

**Big Idea:** Students use models including physical objects, part-part-whole charts, and number lines to develop strategies for adding and subtracting whole numbers building on their previous work with smaller numbers. In kindergarten, they worked with *add to*, *put together*, and *take apart* problem situations in which the answer (total or difference) was unknown. In first grade, students continue to work with problems that exemplify these situations using numbers to 20. Students also begin to work with new situations developing strategies in which the starting number or amount of change is unknown. Finally, students begin to work with comparison problems that are different from previous situations in that they do not imply an action such as putting together or taking apart. Developing an understanding of each situation takes time and should not be rushed. Using concrete models and pictures helps students to consider the actions or meaning of the problem and relate the meaning to mathematical operations. Teaching key words does not help students to develop an understanding of these situations. Rather, by using concrete models and drawing pictures, students can relate their actions to whether the situation calls for addition or subtraction.

Students in first grade continue to explore and make sense out of number combinations to 20, beginning with extending counting strategies to a large range of numbers. Students need experiences with physical counters and ten frames to develop conceptual understanding of strategies prior to drill and practice. Provide a variety of experiences using concrete materials to help students: focus on 10 as a benchmark, identify the property when adding or subtracting 0, adding 1, adding doubles, adding doubles plus one, using the relationship between addition and subtraction, creating equivalent but easier or know sums, and decomposing a number leading to a ten.

Adapted from The Common Core Math Companion (Gojak & Miles, 2015, pg. 34, 47).

**Professional Development Videos:**

[Use Structure to Write Addition Sentences](#)  
[Use Precision in Mathematical Language](#)

**Quarter 1 Fluency Resources:**

[Fluency Resources in Go Math](#)  
[Building Fluency Through Word Problems](#)

[Building Fluency Through Number Talks: Dot Images](#)  
[Building Fluency Through Number Talks: Rekenreks](#)  
[Building Fluency Through Number Talks: Double Ten-Frames](#)  
[Building Fluency Through Number Talks: Number Sentences](#)

**Essential Question:** How can you model adding within 10?

**Standards:** 1.OA.1, 1.OA.3, 1.OA.6

**ELD Standards:**

ELD.PI.1.1-Exchanging information/ideas via oral communication and conversations.

ELD.PI.1.3-Offering opinions and negotiating with/persuading others.

ELD.PI.1.5-Listening actively and asking/answering questions about what was heard.

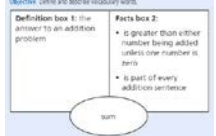

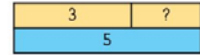
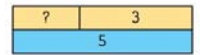

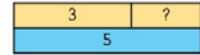
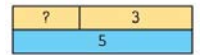
ELD.PI.1.9- Expressing information and ideas in oral presentations.

ELD.PI.1.11- Supporting opinions or justifying arguments and evaluating others' opinions or arguments.

ELD.PI.1.12-Selecting and applying varied and precise vocabulary.

Lesson	Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools <a href="#">Go Math! Teacher Resources G1</a>	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal
1.1 Algebra • Use Pictures to Add to	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 5</a>  Companion Pg. 36	How do pictures show adding to?	Children begin their work with addition at the pictorial level. To reinforce the concept of “adding to”, children count the number of animals in one group and count how many more have been added to the group. Children then write how many.	Any manipulative (linking cube, shapes, bears, etc.)	Draw a picture of 2 flowers. Ask: How many flowers are there? How do you know how many there are? Draw 3 more flowers. Ask students how many flowers there are all together? How does the picture help you solve the problem?	Add to, __more	<b>ELD Standards</b> • <a href="#">ELD Standards</a> • <a href="#">ELA/ELD Framework</a> • <a href="#">ELPD Framework</a>	Use pictures and numbers to show 4 dogs and 1 more dog. Then write how many dogs there are.

