

VIDEO TRANSCRIPTION: JESSICA'S CLASS

Teacher: Say it one more time Arwin

Student: I can't believe that it when I have no numbers I can't understand it. when I have numbers I can understand it

T: That's a good question. Can you understand a story problem if you don't have the numbers?

S: no, yes.

T: Primly why do you say yes?

S: Even though it doesn't have any numbers sometimes if it has the words like "If Annie had so many pieces of bread" so if it has the words it can still help you out, so it doesn't need to have the numbers.

T: Ok so it doesn't need the numbers because the words can help you out? That's interesting. Mason

S: I agree with Primly cause I didn't understand the first part because it doesn't really matter if it has the numbers because you can probably find it out if you read the words

T: What will you be able to figure out

S: you'll be a better mathematician if you don't use the numbers to help you

T: because boys and girls in the change plus change minus problems that we were just talking about what's the important thing we need to find out. We need to find out if a change is happening and if we need to do what? does anyone remember? Alicia

S: add or subtract

T: If we can add or subtract. by reading this problem could we figure out how to add or subtract? That's a question. Raise your hand. Eeve?

S: Well I read this and this said how many beans did she have left so just by reading the sentence without the numbers you could also find out if it's going to be a subtraction or an add.

T: did everyone understand what Eeve was saying? can someone say exactly what Eeve said? Tanner what did she say?

S: If you don't have the numbers you can you still know if it is a subtraction equation or an adding equation

T: Ya by using what, what things did she say to use?

S: the story

T: well the story and she pointed out some very specific parts so you're exactly right. Let's go ahead and read this problem. I'm going to read it, and then we're all going to read it together and then I'm going to give you just a minute of think time to think how you are maybe going to solve this problem. be ready to talk about that. Elnia had blank beads she used blank of them to make a bracelet how many beads does she have left? So let's read it all together.

T&S: Elnia had blank beads she used blank of them to make a bracelet how many beads does she have left?

T: let's just give everyone a chance to think about this. Raise your hand if you're starting to form a plan in your head of how you're going to solve this. Once you've kind of thought about what it's saying go ahead and raise your hand if you have a way to solve this or what it's saying. What kind of strategies and what do you notice in the problem? How are you going to know to do that. What helped you? Kind of what Eevee already said. she had a great start. Jalynn I haven't heard from you

S: How many beans and so you can put the number of beans so like . She had 5 beans. She used 3 beans up. How many does she have left? which would be 8.

T: Ok. Bo?

S: I think you're trying to add on. Cause if she took 3 of them then you only have 2 left. see if you had 5 and you took away 3 it would be 2 and 2 plus 3 equals 5 and I think you're adding on

T: and why would you not add on in this problem Bo? what are you thinking

S: Because it says she used not I bought more

T: Boys and girls I want you to go ahead and solve this problem.

Math Problem Solving is FUN!
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First you take the problem and you Read it, you Read It!
First you take the problem and you Read it, you Read It!

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Then you use the information and you Plan it, you Plan it!
Then you use the information and you Plan it, you Plan it!

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Next you use the plan and you Solve it, you Solve it!
Next you use the plan and you Solve it, you Solve it!

Math Problem Solving is FUN!
Math Problem Solving is FUN!

Last you look back and you Check it, you Check It!
Last you look back and you Check it, you Check It!

Math Problem Solving is FUN!
Math Problem Solving is DONE!

Teacher Moves to Support a Child's Thinking before a Correct Answer Is Given

Category	Sample Teacher Moves
<i>Ensure that the child understands the problem.</i>	Ask him to explain what he knows about the problem. Rephrase or elaborate the problem. Use a more familiar or personalized context in the problem.
<i>Change the mathematics in the problem to match the child's level of understanding.</i>	Change the problem to use easier numbers. Change the problem to use an easier mathematical structure.
<i>Explore what the child has already done.</i>	Ask him to explain a partial or incorrect strategy. Ask specific questions to explore how what he has already done relates to the quantities and relationships in the problem.
<i>Remind the child to use other strategies.</i>	Ask him to consider using a different tool. Ask him to consider using a different strategy. Remind him of relevant strategies he has used before.

Teacher Moves to Extend a Child's Thinking after a Correct Answer Is Given

Category	Sample teacher moves
<i>Promote reflection on the strategy the child just completed.</i>	Ask her to explain her strategy. Ask specific questions to clarify how the details of her strategy are connected to the quantities and mathematical relationships in the problem.
<i>Encourage the child to explore multiple strategies and their connections.</i>	Ask her to try any second strategy. Ask her to try a second strategy connected to her initial strategy in deliberate ways (e.g., more efficient counting or abstraction of work with manipulatives).
<i>Connect the child's thinking to symbolic notation.</i>	Ask her to compare and contrast strategies. Ask her to write a number sentence that "goes with" the problem. Ask her to record her strategy.
<i>Generate follow-up problems linked to the problem the child just completed.</i>	Ask her to solve the same or a similar problem with numbers that are more challenging. Ask her to solve the same or a similar problem with numbers that are strategically selected to promote more sophisticated strategies.