

Grade 2	Lesson: 2-4	Reference to English
Math Standard(s): 2.OA.1 Domain: Operations and Algebraic Thinking		
Content Objective(s):		Language Objective(s):
Students will use the commutative property to find sums. 我可以用加法交换性来找出总和。		Students will use the word separate when talking about subtraction problems. 当我在讲关于减法问题时，我可以用“分开”这个词语。
Essential Understanding: Two numbers can be added in any order.		Academic Vocabulary: Listen: 加数，加法交换性，顺序 Read Write: Speak: 加数，加法交换性 Sentence Frame: ____是____的加法交换性
Materials: <ul style="list-style-type: none"> Beads of different colors and a string Connecting cubes (teaching tool1) (9 each of two different colors per child) Guided Practice Sheet 		Language and Word Wall: 加数
Lesson: Adding in any order		Instructional Time: 30 mins

Opening: (3 minutes)

T: "You know how to add lots of pairs of numbers together. Think to yourself for a minute, does it matter which order the numbers are added in? That's what we're going to learn today."

"I have a string here to make a necklace. I'm going to put on 1,2,3,4 red beads. Now I want to put on 1,2,3,4,5,6 yellow beads. Do you like my beautiful necklace?"

Hold it up for the class to see.

"There are 4 red beads and then 6 yellow beads, what addition sentence shows the number of beads in all?"

Write $4+6=10$ on the board. Turn the necklace around so the 6 yellow beads are on the opposite side of the necklace.

"What addition sentence shows the number of beads in all now?" Ask a student to come up and write

S: will write $6+4=10$

T: "Why does the total number of beads stay the same? Think about it to yourself."

Introduction to New Material (Direct Instruction): (5 minutes)

Each student should have connecting cubes in two colors and page 49.

T: "Use your cubes to show $4+5=9$."

S: will use two colors to model

T: "What will happen to the sum if you change the order of the numbers being added? Try it and see"

S: will use cubes to flip the addends

T: " $4+5$ is the turn around fact of $5+4$."

"Now put your cubes down for a minute, hands in your lap and look at page 49."

"The machine on the top of the page is a magic turn around fact machine. We'll be using it today to help us solve the problems. "

"Make with me a stack of 2 cubes of the same color, and another stack of 4 cubes of another color."

S: will use cubes

T: "Let's connect these two stacks. What addition fact do they show? Tell your neighbor."

S: will say $2+4$

T: Write $2+4=6$ on the board. "Now flip your stack around, like this."

S: will flip their stack

T: What addition fact do they show? Write $4+2=6$ on the board. Thumbs up if this is the sentence it now shows

S: will use thumbs

T: "We can use cubes like this to help us see that you can flip the addends in any addition sentence and the answer will still be the same. These are called turn-around facts."

Guided Practice: (10 minutes)

T: "Now it's your turn to try it with a partner. Think of an addition sentence, make a stack of each color, like we just did, and stick them together. Place your stack in the math machine. Like this."

Show them where to place the train

" Write the addition sentence in the spaces below the machine. Count down backwards from 5 (5,4,3,2,1) and then flip your stack around to find the turn around fact, and write it down. When I clap my hands put your cubes away and get ready to listen."

S: will work with a partner to do the turn around facts.

Use the modeling cycle:

Teacher Does:

T: " Now look at page 50. They have the cubes there for you, and you write the addition sentences. Let's do number 1 together. Count with me, how many red cubes? 1,2,3"

S: will count out loud

T: "How many blue cubes? 1. Write the addition sentence below."

S: will write in the addition sentence

2 Students Do with Teacher:

T: "Now I'm going to ask 2 helpers to lead us in doing number two. Make sure you tell us ____ is the turn around fact of ____"

S: two students will come up and lead the class in doing number 2

T: "Looks like you've got it!"

Independent Practice: (7 minutes)

T: "Now you have time to practice on your own. Do number 3-10. If you want to use your cubes, you can. Each time you find your answer, whisper or say in your head ____ is the turn around fact of ____"

S: will do number 3-10 independently

Assessment:
Response activity, and page 52 given in English

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