1.2	Hands On • Model Adding to	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 5</a>  Companion Pg. 36	How do you model adding to a group?	There are three types of addition situations: adding to, putting together, and comparing. The focus of this lesson is on “adding to” situations in which the result is not known. To model these situations, children will add one group of objects to another group to find how many. Each time they add to a group, some kind of action occurs.	<a href="#">Addition Sentence Mat</a> ;  Unifix cubes or counters	<a href="#">Situation Table</a>  Write: $4 + 5 = 9$ on the board.  Have students draw a picture to illustrate the number sentence. Allow students to display and explain their picture and tell their story. The other students can use their number line and/or linking cubes to model the problem. <a href="#">Situation Table</a>	Addition sentence  Is equal to =  Plus +  Sum	<ul style="list-style-type: none"> <li>• <a href="#">ELL Math Instruction Framework</a></li> </ul> <p><b>Access Strategies</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Organizing Learning for Student Access to Challenging Content</a></li> <li>• <a href="#">Student Engagement Strategies</a></li> <li>• <a href="#">Problem Solving Steps and Approaches</a></li> </ul> <p><b>Equitable Talk</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Accountable Talk Simply Stated</a></li> <li>• <a href="#">Equitable Talk Conversation Prompts</a></li> <li>• <a href="#">Accountable Talk Posters</a></li> <li>• <a href="#">Five Talk Moves Bookmark</a></li> <li>• <a href="#">Effective Math Talks</a></li> </ul> <p><b>Cooperative Learning</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Cooperative Learning Role Cards</a></li> <li>• <a href="#">Collaborative Learning Table Mats</a></li> <li>• <a href="#">Seating Chart Suggestions</a></li> </ul> <p><b>Vocabulary Strategy</b> Scaffold language by using sentence frames to assist students in oral discussions and writing in their journals.</p> <p><i>When I add objects, I _____. Addition means _____.</i></p> <p><i>My picture represents _____.</i></p>	Use cubes to show how to add 1 turtle to 5 turtles. Draw/Color the cubes and give the sum.
1.3	Hands On • Model Putting Together	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 5</a>  Companion Pg. 36	How do you model putting together?	The process of modeling a problem two ways- first with counters and then with drawing the counters-before writing the number helps build a strong conceptual understanding of addition.	<a href="#">CPA Mat</a>  Counters (easy for students to draw circles);	Have students develop stories that involve “putting together” and/or “adding to” situations. Then ask students to discuss the following: How are they similar? How are they different?  Example: Erin collects 6 rocks. Shon gave her 2 more. How many rocks does Erin have now?  How do you know a story is about addition? <a href="#">Situation Table</a>	Add, Addend		Write your own addition problem. Draw counters to help you solve.
1.4	Problem Solving • Model Addition	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 5</a>  Companion Pg. 36	How do you solve addition problems by making a model?	The bar model is a powerful tool for representing addition and subtraction problem situations with an unknown, or missing, number. Bar models are useful tools for helping children gain an understanding of basic algebraic principles.	<a href="#">Part-Part-Total</a>	Have students solve these 2 problems and discuss their answers/representations:  There are 3 girls playing soccer. Then 2 boys join them. How many children are playing soccer?  There are 7 baseball bats in a box. 3 are blue and the rest are red. How many bats are red?	Add, Addend		Write a problem that has two parts (addends). Then solve it by finding the sum.
1.5	Algebra • Add Zero	<a href="#">1.OA.3</a> <a href="#">MP 7</a> <a href="#">MP 8</a>  Companion Pg. 40	What happens when you add 0 to a number?	In this lesson, children explore the Additive Identity Property, which says that any number plus zero equals the number. Working in problem contexts and using manipulatives, pictures, and symbols, children learn that when zero is added to a number-or when a number is added to zero-the sum is that number. This is a powerful algebraic idea.	<a href="#">Addition Sentence Mat</a> ;  <a href="#">Part-Part-Total</a>	Ask students what does zero mean? What happens when you add zero to a number? Does it matter if the first or second addend is a zero?  Solve: There are 3 sheep on the farm. 2 more sheep join. How many sheep are there all together?	Zero		Use pictures and write a number sentence to show $8 + 0$ .

