PBS Lesson Series

Math: Grade 1, Lesson 4, Contextual Problems with Number Bonds

Lesson Objective: Students will use ten frames as a strategy to solve addition based contextual problems with a focus on making ten.
Practice Focus: Students will be adding within 20 (focus within 10) using the following strategies: counting on and number bonds
TN Standards: 1.OA.C.5
Teacher Materials:

- Paper and pencil, or white board and markers
- 10 counters

Students Materials:

- Paper and a regular pencil, and a surface to write on
- The student packet for Math, Grade 1, Lesson 4 which can be found at www.tn.gov/education

Teacher Do	Student Do
Opening **Hello! Welcome to Tennessee's At Home Learning Series for math! Today's lesson is for all our 1st graders out there, though all children are welcome to tune in. This lesson is the fourth in our series.** **My name is ____ and I'm a ____ grade teacher in Tennessee schools! I'm so excited to be your teacher for this lesson! Welcome to my virtual classroom!** **Today we will be working with addition strategies in mathematics! Before we get started, to participate fully in our lesson today, you will need:** • **Paper and a regular pencil, and a surface to write on** • **The student packet for Math, Grade 1, Lesson 4 which can be found at www.tn.gov/education** **If you didn't see our previous lesson, you can find it at www.tn.gov/education. You can still tune in to today's lesson if you haven't seen any of our others. But, it might be more fun if you first go back and watch our other lessons since we'll be talking about things we learned previously.** **Ok, let's begin!**	Student gets materials.
Intro **Hello! Today we are going to look at addition strategies and see how they relate to each other.**	

[Place 10 counters on the table or document camera.] **I am placing 10 counters on the table. Count them with me.** [Touch and count.] **1, 2, 3, 4, 5, 6, 7, 8, 9, 10. Good job! Now close your eyes. No peaking!** [Pause.] [Teacher puts 1 counter in hand.] **Okay, you can open your eyes now.** [Pause.] **I have put one or more of the counters in my hand. Who can use their x-ray vision and tell me how many counters are in my hand?** [Pause.] **Those are some good guesses. Write down your guess and we will check it later.**	Student counts. Student closes their eyes. Student opens their eyes. Student guesses. Student writes down their answer.
<u>Teacher Model</u> **How can we know for sure how many are in my hand without me showing you? Any ideas?** [Pause.] **Those are all great guesses!** **Let's draw a number bond and see if it can help us! Can you draw a number bond on your paper with me?** [Pause.] [Teacher draws a number bond.] **How many counters did we start with?** [Pause.] **Yes, we had 10 counters. Where does the 10 go in our number bond?** [Pause.] **Way to go! It goes in the biggest square because it's the whole. Fill in the 10 in your number bond as I do mine.** [Teacher draws a 10 in the biggest square.] **How many counters were left on the table?** [Pause.] **Yes, 9 counters were left on the table. Where does this number go in our number bond?** [Pause.] **Nice! It goes in one of the smaller squares. Fill in the 9 in your number bond as I do mine.** [Teacher draws a 9 in one of the smaller squares.] **What goes in the last square?** [Pause.] **Ah! That's the big question, isn't it? How many counters were in my hand?** [Pause.] **How can we figure that out?** [Pause.] **Did I hear someone say we can count on using our fingers?** [Pause.] **Why, yes we can! Where do we start?** [Pause.] **Excellent!** [Teacher points to the 9 in the number bond.] **Let's start with 9. Can you point to the 9 you drew in your number bond?** [Pause.] **Now let's count on with our other hand, and let me know when to stop.** [Holds out other hand and puts out one finger to count on.] **10.** [Pause.] **What? Stop already? Hey! You're right! We are already there!**	Student answers. Student draws a number bond with the teacher. Student answers 10. Student answers biggest square. Student fills in number bond. Student answers 9. Student answers smaller square. Student fills in number bond. Student guesses. Student answers. Students answers. Student answers 9. Student points to 9. Student says stop. Student answers.

