

Grade 1	Lesson: 2-9 Connecting Addition and Subtraction	Reference to English
Math Standard(s): 1.OA.6		Domain: Operations and Algebraic Thinking
Content Objective(s):		Language Objective(s):
Students will write related addition and subtraction facts. <i>I can write related addition and subtraction facts.</i>		Students will addition and subtraction sentences. <i>I can addition and subtraction sentences..</i>
<b>Essential Understanding:</b> Addition and subtraction have an inverse relationship. The inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has a related addition fact.		<b>Academic Vocabulary:</b> <b>Listen:</b> same, different, altogether <b>Read:</b> <b>Write:</b> <b>Speak:</b> different, order <b>Sentence Frame:</b>
<b>Materials:</b> <ul style="list-style-type: none"> <li>Two-color counters (6 per pair)</li> <li>Whiteboards and dry erase markers</li> <li>Guided Practice page 74-75</li> <li>Problem Solving page 76</li> </ul>		<b>Language and Word Wall:</b> Addition, subtraction, minus, plus, equals
Lesson: Connecting Addition and Subtraction		Instructional Time: 45 minutes
<b>Opening: (4 minutes)</b> <b>T: "You have learned how to add and subtract numbers. Today, you will learn how addition and subtraction facts are related."</b> <ul style="list-style-type: none"> <li>Draw a large square on the whiteboard. Draw a line down the middle of the square to divide it into two equal parts. Draw 3 counters in one box and 2 counters in the other box.</li> <li>Pass out white boards, markers and erasers.</li> </ul> <b>T: "How many counters are there in all?"</b> S: will say "5". <ul style="list-style-type: none"> <li>Write a number 5 above the two boxes on the whiteboard. Then cover the group of 3 counters</li> </ul> <b>T: "What subtraction sentence could you write? Please write it on your board."</b> S: will write, " $5 - 2 = 3$ ". <b>T: "Now, say the subtraction sentence with me."</b> S: will say " $5 - 2 = 3$ ". <ul style="list-style-type: none"> <li>After the children have helped you write a subtraction sentence, reveal the hidden counters to check the answer.</li> </ul>		
<b>Introduction to New Material (Direct Instruction): (10 minutes)</b> <ul style="list-style-type: none"> <li>Distribute the counters to the children.</li> </ul> <b>T: "I am going to add one more counter to the box that has 3 counters."</b> <ul style="list-style-type: none"> <li>Draw 1 more counter on the model on the board, so that it shows 4 counters on one side and 2 counters on the other side.</li> <li>Have the students model the picture on the board with their counters.</li> </ul> <b>T: "I wan you to draw the two boxes on your board. Put the same number of counters in the boxes, like I did."</b> S: will draw the two boxes and put counters in each box to match the one on the board. <b>T: "How many counters do I have in this box now?"</b> S: will say "4". <ul style="list-style-type: none"> <li>Write a number 6 above the two boxes on the whiteboard.</li> </ul> <b>T: "What addition sentence could you write for these counters? Please write it and then share it with your neighbor."</b> S: will write and say " $4 + 2 = 6$ " to their neighbor. <b>T: "Read the addition sentence with me."</b> S: will say "4 plus 2 equals 6." <b>T: "Cover the 2 counter on the model."</b> <ul style="list-style-type: none"> <li>Cover the 2 counters on the models on the whiteboard.</li> <li>Have the students cover the group of 2 counters on their model.</li> </ul> <b>T: "What subtraction sentence does this make? Write it down and tell your neighbor."</b> S: will write and say " $6 - 4 = 2$ " to their neighbor. <b>T: "Now cover the 4 counters on the model."</b> <ul style="list-style-type: none"> <li>Cover the 4 counters on the models on the whiteboard.</li> <li>Have the students cover the group of 4 counters on their model.</li> </ul> <b>T: "What subtraction sentence does this make? Write it and tell your neighbor."</b> S: will write and say " $6 - 2 = 4$ "to their neighbor.		

**T: "Look at the subtraction sentences. Look at the addition sentences. How are they the same?"**

S: will say, "same numbers."

**T: "How are the sentences different from each other?"**

S: will say "numbers in different order" or "plus or minus signs"

**Guided Practice: (15 minutes)**

*Use the modeling cycle:*

Teacher Does:

**T: "Let's look at another problem. I am going to draw 1 counter in the first box. You do the same."**

- Draw 1 counter in the first box on the whiteboard.
- Have the students model the picture on the whiteboard with their counters.

**T: "I am going to draw 6 counters in the second box. How many counters are in the second box?"**

S: will say "6".

**T: "Good, you draw 6 counters in the second box too."**

**T: "How many counters are in the two boxes altogether? Tell your neighbor."**

S: will say to their neighbor, "7"

- Write a number 7 above the two boxes on the whiteboard.

**T: "What addition sentence could you write for these counters? Write it and say it to your neighbor."**

S: will write and say " $1 + 6 = 7$ " to their neighbor.

- The teacher will record this addition sentence on the whiteboard.
- Have the students record this addition sentence on their whiteboard.

**T: "Read the addition sentence with me."**

S: will say "4 plus 2 equals 6."