						There are 3 sheep on the farm. 1 more sheep join. How many sheep are there now?  There are 3 sheep on the farm. 0 sheep join. How many sheep are there?		<p><i>One addend is _____, the 2<sup>nd</sup> addend is _____ and my sum is _____.</i></p> <p><i>I know my addition sentence makes sense because _____.</i></p>	
1.6	Hands On • Add in Any Order	<a href="#">1.OA.3</a> <a href="#">MP 7</a> <a href="#">MP 8</a>  Companion Pg. 40	Why can you add addends in any order?	In this lesson, children explore the Commutative Property of Addition, which says that the order of the addends does not affect the sum. Children begin with modeling with cubes and two color counters to represent a sum.	Unifix cubes  <a href="#">Addition Sentence Mat</a>  <a href="#">What Makes 10</a>	Use unifix cubes and ask students to model the following problems:  April has 3 carrots. Jack has 4. How many do they have altogether? How do you know? What if April now has 4 carrots and Jack has 3? How many do they have? Make connections between the two.	Addends, Order	<p>Make it a common practice to surface math vocabulary (orally and written) when students are explaining their strategies for solving math problems. Have a key vocabulary list to support students' use of math vocabulary in their oral and written responses.</p> 	Use pictures and numbers to show how to add 3 + 1 in any order.
1.7	Hands On •Put Together Numbers to 10	<a href="#">1.OA.1</a> <a href="#">MP 4</a> <a href="#">MP 7</a> <a href="#">MP 8</a>  Companion Pg. 36	How can you show all the ways to make a number?	Children apply what they know about addition to solve everyday problems. They visualize or use tools such as connection cubes, two-color counters, and drawings. Children use these models to create mathematical representations.	Unifix cubes (2 colors); Red/Yellow counters	How many ways can you make 8? 9? Use unifix cubes to show the addition facts.	Addition sentences  Ways to make	<p><b>Model and Discuss</b></p> <p>Allow time for students to discuss math solutions with partners and small groups.</p> <p><b>Counting On</b></p>  <p>Modeling the problem with manipulatives reinforces the counting on process.</p> <p><b>The Additive Identity Property</b></p>  <p><b>The Commutative Property</b></p>  <p><b>Using A Bar Model</b></p>	Use pictures and numbers to show all the ways to make 6?
1.8	Addition to 10	<a href="#">1.OA.6</a> <a href="#">MP 6</a> <a href="#">MP 7</a>  Companion Pg. 47	Why are some addition facts easy to add?	Addition and subtraction can be written “across” and “up and down”. Children learn that the one thing that changes is the way in which the problem is written.	Counters, Story Boards, Linker Cubes	Student solve: I had 8 crayons. Then my friend gave me 2 more. How many crayons do I have all together?  Ask: How did you show your work? How did you get your answer?	Addends, Sum, Addition problem	<p><b>Counting On</b></p>  <p>Modeling the problem with manipulatives reinforces the counting on process.</p> <p><b>The Additive Identity Property</b></p>  <p><b>The Commutative Property</b></p>  <p><b>Using A Bar Model</b></p>	Use pictures and numbers to solve 7+2.

$$\begin{array}{r} 3 + 2 = ? \\ \hline 3 \quad 2 \\ \hline ? \end{array}$$
  

$$\begin{array}{r} 3 + ? = 7 \\ \hline 3 \quad ? \\ \hline 7 \end{array}$$

**Literature Connection**



*The Class Party*  
 Children read the book and learn to read addition and subtraction number sentences.

**Math Club**

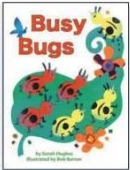


Children read the book and learn to read number sentences.

**Join Us**



Children read the book and add the number of children until they get ten.

								 <i>Busy Bugs</i> Children read the book and add the different bugs found in the illustrations.	
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**Assessments:**  
Go Math [Prerequisite Skills Inventory](#)  
Go Math [Chapter 1 Test](#)  
Go Math Chapter 1 Performance Task [Beth's Kittens](#)  
[Portfolio Assessment](#)

**Big Idea:** Developing understanding of addition and subtraction; and using strategies for addition and subtraction within 20. This chapter begins to introduce students to various strategies for addition and subtraction. For 1.OA.6, students are asked to practice the following strategies to build fluency: counting on, making ten ( $8 + 6 = 8 + 2 + 4 = 14$ ), decomposing a number leading to a ten ( $13 - 4 = 13 - 3 - 1 = 9$ ), using the relationship between addition and subtraction (fact families:  $8 + 4 = 12$ , so  $12 - 4 = 8$ ), and creating equivalent but easier or known sums (doubles/doubles +plus 1:  $6 + 7 = 6 + 6 + 1 = 12 + 1 = 13$  or doubles minus 1:  $8 + 7 = 8 + 8 - 1 = 16 - 1 = 15$ ). Using concrete models and pictures help students to consider the actions or meaning of the problem and relate that meaning to mathematical operations. Students will extend their knowledge and strategies when asked to add/subtract 3 addends. Having students contextualize number sentences into word problems and/or decontextualize word problems into number sentences will help students gain a deeper understanding of addition and subtraction and learn how to apply it in real-world contexts. Students will soon learn to apply these basic strategies along with place value to larger numbers. They begin to determine which strategies are more efficient and effective for various problems.

Adapted from the CCSS Progressions OA K-5, pg. 9, 12-17.

**Professional Development Videos:**

[Use Counters to Represent an Abstract Situation Symbolically](#)

**Essential Question:** How can you subtract numbers from 10 or less?

**Standards:** 1.OA.1, 1.OA.6, 1.OA.8

**ELD Standards:**

ELD.PI.1.1-Exchanging information/ideas via oral communication and conversations.

