Question(s):	Enduring Understanding(s):
<ul style="list-style-type: none"> • Why is a group of objects odd or even? • How can I represent an array of objects using numbers and symbols? • How does partitioning a rectangle into rows and columns into equal size squares help us reason about shapes? • How can I represent the total number of objects in an array as a sum of equal addends? 	<ul style="list-style-type: none"> • An even number is the sum of two equal addends. • A repeated addition problem can be represented by an array. • Partitioning a shape into smaller equal parts allows us to describe the shape in different ways. • Adding the same number repeatedly to find the total in an array.
Demonstration of Learning:	Pacing for Unit
<p>CFA 1: Lesson 3 CFA 2: Lesson 4 CFA 3: Lesson 9 CFA 4: Lesson 11 Checkpoints Unit Assessment</p>	<p>Unit Pacing: 15 days (10 required lessons, 4 flex, 2 assessment and 1 reaction)</p>

Family Overview (link below)	Integration of Technology:																								
Unit 8 Family Support Video Unit 8 Family Support Materials (all languages)	<i>Intentionally aligned use of digital tools and resources to support acquisition of content, researching, organizing and communicating learning</i>																								
Unit-specific Vocabulary:	Aligned Unit Materials, Resources, and Technology (beyond core resources):																								
<table border="1" data-bbox="110 426 795 831"> <tr> <td>add</td> <td>difference</td> <td>partition</td> <td></td> </tr> <tr> <td>addend</td> <td>equation</td> <td>Rectangular arrays</td> <td></td> </tr> <tr> <td>array</td> <td>equal</td> <td>rows</td> <td></td> </tr> <tr> <td>column</td> <td>even</td> <td>sum</td> <td></td> </tr> <tr> <td>compose</td> <td>fluently</td> <td>strategies</td> <td></td> </tr> <tr> <td>decompose</td> <td>object</td> <td>subtract</td> <td></td> </tr> </table> <p>*Bold - Appears in student glossary for IM Unit 8</p>	add	difference	partition		addend	equation	Rectangular arrays		array	equal	rows		column	even	sum		compose	fluently	strategies		decompose	object	subtract		ST Math District - approved online resources
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Opportunities for Interdisciplinary Connections:	Anticipated Conceptions:																								
<p>ELA: Students can read stories that include grouping, sharing, or arrays (e.g. equal groups in real-life contexts).</p> <p>Science: Students can use arrays and grouping when observing the natural world (e.g. count plant leaves, petals, or seeds in equal groups).</p> <p>PE: Students can form arrays with their bodies (e.g. rows and columns). Students can skip count by clapping or jumping (by 2s, 5s, 10s). Students can pair up to represent odd and even (who has a partner?) numbers.</p> <p>Art: Students can create array art using grids (coloring squares in rows and columns) Students can design pictures using repeated patterns and equal groups.</p>	<p>Students might memorize that even numbers end in 0, 2, 4, 6, 8 or odd numbers end in 1, 3, 5, 7, and 9 but not understand the meaning of evenness. These students may not be able to use objects, drawings, or equations to show why a given amount is odd or even.</p> <p>Students will determine whether a number is odd or even by the first digit in the number instead of the digit in the one's place.</p> <p>Students may confuse the terms row and columns and interchange them when writing a repeated addition sentence. The focus should be on the repeated addition of the representation.</p> <p>Students will create an equation that equals the sum without thinking about the rows and columns in the array.</p>																								
Connections to Prior Units: Dependency Diagram	Connections to Future Units:																								
2.6 Geometry, Time	3.1 Multiplication																								

Differentiation through *Universal Design for Learning*

UDL Indicator

Teacher Actions:

Engagement 7.2 Optimize relevance, value, and authenticity

- Vary activities and sources of information so they can be:
 - Personalized and contextualized to learners' lives
 - Culturally relevant and sustaining
 - Socially relevant
 - Age and ability appropriate
 - Appropriate for different racial, cultural, ethnic, and gender groups
- Design activities so learning outcomes are authentic, communicate to real audiences, and reflect a purpose that is clear to the participants.
- Provide tasks that allow for active participation, exploration, and experimentation.
- Invite personal response, evaluation, and self-reflection to content and activities.

