Grade 1	Lesson: 6-5 Using Addition to Subtract	Reference to English

Math Standard(s): 1.OA.4   **Domain: Operations and Algebraic Thinking**

Content Objective(s):	Language Objective(s):
Students will solve addition problems by recognizing and recording its parts in small groups. *I can solve addition problems by recognizing and recording its parts with a small group.*	Students will speak the words inside, outside and in all while adding parts. *I can speak the words inside, outside and in all while adding parts.*
Essential Understanding: 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.	**Academic Vocabulary:** **Listen:** **Read:** **Write:** **Speak:** **Sentence Frame:**
Materials: • Number Cards 12 – 20 (Teaching Tool 10) • Counters (Teaching Tool 14)	**Language and Word Wall:**

Lesson: Using Addition to Subtract	Instructional Time:

Opening: (minutes)
- Pass out white boards, erasers, and markers.

T: "You have learned how to use a part-part-whole model to write related addition and subtraction facts. Let's do one together."

T: "I am going to write 3 numbers on the board. 6, 14, 20. I am going to write one addition fact, 6 + 14 = 20. (Teacher will write it on the board) **I need you to write the other on your white board. Remember to use the same numbers."**

S: *will write the other addition fact with the same numbers, 14 + 6 = 20.*

- Prompt/help students as needed.

T: "Show me the addition fact you wrote on the board. Good job, I will write it on my board. 14 + 6 = 20. Look at the two equations. They have the same numbers, 14, 6, 20. Now let's use the same numbers to do subtraction facts. I will write the first one, you will write the 2nd one. 20 – 14 = 6. (Teacher will write it on the board) **Your turn, write the other subtraction facts on your white board."**

S: *will write 20 – 6 = 14 on their white board.*

T: "Show me your equations. Good, I will write it on the board too. Say it with me as I write it, 20 – 6 = 14."

T: "Look at these 4 equations. 2 addition facts and 2 subtraction facts. They all use the same numbers so they are a FACT FAMILY."

T: "Today you will use a part-part-whole model and addition to solve subtraction problems."

Introduction to New Material (Direct Instruction): (minutes)

T: "I am going to write part of an equation on the board. 14 – 5 = _____. How can we use a related addition fact to help solve the problem? When I put 14 at the top and 5 counters in the box to the left, how can I figure out the missing number? What can I put in the other box?"

T: *will respond, "counters"*

T: "Yes I can put counters in the other box. How do I know the amount of counters I should put in the right box? We know we have 5 counters in the left box, will you please help me count on until I reach 14?"

S: *will count on with the teacher 6,7,8,9,10,11,12,13,14."*

T: "Good, now we have 5 counters in the left box and how many counters are in the right? Let's count the counters we just put into the right box."

S: *will count with the teacher, "1,2,3,4,5,6,7,8,9."*

T: "I will write 5 in the left box with the 5 counters and 9 in the right box with the 9 counters. Let's fill in the blank in the addition fact. 5 + 9 = 14. Good, that is the addition fact. Tell your neighbor the other addition fact."

S: *will tell their neighbor "9 + 5 = 14" or "5 + 9 = 14"*

T: "Raise your hand and tell me one related addition fact."

S: *will raise their hand and say, "9 + 5 = 14" or "5 + 9 = 14"*

T: "Let's look at the original problem. 14 – 5 = _____. What number do we need to use to fill in the blank? Show me with your hands, is 14, 9 or 5?"

S: *will show with their hands, 9.*

T: "You are right! Let me write 9 in the blank."

T: "We have two addition facts 9 +5 = 14, 5 + 9 = 14 and one subtraction fact 14 – 5 = 9. What is the last subtraction fact? Tell

your neighbor?"

S: *will turn to their neighbor and say, "14 – 9 = 5"*

T: "Let's write the last subtraction fact on the board with the others. Say it with me, '14 – 9 = 5'."

Guided Practice: (minutes)

Use the modeling cycle:

Teacher Does:

T: "Now I am going to separate you into groups of 2. You will be given 2 more problems on the board and I need you and your partner to solve them. You will take turns saying the addition and subtraction facts."

1 Students Does with Teacher:

T: "I need one students to come up and help me."

• Teacher will choose one students to come up.

T: "Here is our problem, 16 – 8 = _____. Where do I put the 16 in this diagram?"

• Teacher will have the small box on top with two larger boxes below it draw on the board.