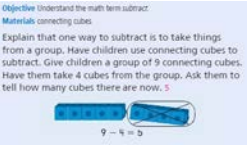
ELD.PI.1.3-Offering opinions and negotiating with/persuading others.

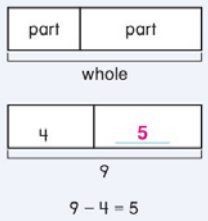

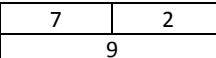
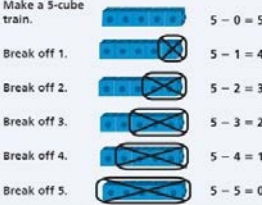


ELD.PI.1.5-Listening actively and asking/answering questions about what was heard.

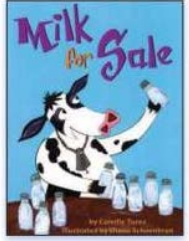
ELD.PI.1.9- Expressing information and ideas in oral presentations.

ELD.PI.1.11- Supporting opinions or justifying arguments and evaluating others' opinions or arguments.

ELD.PI.1.12-Selecting and applying varied and precise vocabulary.

Lesson		Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools <a href="#">Go Math! Teacher Resources G1</a>	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal								
2.1	Use Pictures to Show Taking From	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 2</a> <a href="#">MP 4</a>  Companion Pg. 36	How can you show taking from with pictures?	When children use pictures to represent “taking from” situations, be sure they understand that the picture represents the whole. Direct children’s attention to the pictures “moving away” from the group to explain how that is the part being taken from the group.	Drawings Unifix cubes, counters	Ask students to solve this addition problem: There are 5 cats drinking milk. 2 cats join. How many cats are drinking milk?  If there are 6 cats drinking milk, what happens when 2 cats are finished drinking milk? How do we show that with pictures, numbers, and words?	Taking from, whole group, away, fewer	<b>Vocabulary Strategy</b>    <b>Model and Discuss</b> <table border="1" data-bbox="2091 1266 2284 1429"> <tr> <td>addend 3</td> <td>addend 4</td> </tr> <tr> <td colspan="2">sum ?</td> </tr> <tr> <td>3</td> <td>?</td> </tr> <tr> <td colspan="2">7</td> </tr> </table>	addend 3	addend 4	sum ?		3	?	7		Draw a picture to show the problem. There are 9 turtles. 3 turtles walk away. How many turtles are there now?
addend 3	addend 4																
sum ?																	
3	?																
7																	
2.2	Hands On • Model Taking From	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 2</a> <a href="#">MP 4</a>  Companion Pg. 36	How do you model taking from a group?	Concrete models such as counters or connecting cubes, are good models to show subtraction because they can be used to represent the movement in taking from problem situations.	Unifix cubes, Red/Yellow counters (1 color can represent the amount that was removed from the group)	Have students start with 9 linking cubes, take 1 away(9-1), then 2 away(9-2), and so on. On a table, record what you are starting with, how many you take away, and how many cubes you have left. Have students discuss the pattern they see. You can add another column to	minus, difference, subtraction sentence	<b>Model and Discuss</b> <table border="1" data-bbox="2091 1266 2284 1429"> <tr> <td>addend 3</td> <td>addend 4</td> </tr> <tr> <td colspan="2">sum ?</td> </tr> <tr> <td>3</td> <td>?</td> </tr> <tr> <td colspan="2">7</td> </tr> </table>	addend 3	addend 4	sum ?		3	?	7		Use pictures and numbers to model 9-2.
addend 3	addend 4																
sum ?																	
3	?																
7																	

