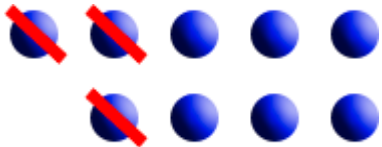


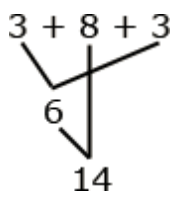
Seymour Public Schools Math Grade 1 Unit 6

<p>Grade: 1</p> <p>Unit 6- Organize, Represent, and Compare Data</p>	<p>Subject: Math</p> <ul style="list-style-type: none"> • Time Frame: 17 days • Domain: Operations and Algebraic Thinking Measurements and Data 	
<p>Standards</p>	<p>Content Standards: 1.OA.1, 1.OA.2 1.MD.4 http://www.corestandards.org/wp-content/uploads/Math_Standards.pdf</p>	<p>Practice Standards: MP 1, 2, 3, 4, 5, 6, 7, 8</p>
<p>Enduring Understandings</p>	<ol style="list-style-type: none"> 1. Use objects, drawings, and equations with a symbol for the unknown number to represent a problem. 2. Make matching drawings or draw comparison bars to represent comparison situations. 	
<p>Essential Questions</p>	<ol style="list-style-type: none"> 1. How can we organize and interpret data? 2. How do we solve compare problems? 	
<p>Vocabulary</p>	<p>sort, data, compare, more, most, fewer, fewest, category, comparison bars</p>	

Priority and Supporting CCSS	Explanations and Examples*
<p>1. OA.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p>	<p>1. OA.1. Contextual problems that are closely connected to students' lives should be used to develop fluency with addition and subtraction. Table 1 (Appendix A) describes the four different addition and subtraction situations and their relationship to the position of the unknown. Students use objects or drawings to represent the different situations.</p> <ul style="list-style-type: none"> • <i>Take-from</i> example: Abel has 9 balls. He gave 3 to Susan. How many balls does Abel have now?  <ul style="list-style-type: none"> • <i>Compare</i> example: Abel has 9 balls. Susan has 3 balls. How many more balls does Abel have than Susan? A student will use 9 objects to represent Abel's 9 balls and 3 objects to represent Susan's 3 balls. Then they will compare the 2 sets of objects. <p>Note that even though the modeling of the two problems above is different, the equation, $9 - 3 = \underline{\quad}$, can represent both situations yet the compare example can also be represented by $3 + \underline{\quad} = 9$ (How many more do I need to make 9?)</p> <p>It is important to attend to the difficulty level of the problem situations in relation to the position of the unknown.</p> <ul style="list-style-type: none"> • <i>Result Unknown</i> problems are the least complex for students followed by <i>Total Unknown</i> and <i>Difference Unknown</i> • The next level of difficulty includes <i>Change Unknown</i>, <i>Addend</i>

*Source – Connecticut Core Standards for Mathematics as adapted from the Arizona Academic Content Standards

Priority and Supporting CCSS	Explanations and Examples*
<p>1. OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p>	<ul style="list-style-type: none"> • <i>Unknown</i>, followed by <i>Bigger Unknown</i> • The most difficult are <i>Start Unknown</i>, <i>Both Addends Unknown</i>, and <i>Smaller Unknown</i> <p>Students may use document cameras to display their combining or separating strategies. This gives them the opportunity to communicate and justify their thinking.</p> <p>1. OA.2. To further students’ understanding of the concept of addition, students create word problems with three addends. They can also increase their estimation skills by creating problems in which the sum is less than 5, 10 or 20. They use properties of operations and different strategies to find the sum of three whole numbers such as:</p> <ul style="list-style-type: none"> • Counting on and counting on again (e.g., to add $3 + 2 + 4$ a student writes $3 + 2 + 4 = \underline{\quad}$ and thinks, “3, 4, 5, that’s 2 more, 6, 7, 8, 9 that’s 4 more so $3 + 2 + 4 = 9$.”) • Making tens (e.g., $4 + 8 + 6 = 4 + 6 + 8 = 10 + 8 = 18$) • Using “plus 10, minus 1” to add 9 (e.g., $3 + 9 + 6$ A student thinks, “9 is close to 10 so I am going to add 10 plus 3 plus 6 which gives me 19. Since I added 1 too many, I need to take 1 away so the answer is 18. • Decomposing numbers between 10 and 20 into 1 ten plus some ones to facilitate adding the ones <div style="text-align: center;"> </div>