**T: "Cover the 6 counter on the model."**

- Cover the 6 counters on the models on the whiteboard.
- Have the students cover the group of 6 counters on their model.

**T: "What subtraction sentence does this make? Write it and share it with your neighbor."**

S: will write and say " $7 - 6 = 1$ " to their neighbor.

**T: "Now cover the 1 counter on the model."**

- Cover the 1 counter on the models on the whiteboard.
- Have the students cover the group of 1 counter on their model.

**T: "What subtraction sentence does this make? Write it and share it with your neighbor."**

S: will write and say " $7 - 1 = 6$ ".

**T: "Let's say the subtraction sentence together.  $7 - 1 = 6$ . Good job!"**

**T: "How are the addition and subtraction sentences alike?"**

S: will say, "they all use the same numbers."

Students Do with Teacher:

**T: "I need a student to help me."**

- Pick a student to come up and demonstrate the activity with the teacher.

**T: "Let's look at another problem. I am going to draw 2 counters in the first box."**

- Draw 2 counters in the first box on the whiteboard.
- Have the student volunteer model the picture on the whiteboard with the counters.

**T: "I am going to draw 6 counters in the second box. How many counters are in the second box?"**

S: will say "6".

**T: "I have 8 counters altogether."**

- Write a number 8 above the two boxes on the whiteboard.

**T: "Now I want you to think of an addition sentence that could go with my picture."**

S: will say either " $2 + 6 = 8$  or  $6 + 2 = 8$ ".

- The student volunteer will record this addition sentence on the whiteboard.

**T: "Now I want you to think of one subtraction sentence that could go with my picture."**

S: will say " $8 - 2 = 6$ ".

- The student volunteer will record this subtraction sentence on the whiteboard.

**T: "What is a second subtraction sentence that could go with picture?"**

S: will say " $8 - 6 = 2$ ".

- The student volunteer will record this subtraction sentence on the whiteboard.

**T: "Great job!"**

**2 Students Do:**

**T: "I need 2 students to help me. Raise your hand if you want to help me."**

- Teacher will choose 2 students.

**T: "You two are going to demonstrate this activity for us today. Student #1 will draw counters in the first box and counters in the second box. The number of counters draw in the picture needs to be less than 10. Student #2 will write one addition sentence that goes with the picture and two subtraction sentences that go with the picture."**

S: #1 draws counters in the two boxes.

S: #2 will write one addition sentence that goes with the picture. Then students #2 will write two subtraction sentences that go with the picture.

**T: "Thank you for helping. You two may go back to your seats."**

**All Students Do:**

**T: "Now you all know how to do the activity. I am going to separate you into groups of two. When I say your name take your supplies and find a place to sit with your partner. You will have 5 minutes to do this activity with your partner. Take turns doing each job. When I clap my hands I want your attention on me."**

- As the teacher calls on the students they find a place in the classroom to work with their partner.
- Teacher will walk around the classroom as the students do the activity and make sure they are on task.

**T: (Clap to get their attention.) "You have 10 seconds to put your supplies away and sit at the carpet. 10,9,8,7,6,5,4,3,2,1. Good, you all made it."**

**Independent Practice: (12 minutes)**

**T: "Now it is your turn to do it on your own. Each of you will be given this worksheet. Let's do the first problem together."**

- Pass out guided practice page 74-75.
- The teacher will read problem #1 on page 74 to the students.

**T: "How many counters are in the first box?"**

S: will say "1".

**T: "How many counters are in the second box?"**

S: will say "5".

**T: "How many counters are in the two boxes altogether?"**

S: will say "6"

**T: "Cover the 5 counters on the picture. What subtraction sentence does this make?"**

S: will say " $6 - 5 = 1$ ".

S: will record this subtraction sentence on the first row.

**T: "Cover the 1 counter on the picture. What subtraction sentence does this make?"**

S: will say " $6 - 1 = 5$ ".

S: will record this subtraction sentence on the second row.

**T: "What addition sentence could you write for this picture?"**

S: will say " $1 + 5 = 6$ ".

S: will record this addition sentence on the third row.

**T: "Now it is your turn to do problems #2, 3, 4, 5, and 6. You will have 5 minutes, when I clap my hands come back to the carpet."**

- Students will get to work finishing pages 74-75. As they are working independently the teacher will walk around the room asking students to answer questions and check for any misconceptions.
- Teacher claps hands and students return to the carpet. Do problems 7, 8, and 9 on the problem solving page together.

**Closing: (4 minutes)**

- Collect the papers and bring the class together on the floor.

**T: "Let's look at question #3 on page 75."**

**T: "How many counters are in the first box?"**

S: will say "5".

**T: "How many counters are in the second box?"**

S: will say "3".

**T: "How many counters are in the two boxes altogether?"**

S: will say "8"

**T: "Cover the 3 counters on the picture. What subtraction sentence does this make?"**

S: will say " $8 - 5 = 3$ ".

**T: "Cover the 5 counter on the picture. What subtraction sentence does this make?"**

S: will say " $8 - 3 = 5$ ".

**T: "What addition sentence could you write for this picture?"**

S: will say " $5 + 3 = 8$ ".

**T: "Great job today!"**

**Assessment:**

**Guided Practice**