						include the subtraction sentence that would be used to describe what happened.			
2.3	Hands On • Model Taking Apart	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 5</a>  Companion Pg. 36	How do you model taking apart?	Two-color counters are a helpful tool in modeling taking-apart situations because students can easily turn over the counters to see the red and yellow parts.	<a href="#">Part-Part-Total Template</a> Counters	Show students 8 unifix cubes. Ask them what happens if some are taken away? Take away 3 cubes. Ask students how many you are left with. Write the subtraction sentence together to represent the problem. Practice with a few more subtraction facts to 8.	subtract, how many, take apart	<p><b>Using Bar Models</b></p> 	Use pictures and numbers to model 8-3. What's another way you could write this number sentence? (Answer: 3 + 5 = 8).
2.4	Problem Solving • Model Subtraction	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 5</a>  Companion Pg. 36	How do you solve subtraction problems by making a model?	The bar model for subtraction used in this lesson represents the type of subtraction situations children are solving-taking from and taking apart. It is the same model children used in Chapter 1 with adding to and putting together situations. This model is sometimes referred to as the part-part-whole model. These components-the parts and the whole-are also in subtraction situations in which the whole and one part are given and the other part is to be found.	<a href="#">Part-Part-Total Template</a> Counters	Have students solve the following problem: There are 7 children playing on the playground. Some of the children go home. 2 children are still playing. How many children went home?  Use different representations and have students explain their thinking to solve this missing addend problem.	Part, whole, number, take from, take apart, unknown addend	<p><b>Using Comparison Subtraction Bar Models</b></p> 	Choose a model from one of the problems you solved today. Write a new subtraction problem to match.
2.5	Use Pictures and Subtraction to Compare	<a href="#">1.OA.8</a> <a href="#">MP 1</a> <a href="#">MP 2</a> <a href="#">MP 4</a>  Companion Pg. 50	How can you use pictures to compare and subtract?	Help children recognize comparison subtraction in our everyday lives by setting informal tasks throughout the day that require some sort of comparison.	<a href="#">Comparison Template</a> Counters	 <p>Have students write their own story to match this model. Encourage addition and subtraction situations.</p>	Compare, fewer, more	<p><b>Using a Cube Train Model</b></p> <p>Make a 5-cube train.</p> 	You have 7 squirrels and 2 logs. How many more squirrels than logs do you have? How many fewer logs do I have?
2.6	Hands On • Subtract to Compare	<a href="#">1.OA.1</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 6</a>  Companion Pg. 36	How can you use models to compare and subtract?	Comparison situations differ from taking from and taking apart situations in that they involve only two discrete quantities that are not parts of a whole or related in that way. The two quantities are compared to find which is greater or less. In some comparison problems, you may know one quantity and how it compares to an unknown quantity. By subtracting the difference from the known quantity, you find the other quantity.	<a href="#">Comparison Template</a> Counters	Jill has 8 stickers. Jill has 5 more stickers than Derek. How many stickers does Derek have?  How can I compare this problem? How can I write this as a subtraction sentence? An addition sentence?	Compare, bar model, fewer, how many more than	<p><b>Vertical vs Horizontal Format</b></p> 	Jennifer has 3 pennies. Brad has 9 pennies. How many fewer pennies does Jennifer have than Brad? Write an addition and subtraction sentence.
2.7	Subtract All or Zero	<a href="#">1.OA.8</a> <a href="#">MP 3</a> <a href="#">MP 4</a> <a href="#">MP 8</a>  Companion Pg. 50	What happens when you subtract 0 from a number?	In this lesson, children practice subtracting zero. They also subtract all to find the difference of zero. The principles of subtract all or subtract none apply to numbers of any size.	<a href="#">Part-Part-Total Template</a> Counters, or Unifix cubes, or small objects	Discuss the concept of subtracting all and subtracting none. Show how these concepts can be applied across large or small numbers (regardless of the size of number). Write the number 73 on the board, discuss what the answer is if I subtract all. Discuss what the answer would be if I subtracted none.	Subtract all, Subtract none	<p><b>Literature Connection</b></p> 	Use pictures and numbers to show 5-0. Use pictures and numbers to show 5-5.

2.8	Hands On: Algebra • Take Apart Numbers	<a href="#">1.OA.1</a> <a href="#">MP 3</a> <a href="#">MP 4</a> <a href="#">MP 7</a>  Companion Pg. 36	How can you show all the ways to take apart a number?	In this lesson, children break a cube train into two parts as they model all the ways to subtract from a given number.	<a href="#">Linking Cubes Template</a>  Unifix cubes	Have students hold up the number 5 on their hands. Ask them to show a different combination that would also make 5 using their fingers. Etc...  Now ask how can we show 5-1 with our hands? 5-2? Etc...	Subtraction sentence, take apart	Children read the book and learn to read addition and subtraction number sentences.	Use pictures and numbers to show all the ways to take apart 8.
2.9	Subtraction from 10 or Less	<a href="#">1.OA.6</a> <a href="#">MP 4</a> <a href="#">MP 6</a> <a href="#">MP 8</a>  Companion Pg. 47	Why are some subtraction facts easy to subtract?	Subtraction in a vertical format is introduced in this lesson. As with addition, children should understand that it does not matter if the subtraction sentence is written horizontally or vertically; the operation itself does not change. As children gain familiarity using the vertical format, they also build fluency with subtraction facts within 10.	Counters	As a class, write all the possible addition sentences to 10. Then using 10 cubes, have students subtract 1, subtract 2, etc. Have students compare their addition and subtraction sentences.  How are the addition and subtraction sentences the same? How are they different? How does using the cubes help compare the addition and subtraction sentences?	Subtraction problem, subtraction sentences, how many are left	 <p><i>Milk for Sale</i> Children read the book and practice subtraction facts through 10.</p>	Find 10-3. Write the subtraction fact two ways.