Priority and Supporting CCSS	Explanations and Examples*
<p>1.MD.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</p>	<ul style="list-style-type: none"> • Using doubles <div style="text-align: center;">  </div> <ul style="list-style-type: none"> • Using near doubles (e.g., $5 + 6 + 3 = 5 + 5 + 1 + 3 = 10 + 4 = 14$) <p>Students will use different strategies to add the 6 and 8.</p> <p>Students may use document cameras to display their combining strategies. This gives them the opportunity to communicate and justify their thinking.</p> <p>1.MD.4. Students create object graphs and tally charts using data relevant to their lives (e.g., favorite ice cream, eye color, pets, etc.). Graphs may be constructed by groups of students as well as by individual students.</p> <p>Counting objects should be reinforced when collecting, representing, and interpreting data. Students describe the object graphs and tally charts they create. They should also ask and answer questions based on these charts or graphs that reinforce other mathematics concepts such as sorting and comparing. The data chosen or questions asked give students opportunities to reinforce their understanding of place value, identifying ten more and ten less, relating counting to addition and subtraction and using comparative language and symbols.</p>

Priority and Supporting CCSS	Explanations and Examples*
	Students may use an interactive whiteboard to place objects onto a graph. This gives them the opportunity to communicate and justify their thinking.

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Resources

Math Expressions - Unit 6, Lessons 1-9
Soar to Success Math Intervention
Mega Math
Destination Math
Common Core Mathematics-Newmark Learning- Units-1, 2, 3, 4, 5, 19

Unit Assessments

Unit Test
Quick Quizzes
Formative Assessments
Performance Assessment

Technology: Videos, Websites, Links

www.learnzillion.com

www.xtramath.org

<https://www.georgiastandards.org/Common-Core/Pages/Math-K-5.aspx>

<http://exchange.smarttech.com/index.html#tab=0>

<http://nlvm.usu.edu/en/nav/vlibrary.html>

<https://grade1commoncoremath.wikispaces.hcpss.org/1.OA.1>

<https://grade1commoncoremath.wikispaces.hcpss.org/1.OA.3>

http://www.internet4classrooms.com/common_core/apply_properties_operations_strategies_add_subtract_operations_algebraic_thinking_first_1st_grade_math_mathematics.htm

http://mrnussbaum.com/grade_1_standards/

<http://www.youtube.com/watch?v=OWpTqaSr7e8>

http://ccssmath.org/?page_id=49

<http://www.ohiorc.org/standards/commoncore/mathematics/grade.aspx?id=5022>

<https://sites.google.com/a/bryantschools.org/math-common-core-resource-site/home-1/1st-grade/1-0a-6>

<http://www.mrmaffesoli.com/1stGrade/1stGradeCCS.html>

APPENDIX A—TABLE 1

TABLE 1. Common addition and subtraction situations.⁶

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? $2 + 3 = ?$	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? $2 + ? = 5$	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? $? + 3 = 5$
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? $5 - 2 = ?$	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $5 - ? = 3$	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $? - 2 = 3$
	Total Unknown	Addend Unknown	Both Addends Unknown ¹
Put Together/ Take Apart²	Three red apples and two green apples are on the table. How many apples are on the table? $3 + 2 = ?$	Five apples are on the table. Three are red and the rest are green. How many apples are green? $3 + ? = 5$, $5 - 3 = ?$	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? $5 = 0 + 5$, $5 = 5 + 0$ $5 = 1 + 4$, $5 = 4 + 1$ $5 = 2 + 3$, $5 = 3 + 2$
	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare³	(“How many more?” version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? (“How many fewer?” version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? $2 + ? = 5$, $5 - 2 = ?$	(Version with “more”): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with “fewer”): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $2 + 3 = ?$, $3 + 2 = ?$	(Version with “more”): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with “fewer”): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? $5 - 3 = ?$, $? + 3 = 5$

¹These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in but always does mean is the same number as.

²Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.

³For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using more for the bigger unknown and using less for the smaller unknown). The other versions are more difficult.