

INSTRUCTIONAL PLANNING TEMPLATE

Overview and Context

Your name(s):	Brittany Tincher
Grade level and school:	Kindergarten, Wines Elementary
Title of lesson/activity:	The Addition Symbol (+)
Teaching date(s) and time(s):	Thursday, December 5 th , 12:30 pm
Estimated time for lesson/activity:	About 35 minutes
Overview of lesson:	This lesson will introduce the addition symbol, or plus sign, to students. They will continue to work with 10 beans with Xs on one side and Os on the other, and dump beans out of the cup. They will then sort X beans to the left of a popsicle stick with a plus sign drawn on it, and the O beans to the right. They will then fill out the attached worksheet, which transitions them from writing Xs and Os to writing a number sentence made up of the number of Xs plus the number of Os.
Context of lesson:	This lesson comes after 3 discussions in which students made combinations of various numbers using Xs and Os, and learned how the Xs and Os worked together to make the total number of beans. The students are beginning to understand addition without even realizing it, which fits perfectly with the next lesson in the curriculum (The Addition Symbol).
Sources:	<i>Everyday Math</i> book, with some revisions made by Mentor Teacher, Shanna Middleton, and myself.

Learning Goals

Learning Goals	Connection to Standards	Connection to Activities
Students will be able to represent addition using beans and addition symbol sticks (popsicle sticks with plus signs drawn on them).	K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations.	Students will first work with the beans by shaking out the 10 beans in their cup, and sorting them into piles based on whether the Xs or Os are facing up.
Students will be able to write number sentences, such as $2+8=10$.	K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawing, and record each decomposition by a drawing or equation (e.g., $5=2+3$ and $5=4+1$).	After using the beans, students will then write down the number of Xs that they have before the plus sign, the number of Os they have after the plus sign, and then the total of the two added together (which in this case will be 10) after the equal sign.

Attending to the Learners

Anticipating student ideas:	Students will likely remember making combinations with the beans, as this is the work I have done with them during our last three discussions. However, this time I want them to notice how many beans they have, and to record them in a different way. I anticipate that a few students in my class will catch onto number sentences
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	and addition quicker than others, so I expect to have to work through several examples with them.
Making the content accessible to all students:	By using all different types of materials (beans, pencil and paper, examples done as a class), I hope that the content will reach many different types of students in my class. I also expect that some students will need individual help, which will be provided by either myself, my Mentor Teacher, the Eastern student teacher, or our classroom aide. I also know that my Field Instructor is happy to help my students during my lessons. This means that there can be one adult at each table to help students individually, if needed.

Assessments

Type of Assessment	Learning-Goals Connection
Mid-lesson check (worksheet)	The brief mid-lesson check will assess whether or not students have grasped how to set up addition problems (with the beans), and also whether or not students are developing knowledge for how to write out a number sentence using addition.
End of discussion check	The brief assessment check will assess whether students are able to make number sentences based on the number of beans they see.

Instructional Sequence

Materials:	22 Dixie cups 22 sets of 10 beans 22 popsicle sticks 22 mid-lesson check worksheets 22 end of discussion checks bean magnets magnetic popsicle stick
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Time	Steps Describing What the Teacher and Students Will Do	Notes and Reminders (including management considerations)
5 min – Set up	<p>"We are going to do some more work with our Xs and Os today. The last few times I've worked with you, we've tried to make combinations of 10 using Xs and Os. But this time, we will not be making combinations!</p> <p>You all may remember that we started talking about looking at how the Xs and Os work together in our solutions to see how many beans we have all together. We are going to do some more of that today.</p> <p>First, I need to show you all a very cool symbol that we use in math. This is called an addition symbol, or a plus sign. It looks like this [draw + on the board]. What do you think we will use this for?</p> <p>You're right! We use this symbol to show that we are putting two things together into one big group. We're</p>	