**Assessments:**

Go Math [Chapter 2 Test](#)

Go Math Chapter 2 Performance Task: [Who's Still Here?](#)



**Big Idea:** Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20. This chapter begins to introduce students to these various strategies. In 1.OA.6, students are to practice the following strategies to build fluency: counting on, making ten ( $8 + 6 = 8 + 2 + 4 = 14$ ), decomposing a number leading to a ten ( $13 - 4 = 13 - 3 - 1 = 9$ ), using the relationship between addition and subtraction (fact families:  $8 + 4 = 12$ , so  $12 - 4 = 8$ ), and creating equivalent but easier or known sums (doubles/doubles +plus 1:  $6 + 7 = 6 + 6 = 12 + 1 = 13$  or doubles minus 1:  $8 + 7 = 8 + 8 = 16 - 1 = 15$ ). Using concrete model and pictures helps students to consider the actions or meaning of the problem and relate that meaning to mathematical operations. Students will extend their knowledge and strategies when asked to add/subtract 3 addends. Having students contextualize number sentences into word problems and/or decontextualize word problems into number sentences will help students gain a deeper understanding of addition and subtraction and how to apply it in real-world context. “Mastery of a basic fact means that a child can give a quick response (in about 3 seconds) without resorting to non-efficient means, such as counting on” –Van De Walle, 2004. Students will apply these basic strategies along with place value to larger numbers. They begin to determine which strategies are more efficient and effective for various problems.

Adapted from Go Math: Teaching for Depth, pg. 93E.

**Professional Development Videos:**

[Use Structure to Write Addition Sentences](#)

[Use Precision in Mathematical Language](#)

**Essential Question:** How do you solve addition problems?

**Standards:** 1.OA.2, 1.OA.3, 1.OA.5, 1.OA.6

**ELD Standards:**

ELD.PI.1.1-Exchanging information/ideas via oral communication and conversations.

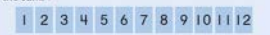
ELD.PI.1.3-Offering opinions and negotiating with/persuading others.



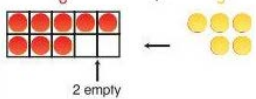


ELD.PI.1.5-Listening actively and asking/answering questions about what was heard.


ELD.PI.1.9- Expressing information and ideas in oral presentations.

ELD.PI.1.11- Supporting opinions or justifying arguments and evaluating others’ opinions or arguments.

ELD.PI.1.12-Selecting and applying varied and precise vocabulary.

Lesson		Standards & Math Practices	Essential Question	Math Content and Strategies	Model/Tool <a href="#">Go Math! Teacher Resources G1</a>	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal
3.1	Algebra • Add in Any Order	<a href="#">1.OA.3</a> <a href="#">MP 1</a> <a href="#">MP 4</a> <a href="#">MP 6</a>  Companion Pg. 40	What happens if you change the order of the addends when you add?	In this lesson, children revisit the Commutative Property of Addition to reinforce the concept that changing the order of two addends does not change the sum. This algebraic principle can help children become fluent with basic addition facts. The Commutative Property will also help to simplify calculations.	Counters or Unifix cubes (2 different colors)	If Adam knows $4 + 7 = 11$ , what other addition fact does he know? Using manipulatives or drawings to justify and explain your thinking.	Change the order of addends, addition sentences	<b>Vocabulary Strategy</b> <small>Objective Understand the math term count on. Materials Vocabulary Card for count on, Numeral Cards 1–12 (see eTeacher Resources) Tell children that they can use Numeral Cards to help them count on. Then show them the Vocabulary Card for count on and have them count on. Display Numeral Cards 1–12 in a row. Then show children the addition <math>5 + 2 = \underline{\quad}</math>. Ask children to point to the number 5. Then have them count on 2 more to find the sum. ?</small> 	How many ways can we make 13? (Focusing on students stating $9 + 4$ , $4 + 9$ , $6 + 7$ , $7 + 6$ , etc.
3.2	Count On	<a href="#">1.OA.5</a> <a href="#">MP 1</a> <a href="#">MP 6</a> <a href="#">MP 8</a>  Companion Pg. 45	How do you count on 1, 2, 3?	Counting on from a certain number is the same as adding to that number. Counting on from the greater addends is a helpful strategy that can foster mental math skills.	Counters, unifix cubes, drawings	Terry added 3 and 7. He got the sum of 9. His answer is not correct. Describe how Terry can find the correct sum.	Count on, greater addend, sum, counting on_	<b>Model and Discuss</b> Doubles and Doubles Plus and Minus 1	Use pictures or words to explain how you can find $9 + 3$ by counting on.

