

A Subtraction Story Problem Aloud

Students have recently been introduced to subtraction story problems. Notice how this teacher connects students back to the context, describes strategies, and models the strategies on paper and with various tools. He also encourages students to listen to one another, and to think about and compare a variety of strategies, including ones other than their own.

Teacher: I'm going to tell you another story. Remember that your job is to listen and try to picture it in your mind. My story today is about a girl named Libby and a boy named Jonah. Libby is working at the art table, and she has 10 crayons. Picture it, do you see it? Jonah goes over to the art table, and Libby is really, really generous and gives Jonah 4 crayons. Who can retell that story?

Danielle: Wait, how many did she have?

Another student is worried that he missed the names of the students. The teacher reassures them, and then retells the story. He asks for volunteers to retell it in their own words.

Keena: Libby was sitting at the art table. She had 10 crayons. Jonah went over to the art table, and Libby was really generous and gave Jonah 4 crayons.

Vic: Libby went to the art table, and Libby had 10 crayons, and Jonah came over, and Libby was really, really nice and gave him 4 crayons.

Teacher: Does Libby have more than 10 crayons or fewer than 10?

Carol: Less because she is giving them away.

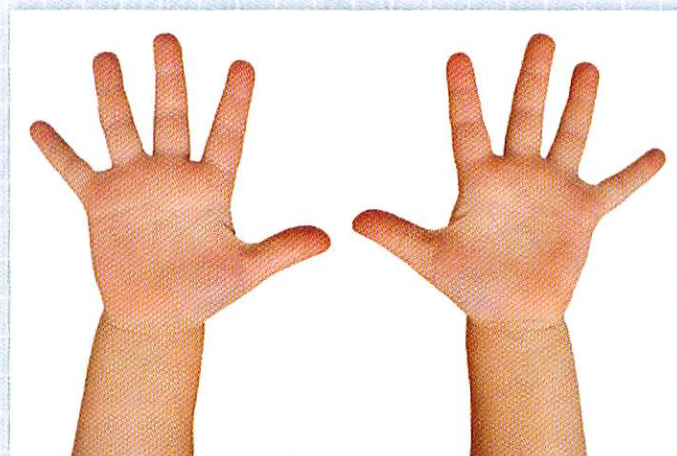
Marta: Less because Jonah took 4 and that's 6.

Teacher: So you're thinking of the answer, and that's less than 10?

Marta: Yes.

The teacher uses this comment to transition to asking all students to solve the problem. He rereads the story and invites students to use the cubes in the center of the rug. He gives them some time to work and, when students seem to have finished, asks them to share strategies.

Carol: I took my hands and holded up 10 hands, I mean fingers, and then I took away 4, and then I counted the ones up, and I got 6.



Teacher: Carol held up 10 fingers [demonstrates this strategy]. What did her fingers stand for? (*the crayons*) Then she took away 4, and counted the fingers that were left. Did anyone do something similar to Carol?

Richard: I did [holds up 5 fingers on each hand]. 5 and 5 make 10 and take away 4 [puts down 4 fingers on one hand], leaves this [shows the remaining fingers], and 1 and 5 make 6.

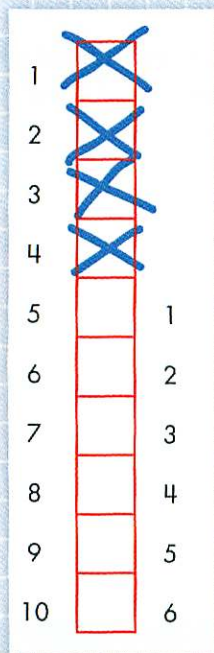
Teacher: Interesting. Could you show your idea with cubes?

Richard makes 2 towers of 5 cubes, takes off 4 from one tower, and puts the remaining cubes into a single tower of 6.

Neil: I did it with cubes too. I built a 10 [shows a tower of 10], then take away 4 [breaks off 4]. Six are left—1, 2, 3, 4, 5, 6.

Teacher: Can someone tell us what Neil did?

Allie: He took out 10 cubes and then took 4 away, and then he counted how many were left.



Teacher: OK, who has another way of solving the problem?

Marta: I counted backward with my fingers. I started with 9.

Teacher: And how did you know when to stop?

Marta: When I got to 4.

Leah: Why did you start with 9?

Talisa: Yeah, shouldn't you start with 10?

Marta: I put up 4 fingers and I counted them backward until I had none up.

Teacher: What did you say when you put down one finger?

Marta: 9.

Paula: You pretend 10 isn't there and you go 9, 8, 7. . .

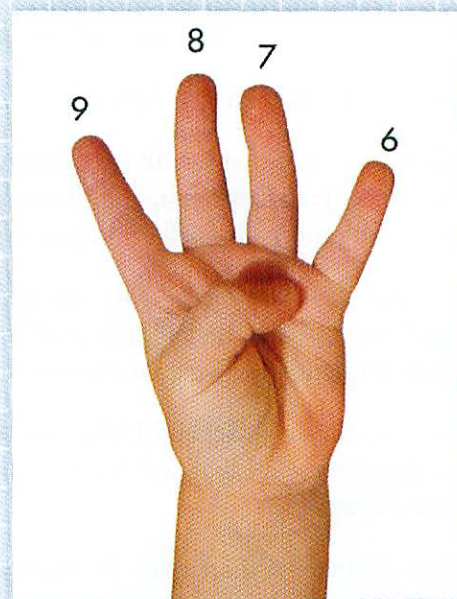
Teacher: What is Marta pretending these 4 fingers are?

Chris: The 4 crayons Libby gave to Jonah.

Teacher: So if Libby had 10 and gives one to Jonah, how many does she have left?

Leah: 9. Oh! That's why the first number you said was 9. It's after you take away the first crayon.

The teacher records Marta's strategy as she described it, but he also models it on the class number line, in writing and aloud, thinking that seeing the jumps might help more students have access to Marta's strategy.



Teacher: Two people used their fingers today. Carol showed all 10 crayons on her fingers, then took away 4, and counted how many fingers were left. Raise your hand if you used your fingers like Carol. Raise your hand if you counted backward on your fingers like Marta did.