S: *will place the 16 in the small box at the top of the diagram.*

T: "Correct, we put the 16 at the top. What about the 8, where do we put the 8 counters?"

S: *will put the 8 counters in the left box.*

T: "Look at the subtraction fact again, 16 – 8 = _____." How many counters go in the right box?"

S: *will figure out how many counters go in the right box.*

• Help the student as needed, but let them figure out as much as they can on their own.

T: "They just put 8 counters in the right box. Let's count on to make sure it is correct. We start with 8,9,10,11,12,13,14,15,16."

S: *will count with the teacher.*

T: "All are there. So let's fill in the blank. 16 – 8 = 8. You say the subtraction fact."

S: *will say, "16 – 8 = 8"*

T: "Good, now write the addition fact and say it."

S: *will write the related addition fact and say it, "8 + 8 = 16"*

T: "Then we will switch and I will say it for the other problem."

All Students Do:

T: "Now it is your turn. I will separate you into partners. You will complete the 2 subtraction facts written on the board. I want to hear you saying the facts as you go and write them down."

T: "I will call out the groups. Collect the papers and get started."

• Equations: 12 – 5 = _____ and 15 – 8 = _____.

• Teacher will walk around the room to help students.

• When 5 minutes are up bring the students back together on the carpet.

Independent Practice: (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."

T: "Look at this picture. What is the number at the top?"

S: *will respond, "14"*

T: " Yes, we have 14 at the top. How many yellow dots do you see on the left? Count together."

S: *will count with the teacher. "1,2,3, 4,5,6,7,8"*

T: "Correct, our equation is 14 – 8 = _____. What is the missing number? Let's count on from 8 and put those counters in the right box. 8, 9,10,11,12,13,14.

S: *will count with the teacher "8, 9,10,11,12,13,14"*

T: "Tell your neighbor how many counters you put in the right box."

S: *will tell their neighbor the number of counters they put in the right box "6"*

T: "There are 6 counters in the right box. Let's say the equation together. 14 – 8 = 6."

S: *will say, "14-8=6" with the teacher.*

T: "What is the related addition fact? We know 8 + _____ = 14. What is the missing number? Raise your hand and I will write it on the board."

S: *will raise their hand and say "6"*

T: "Raise your hand and tell me the whole addition fact sentence."

S: *will raise their hand and say "8 + 6 + 14"*

T: "Now I am going to give you each a paper. Please do problems 2-5 at your desk. You have 5 minutes."

• Teacher will pass out the papers and students will begin the Guided Practice.

• Teacher will walk around the classroom to help the students who need help. If students are finishing faster than 4 minutes, cut it short and bring them back together when most of the students are finished.

T: (clap hands to get the students attention) **"Please leave your papers at your desk and let's do questions 3 and 5 together."**
- Go through questions 3 and 5 the same way you went through question 1 (faster if the students understand the concept).

Closing: (4 minutes)
- Collect the papers and bring the class back together on the floor.
- Hand out the student white boards with markers and erasers.

T: **"Great Job today! Let's look at question 7. As I read the story problem I will also draw the picture on the board, I want you to draw it on your write boards too."**

S: *will draw the story problem on their white board and show the teacher by raising up their board.*

T: **"A box (draw a box) had 17 robot parts (draw 17 dots for robot parts), count with me, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17"**

S: *will count with the teacher as they draw 17 dots to represent the robot parts.*

T: **"Fred used some of the parts. Now there are only 8 left. We know that there are 8 left, if we cross out those 8 we will know how many he used. Let's count to 8 as we cross out the dots. 1,2,3,4,5,6,7,8."**

S: *will count and cross out 8 dots with the teacher.*

T: **"How many dots are left? Let's count together. 1,2,3,4,5,6,7,8,9. There are 9 dots not crossed out. Let's write the equation. 17 - ___ = 8? Tell you neighbor the missing number."**

S: *will turn to their neighbor and say "9"*

T: **"Let's say the whole equation together. 17 – 9 = 8. Perfect. What is the addition fact? Write it on your white board."**

S: *will write the addition fact on their white board.*

T: **"3,2,1 show me."**

S: *will raise up their boards.*

- Teacher will scan the boards for correct answers.

T: **"Now, tell your neighbor the addition fact."**

S: *will turn to their neighbor and say "9 + 8 = 17" or "8 + 9 = 17"*

T: **"Good job. Let's look at number 8."**

Continue with number 8 and 9 as a whole group.

Assessment:

Guided Practice