



Dear First Grade Families,

In Unit 3, students will work on the following first grade Common Core standard in the Operation and Algebraic Thinking (OA) domain.

1.OA.3	Apply properties of operations as strategies to add and subtract. <i>Examples: If <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known. (Commutative property of addition.) To add <math>2 + 6 + 4</math>, the second two numbers can be added to make a ten, so <math>2 + 6 + 4 = 2 + 10 = 12</math>. (Associative property of addition.)</i>
1.OA.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$ ).

### Unit 3 Concepts:

- Add by counting on using a number line and a number bond
- Make 10 with a base ten frame
- Make 10 with a diagram
- Make easier and known sums

### Unit 3 Vocabulary:

- Base ten blocks
- Number line
- Base ten frame
- Equation
- Expression
- Doubles
- Doubles plus one
- Decompose a number to make ten

Ask questions like these to help your child become a productive mathematical thinker:

- Is it more efficient to count on to solve  $13 + 1$  than it would be to use the number line strategy? Why?
- Show me how to solve  $7 + 8$  with base ten frames. Explain to me what you're doing and why.
- Tell me why you chose to use this strategy instead of another.
- The lettuce is \$3 and the chicken is \$8. How much will they cost together? How did you solve that in your head?

Need a review? Check out our lesson videos on-line!

**[swunmath.com/student-videos](http://swunmath.com/student-videos)**

If you don't know the class's special name, ask your child's teacher.

We encourage you to talk with your child daily about what was learned in math class.

Thank you for your support!

# Grade 1 – Unit 3

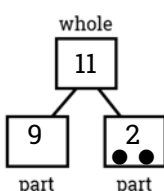

## Addition Strategies

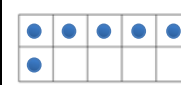
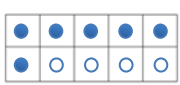
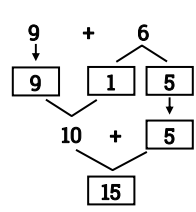


Our focus in this unit is to help students understand what is happening with addition. Before we work with the traditional algorithm, students will first build their conceptual understanding of addition with several different strategies and models.

**It is very important that first graders learn to manipulate numbers in these ways, and to make sense of addition. They are building a strong foundation for future math success.**

When helping with homework at home, ask your child to show you how they're using these strategies and models to show how they understand what they're adding.

Count on Strategy	Number Line Strategy
<p style="text-align: center;"><math>2 + 9</math></p> <p style="text-align: center;">"9... 10, 11."</p> <p style="text-align: center;">9 and 2 more is 11.</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="margin-right: 20px;"> <ol style="list-style-type: none"> <li>1. Place the greater addend in your head.</li> <li>2. Count on the value of the smaller addend.</li> </ol> </div>  </div>	<p style="text-align: center;"><math>8 + 4</math></p>  <p style="text-align: center;"><math>8 + 4 = 12</math></p> <ol style="list-style-type: none"> <li>1. Find the larger addend on the number line.</li> <li>2. Jump forward the value of the smaller addend.</li> </ol>

Make 10 with Base Ten Frames	Make a Ten Diagram
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><math>6 + 7</math></p> </div> <div style="text-align: center;"> <p>is the same as</p> </div> <div style="text-align: center;">  <p><math>10 + 3</math></p> </div> </div> <p style="text-align: center;"><math>6 + 7 = 13</math></p> <ol style="list-style-type: none"> <li>1. Determine the value of each addend. Place that number of markers on the base ten frame.</li> <li>2. Move enough markers from one frame to fill the other frame with 10 markers. Add.</li> </ol>	<div style="text-align: center;">  </div> <ol style="list-style-type: none"> <li>1. Bring down the first addend.</li> <li>2. Decompose the second addend so it can make a ten with the first addend.</li> <li>3. Bring down the third addend. Add.</li> </ol>

Doubles Plus One Strategy							
$8 + 9$	This strategy works best when children have committed their "doubles" to memory (e.g. $1+1$ , $5+5$ , $8+8$ ).						
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><math>8 + 9 =</math></td> <td style="padding: 5px;"><math>8 + 8 + 1</math></td> </tr> <tr> <td style="padding: 5px;"><math>8 + 9 =</math></td> <td style="padding: 5px;"><math>16 + 1</math></td> </tr> <tr> <td style="padding: 5px;"><math>8 + 9 =</math></td> <td style="padding: 5px;">17</td> </tr> </table>	$8 + 9 =$	$8 + 8 + 1$	$8 + 9 =$	$16 + 1$	$8 + 9 =$	17	<p>If the addends are two consecutive numbers:</p> <ol style="list-style-type: none"> <li>1. Break apart the greater addend to show the "doubles."</li> <li>2. Add the double, then add one more.</li> </ol>
$8 + 9 =$	$8 + 8 + 1$						
$8 + 9 =$	$16 + 1$						
$8 + 9 =$	17						

There's no one "right way" to solve math problems. Sometimes one strategy is more or less efficient than another. Ask your child why they chose a particular strategy, and encourage multiple ways to solve. Most importantly, ask your child to explain why their answer makes sense.