Representation 2.1 Clarify vocabulary, symbols, and language structures

- Pre-teach vocabulary and symbols, especially in ways that promote connection to the learners' experience and prior knowledge.
- Offer graphic symbols with alternative text descriptions.
- Highlight how complex terms, expressions, or equations are composed of simpler words or symbols.

Action and Expression 6.3 Organize information and resources

- Use graphic organizers and templates for data collection and organizing information.
- Use prompts for categorizing, systematizing, and discovering themes and patterns.
- Use checklists and guides for note-taking.

See Illustrative Math Teachers Guide for identified "Access for Students with Disabilities" by lesson and activity.

Supporting Multilingual/English Learners

Related *CELP standards*:

Learning Target	Level 1/Level 2	Level 3	Level 4/Level 5
I can determine whether a number is even or odd and write an equation to justify my answer.	I can tell if a number is even or odd and explain my thinking using gestures, pictures or my native language.	I can tell if a number is even or odd and explain my thinking using simple sentences and words.	I can tell if a number is even or odd and explain my thinking using math vocabulary.
I can represent an array as the sum of equal addends and skip count to find the total.	I can use pictures, objects and numbers to show equal groups in an array and count by the same number to find the total.	I can describe an array using a word bank and explain how skip counting helps find the total.	I can explain how an array shows repeated addition and tell how I found the total.
I can partition a rectangle into rows and columns of same size squares and find the total number of squares in the array.	I can partition a rectangle and explain how to find the total number of squares with prompting and support.	I can partition a rectangle and explain how to find the total number of squares using simple words and sentences.	I can partition a rectangle and explain how to find the total number of squares using math vocabulary.

Lesson Sequence	Learning Target and Success Criteria
Unit 8 Planning Map	
Section A	<p>Learning Targets: <i>I can determine whether a number is even or odd and write an equation to justify my answer.</i></p> <p>Success Criteria:</p> <p>Lesson 1</p> <ul style="list-style-type: none"> <input type="checkbox"/> Determine whether a collection of objects can be arranged into 2 equal groups (with “some leftovers” or “no leftovers”). <input type="checkbox"/> Describe (orally) observations about each category. <p>Lesson 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> Determine whether a collection of objects can be arranged into groups of 2 (or “pairs) with “one leftover” or “no leftovers”. <input type="checkbox"/> Describe (orally) observations about each category. <p>Lesson 3</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for determining whether images show an even or odd number of objects. <p>Lesson 4</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create equations (with two addends) that represent different ways to decompose even and odd numbers.
Section B	<p>Learning Targets: <i>I can represent an array as the sum of equal addends and skip count to find the total.</i></p> <p><i>I can partition a rectangle into rows and columns of same size squares and find the total number of squares in the array.</i></p> <p>Success Criteria:</p> <p>Lesson 7</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create an array and describe (orally) the “rows”. <p>Lesson 8</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create arrays and describe (orally) the “rows” and “columns”. <p>Lesson 9</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain (orally) strategies for finding the total number of objects in an array. <input type="checkbox"/> Match (orally) expressions and arrays that represent the same value. <p>Lesson 10</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create arrays and represent the objects in the array with an equation (with equal addends). <p>Lesson 11</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create rectangles composed of square tiles and describe (orally) the rectangles using math vocabulary. <input type="checkbox"/> Partition rectangles into an array of equal-size squares. <input type="checkbox"/> Explain (orally) how to determine the total number of equal-size squares that make up a rectangle. <p>Lesson 12</p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe (orally and using other representations) rectangles partitioned into equal-size squares using math vocabulary. <input type="checkbox"/> Explain (orally) strategies for partitioning rectangles into arrays of equal-size squares.