3.3	Hands On • Add Doubles	<a href="#">1.OA.6</a> <a href="#">MP 5</a> <a href="#">MP 7</a>  Companion Pg. 47	What are doubles facts?	Children should move beyond counting to develop efficient strategies for addition. Research shows that many children remember doubles facts more easily than other facts with sums within 20. It is important for children to be able to identify doubles facts and to develop quick recall of their sums.	Unifix cubes	Write the following on the board <b>out of order</b> : 5 + 5, 6 + 6, 7 + 7, 8 + 8, 9 + 9. Ask students to rearrange the number sentences to show a pattern. Have them describe their patterns and justify their thinking as a small group to other small groups or whole class.	Doubles, sum	 <b>Counting On</b> 5 	Use pictures or words to explain how you could find the sum of 7 + 7.
3.4	Hands On • Use Doubles to Add	<a href="#">1.OA.6</a> <a href="#">MP 1</a> <a href="#">MP 5</a> <a href="#">MP 7</a>  Companion Pg. 47	How can you use doubles to help you add?	In this lesson, children learn a new strategy that builds upon what they have learned by creating equivalent but known sums using doubles. Some children may know some of the facts in this lesson already, but it is still important for them to be familiar with the strategy of using doubles.	Unifix cubes, counters	What are doubles? Is 3+2 a double? Is 3+3 a double? Why or why not...have students explain their thinking with a partner. What other doubles do you know? Have students write them on whiteboards and share different representations.	Decompose, doubles fact, missing sums	<b>Making a Ten</b> 	Draw and label a picture to show how knowing 7 + 7 helps you find 7 + 8.
3.5	Hands On • Doubles Plus 1 and Doubles Minus 1	<a href="#">1.OA.6</a> <a href="#">MP 6</a> <a href="#">MP 7</a>  Companion Pg. 47	How can you use what you know about doubles to find other sums?	Fact strategies such as doubles plus 1 and doubles minus 1 help develop reasoning skills in young learners. Teaching fact strategies explicitly helps children recognize patterns within number relationships and make connections between the strategies.	2 colors of unifix cubes, or red/yellow counters.	What number is 1 more than 7? What number is 1 less than 7? Use unifix cubes for a visual representation. Have students solve 8+9 on their whiteboards or in a journal. Ask: How does using doubles help us solve this problem?	Doubles minus 1, Doubles plus 1	<b>Literature Connection</b>  <i>Join Us</i>	Use pictures or words to explain how you would use doubles plus one to solve 4 + 5.  Which two doubles facts could you use to solve 7 + 8? (Answer: 7 + 7 (+1) or 8 + 8 (-1).)
3.6	Practice the Strategies	<a href="#">1.OA.6</a> <a href="#">MP 3</a> <a href="#">MP 7</a>  Companion Pg. 47	What strategies can you use to solve addition fact problems?	In this lesson, children analyze addition facts to select appropriate solution strategies. Some children may find memorization easy and resist explaining their strategies. Selecting a solution strategy requires that children analyze the relationship between the addends, and use that information to make a choice.	Unifix cubes, or, Counters, etc.  <a href="#">Addition Sentence Mat</a>	With unifix cubes have students show a double plus one fact, a double minus one fact. Ask: How does using doubles help when adding and subtracting?	Count on, Doubles, Doubles +/-1	Children read the book and add the number of children until they get ten.  <b>Doubles Fun on the Farm</b>  Children read the book and add equal groups to make doubles.	Use pictures or words to explain two strategies to solve 8 + 9.
3.7	Hands On • Add 10 and More	<a href="#">1.OA.6</a> <a href="#">MP 2</a> <a href="#">MP 5</a>  Companion Pg. 47	How can you use a ten frame to add 10 and some more?	The ten frame introduced in this lesson helps children keep track when counting 10 or more objects and helps reinforce the idea of grouping 10 and extras, a key to understanding teen numbers. Working with the ten frame also readies children for the addition strategy make a ten taught in succeeding lessons.	Red/Yellow counters  <a href="#">Double Ten-Frame</a>	Show a 10 and 1 more with counters. What is 10 and 2 more? What is 10 and 3 more? How do 10's help us add quickly?	Ten Frame, sum, add 10, order of addends		Use pictures or words to explain how you can solve 10 + 6.
3.8	Hands On • Make a 10 to Add	<a href="#">1.OA.6</a> <a href="#">MP 2</a> <a href="#">MP 5</a>  Companion Pg. 47	How do you use the make a ten strategy to add?	The strategy of making ten helps children decompose and compose numbers to simplify addition.	Red/Yellow counters, or 2 colors unifix cubes, or 2 different foam shapes, etc.	Ask students to represent all the different addition facts for 10.  What do you notice about these facts? (Doubles, related facts, number in the 1 <sup>st</sup> addend increase	Make a ten, Compose, Decompose		Use pictures or words to explain how you would use the make a ten strategy to solve 5 + 7.