	<p>going to practice doing this with our beans. When you get to your seats, you're going to have a cup that looks like this, and there will be some beans with Xs and Os on them inside the cup. I want each of you to gently shake up the cup, and pour your beans onto the table. I've got these cool magnetic beans that I made so you can see how I would do this. I'm going to stick those up on our board, and pretend that this is my tabletop. When I shake out my beans, I find that I've got some with Xs facing up, and some with Os facing up. I've also got this popsicle stick with our addition symbol on it. How do you think we could sort these beans?</p> <p>Right, let's put the X beans on this side of the stick [the left side], and the O beans on this side [the right side]!</p> <p>We are learning to make something called <i>number sentences</i>. Just like in reading and writing sentences with words, we start at the left, and read across to the right, like this. It's the same way with number sentences! We start reading at this side [the left side], and then read across this way [to the right].</p> <p>So, count out loud with me while I see how many X beans we have. Yes, we have 3 X beans! So I'm going to put those on this side [left], and write a 3 underneath it so I don't forget how many Xs we have. Now I'm going to count the Os. Count with me. Yes, we have 7 O beans! I'm going to put the O beans on this side [right], and write a 7 underneath so I don't forget how many Os we have. Now, let's count how many beans we have all together...</p> <p>It looks like we have 10 beans! How could we say this by reading our <i>number sentence</i> that we just made? Does anyone have any ideas?</p> <p>Three plus seven equals ten.</p> <p>Whoa, we talked about another new symbol; the equals sign! When you've got two things that you are adding together with our addition symbol, or plus sign, the number of them added all together, we are finding what the total is. The total is what the two numbers put together equal.</p> <p>Now, you are going to go back to your seats and try this on your own! You'll have five minutes to work on the paper at your seat. You might find that you've got time to make a few different number sentences. If so, you</p>	
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	<p>can flip over to the back and write some more!</p> <p>If you're wearing green, you may go to your seat quietly. If you're wearing blue, you may go to your seat quietly..."</p>	
5 min – independent work	<p>"Okay class, it's time to stop and come up to the rug! It's okay if you haven't finished yet, but put your name on your paper.</p> <p>Walk to the rug with your paper and sit on the perimeter or outside of the rug. Bring your papers with you.</p> <p>Raise your hand if you would like to share the number sentence that you made."</p>	
20 min – discussion	<p>[Record the solution on the board.]</p> <p>"How many Xs does it have? How many Os does it have? How did you make this number sentence?</p> <p>How do you know that your sentence is a correct sentence?</p> <p>_____, can you repeat what _____ just said in your own words?</p> <p>_____, do you agree that _____'s number sentence is a correct one? Why or why not?</p> <p>I'll take another volunteer. Raise your hand if you would like to share the number sentence that you made.</p> <p>[Record the solution on the board.]</p> <p>How many Xs does it have? How many Os does it have? How did you make this number sentence?</p> <p>How do you know that your sentence is a correct sentence?</p> <p>_____, can you repeat what _____ just said in your own words?</p> <p>_____, do you agree that _____'s number sentence is a correct one? Why or why not?</p> <p>I'll take one more volunteer. Raise your hand if you</p>	

	<p>would like to share the number sentence that you made.</p> <p>[Record the solution on the board.]</p> <p>How many Xs does it have? How many Os does it have? How did you make this number sentence?</p> <p>How do you know that your sentence is a correct sentence?</p> <p>_____, can you repeat what _____ just said in your own words?</p> <p>_____, do you agree that _____'s number sentence is a correct one? Why or why not?</p> <p>How would our number sentence look if we didn't write the Xs and Os on the paper, but only wrote the number of Xs and the number of Os?</p> <p>Is this way easier, or more difficult? Why do you think so?"</p>	
1 min – conclusion	<p>"Being able to make and read number sentences is very important! It's also important to learn to use the addition symbol, so we can learn how to put two groups of things together in one big group.</p> <p>I'm so excited that we now know how to make number sentences! I made some more worksheets like the one we did today for Mrs. Middleton to use during centers, so you can have the chance to make more number sentences with the beans during centers! "</p>	
5 min – end of discussion check	Distribute copies of the problem attached to this page. (will be attached in my email)	

Reflection on Planning

Learning goal for self:	I hope to hit all of the major discussion points which we highlighted in our Math Methods class, while still teaching the content effectively to my students.
Preparing to teach this lesson:	In preparing to teach, I met with my Mentor Teacher about three weeks prior to the lesson. We worked together to decide how to edit the lesson to fit the needs of our class. I prepared my own worksheets, as well as other necessary supplies (beans, sticks, etc.). I was in contact with my MT multiple times as I planned the lesson so I could make sure that I was on the right track with my lesson writing and planning.

	<p>I also found all of the possible number sentences:</p> <p>$10+0=10$ $9+1=10$ $8+2=10$ $7+3=10$ $6+4=10$ $5+5=10$</p> <p>And of course, in reverse order (although it might be worth it to note that reversing the order of the two numbers being added together does not change the problem, but I plan to talk with my MT about whether or not she wants me to say this. I don't want to get into too much during this lesson and overwhelm the students).</p> <p>$4+6=10$ $3+7=10$ $2+8=10$ $1+9=10$ $0+10=10$</p>
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