So how many counters do I have in my hand? [Pause.] [Teacher holds up the one finger from counting on.] **Only 1? Let's see.** [Opens hand] **You were right! 1 counter! Let's write the number in the number bond. Fill in yours as I complete mine.** [Writes number 1 in number bond.]	Student fills in number bond.
That was fun. Now let's practice counting on with another example.	
<u>Guided Practice</u>	
Let's read this problem together. You can read along with me!	
Emma and her sister Johanna each got books from the library. Emma got 4 books. They got 9 books altogether. How many books did Johanna get?	Student reads along.
Let's draw and label a number bond to show the part of the books Emma checked out and the part that Johanna checked out. Can you draw a number bond with me? [Pause.] [Draw a number bond.]	Student draws a number bond.
How many books did they get altogether? [Pause.] **Yes, they got 9 books altogether. We will write the number 9 in the top circle to show how many books in all. That is the whole amount. Fill yours in too!** [Teacher fills in 9 in the number bond.]	Student answers 9. Student draws a 9 in the number bond.
How many books did Emma get from the library? [Pause.] **4? Yes…4 books. Write 4 in the bottom circle and label it with an E for Emma.** [Teacher fills in the number bond.]	Student answers 4. Student draws a 4 in the number bond and labels it with an E.
We can use the Counting On strategy to find out how many books Johanna got by counting from 4 to 9. Let's count on from 4. Do it with me. 4, 5, 6, 7, 8, 9.	Student counts on from 4.
How many did we add to 4 to get to 9? [Pause.] **5, Yes, we counted 5 more. So, how many books did Johanna have?** [Pause.] **5? Yes, you are correct. Johanna got 5 books.**	Student answers 5. Student answers 5.
Write 5 in the other circle and label it with a J for Johanna. [Teacher fills in number bond.] **You used the Counting On strategy to find out how many books Johanna had. Great job using the Counting On strategy!**	Student fills in number bond.
I think we have time to do 1 more problem together! Draw your number bond to get ready! [Teacher draws number bond.]	Student draws a number bond.

Let's read this problem together. You can read along with me!	
Some ducks were swimming in a pond. 3 more ducks swam up. Now there are 7 ducks. How many ducks were originally in the pond?	Student reads along.
Okay! You try first. Think about the numbers in the problem and where they go in your number bond. Fill in your number bond. Also, think about a strategy and find the answer and put it in the number bond too. [Pause while student works.]	Student works.
What number did you use first? [Pause.] **Wait, I hear a 7! Yes 7 is one of the numbers. Where does it go?** [Pause.] **That's right! There are 7 ducks altogether. It goes in the big rectangle.**	Student answers 7. Student answers big space.
Do you see another number? [Pause.] **I heard a 3! That's right! 3 more ducks joined! And you put that in a small rectangle?** [Pause.] **Way to go!**	Student answers 3. Student answers yes.
Now, what was you answer? Shout it out! [Pause.] **4? That's right there were 4 ducks! Did you count on?** [Pause.] **3, 4, 5, 6, 7? I am so proud of you!**	Student answers 4. Student answers.
Did your number bond look like this? [Pause.] [Show a correct number bond]	Student answers.
<u>Independent Practice</u> **Great job students! Thanks for helping me use my number bonds to solve these problems!** **Now it's your turn to try some on your own. I'm going to read each problem for you and then you can work on your own after the show!** **9 little bears went to play in the forest. 2 Bears wanted to play tag. The other bears wanted to play hide-n-seek. How may bears wanted to play hide-n-seek?** [Pause.] **8 bears were fishing for dinner. Five bears had been fishing all day. The rest of the bears came after lunch. How many bears came after lunch?** [Pause.] **Rich bought 6 cans of soda on Monday. He bought some more on Tuesday. Now, he has 9 cans of soda. How many cans did Rich buy on Tuesday?** [Pause.]	Student completes independent practice sheet.

Closing **Boys and Girls, I enjoyed doing some mathematics with you today! Thank you for inviting me into your home. I look forward to seeing you in our next lesson in Tennessee's At Home Learning Series! Bye!**	