					<a href="#">Number Line to 20</a>	and number in the 2 <sup>nd</sup> addend decrease.)		 <p>Funny Bunny Hats Children read the book and add the number of hats made by Bunny.</p>	
3.9	Use Make a 10 to Add	<a href="#">1.OA.6</a> <a href="#">MP 2</a> <a href="#">MP 4</a>  Companion Pg. 47	How can you make a ten to help you add?	In this lesson, guide children to accurately describe the strategies that can be used to add within 20. Use questions such as, “What strategies can you use to find each sum?” and “Would you use the same strategy for all the facts?”	Red/Yellow counters, or 2 colors unifix cubes, or 2 different foam shapes, etc.	Show students 7 counters. Ask how many more do I need to make 10? How do you know? Show 6,3,1,etc... ask the same focusing questions for each.	Make a ten, sum		Draw to explain how you would make a ten to find 5 + 8.
3.10	Hands On: Algebra • Add 3 Numbers	<a href="#">1.OA.3</a> <a href="#">MP 3</a>  Companion Pg. 40	How can you add three addends?	This lesson addresses the Associative Property of Addition. This property states that when you add three or more numbers, you can group the addends in any way without changing the sums. Using the Associative Property provides an excellent opportunity for children to apply a variety of addition strategies. Encourage children to analyze the addends to determine which two might make sense to add together first.	Counters or Unifix cubes  <a href="#">Double-Ten Frame</a>  <a href="#">Addition Sentence Mat</a>  <a href="#">Number Line to 20</a>	What are two other ways to write 9 + 6? Why? How do you know? (Answer: 9 + 1 + 5 or 10 + 5)	Compose, Decompose  <u>Strategies:</u> Doubles Doubles Plus One Doubles Minus One Making Ten Counting On <u>Addition Properties:</u> Commutative Property Associative Property		Use pictures or words to explain how you can find the sum for 3 + 5 + 7.
3.11	Algebra • Add 3 Numbers	<a href="#">1.OA.3</a> <a href="#">MP 3</a> <a href="#">MP 8</a>  Companion Pg. 40	How can you group numbers to add three addends?	This lesson on the Associative Property of Addition now has children making their own choice of which two addends they will add first. Children must analyze the problem by looking for relationships between two of the three addends. Children become active learners when they thinking about the mathematics involved in choosing a strategy and in explaining their solution process.	Unifix cubes, counters  <a href="#">Double-Ten Frame</a>  <a href="#">Addition Sentence Mat</a>  <a href="#">Number Line to 20</a>	Write 3 + 4 + 6 on the board. Encourage students to consider the addition strategies they have learned and find all the various ways they can add these 3 addends.  Which numbers did you decide to add first? Why? Which strategy does that connect to?  Why is the sum the same no matter which strategy you use?	Compose, Decompose  <u>Strategies:</u> Doubles Doubles Plus One Doubles Minus One Making Ten Counting On <u>Addition Properties:</u> Commutative Property Associative Property		Use pictures or words to explain how you would find 6 + 4 + 4.
3.12	Problem Solving • Use Addition Strategies	<a href="#">1.OA.2</a> <a href="#">MP 1</a> <a href="#">MP 2</a> <a href="#">MP 4</a>	How do you solve addition word problems by drawing a picture?	Encourage children to use a picture they are comfortable using and that makes sense to them. Make sure they understand that any simple drawing will do.	Unifix cubes, counters  <a href="#">Double-Ten Frame</a>	How does drawing a picture help you solve a problem or “story”? What should you include in your drawing? What can you leave out of a drawing (items not important?)	__more, order of addends	Draw a picture to show how you would solve this problem: Jeb has 4 large rocks, 4 medium rocks, and 7 small rocks. How	

		Companion Pg. 38		<a href="#">Addition Sentence Mat</a> <a href="#">Number Line to 20</a>				many rocks does Jeb have? Write a number sentence.
<b>Assessments:</b> Go Math <a href="#">Chapter 3 Test</a> <b>**Common Assignment</b> Critical Area Performance Task: <a href="#">Let's Help Chen Add!</a>								