1.M.1 Lesson 11

Standards/Quality Indicators/Skills/Mathematical Practices/Literacy Practices
Missouri standards, quality indicators, and skills addressed by this lesson

- **1.RA.C.7**
  - Add within 20 using a variety of strategies.

Learning Objectives/Goals
The lesson's objectives and intended learning outcomes appropriate for meeting curricular and student needs

Objective:
- Solve add to with change unknown math stories a context for counting on by drawing, writing equations, and making statements of the solution

I can statement:
- I can add unknown math stories as a picture, writing equations, and making statements of the solution.

Rationale for Lesson
Why this lesson this way? Why use this/these objectives? Why are these best strategies to choose and use? Explain why this sequence of activities leads to displaying the knowledge called for by the objectives.

This lesson builds addition skills by helping students solve change unknown story problems. Using drawings, equations, and solution statements supports different learning styles and helps students understand counting on as a strategy for finding missing parts.

Prerequisite knowledge
What content covered previously this year or in prior years is necessary for this lesson?

- Count forward within 20
- Understand basic addition as putting together and counting on
- Recognize and write numbers up to 20
- Understand parts of a story problem (start, change, result)
- Use drawings to represent math situations
- Write simple addition equations

Lesson Structure and Procedures *Sequence of events of the lesson elements. Should include procedures, classroom management techniques, differentiation/increase in rigor,* ***highlighted*** *assessments, and possible questions* ***bolded****.*

State Objective in student friendly terms: “Today we are going to be using different strategies to find the mystery number in story problems.”

Set Expectations: “We need to make sure that we are participating and using active listening during the lesson. Can someone remind me what it looks like to be an active listener?” **(eyes on the speaker, quiet body, not distracted by anything else, not talking out of turn)**

Application Problem (10 minutes):

- Bring all students to the carpet
- “We are going to work through the application problem together. It says that there are 8 children in the afterschool cooking club. How many boys and how many girls might be in the class? It wants us to draw a picture and write a number sentence. There are going to be many correct answers so let's work together to see if we can find them all.”
- “Turn and tell your partner how many boys and how many girls you think are in the cooking club.” (give students 1-2 minutes to discuss)
- “Turn back to the board and we are going to see what you guys came up with. Someone raise your hand and tell me one combination of boys and girls that could be made.” (1 and 7, 2 and 6, 3 and 5, 4 and 4, 0 and 8, and the inverse)
- Have students tell you their combination and call on another student to write the number sentence on the board.
- Draw the picture using circles and labels (B for boys and G for girls)

Concept Development (15 minutes):

- “All morning many of you were wondering what was in this mystery box and I think we are about to find out. But first I have a story for you.” (set out 3 bear counters where all students can see)
- “Once upon a time, 3 little bears went to play tag in the forest. Then some more bears thought it looked fun and wanted to join. In the end, there were 5 little bears playing tag in the woods all together. How many bears do you think joined in the tag game? Turn and talk to your partner about what you think.” (give students 1-2 minutes to talk)
- “Raise your hand if you think you know how many bears joined.” (call on a student)
- “___ said that 2 bears joined the game of tag. Thumbs up if you agree.” (assess student responses)
- “___ what strategy did you use to find your answer?” (pulling down and counting on, finger counting, or knew what that 3 and 2 more make 5)
- “Let’s go ahead and pull down 3 as a class and count on to 5.” (4, 5)
- “__ was correct, 2 more bears joined the game of tag.”
- Write 3 + ? = 5 on the board and use the ?, +, and = magnets
- “When we were finding our mystery number were we trying to find a part or the total?” (part)
- “We were trying to find the missing part. We already knew one part was 3 bears, those were the ones originally playing tag, and the total was 5 bears.”
- Take down the ? magnet and write 2 in the space
- “Now let's take a look in the mystery box and see what's inside.” (when opening be very theatrical. Shake the box, dig around, act like its heavy)
- “There were two bears inside! Our mystery number is kinda like a mystery box. We do not know what is inside until we solve it.”
- “We are going to try another story problem. Nine bears were playing tag. At first, there were only 6 bears playing. How many bears joined in? I am going to have you turn and talk with your partner. I want you to think about if we have a part or the total or both as well as what you think our mystery number is.” (allow students 2-3 minutes to discuss)
- “Turn back to the board and we are going to talk about the information the story problem gave us. Is 9 a part or a total?” (total) “9 is our total because it was how many bears were playing tag in all. Is 6 a part or the total?” (part) “Is a part because it was how many were playing tag at first before more bears joined. So does that mean our mystery number is a part or total?” (part) “Our mystery number is a part, it is how many bears joined in on the game of tag.”
- Write 6 + ? = 9 on the board and use the magnets
- “Who thinks they know how many bears joined?” (call on a student) (3 bears)
- “What strategy did you use to find out that 3 bears joined?” (pulled down and counted on, new 3+6 =9)

- "Let's pull down 6 and count to 9." (7,8,9)
- "Our mystery number is 3." (remove the ? magnet and write 3)

Problem Set Worksheet (10-15 minutes):

- Send students back to their seats to get a clipboard and pencil and pass out to worksheet to students as they return to the carpet
- Show your paper on the camera
- "Now we are going to work through the problem set together and find the mystery number in these story problems."
- "Question 1 says Jill was given a total of 5 flowers for her birthday. Draw more flowers in the vase to show Jill's birthday flowers. How many flowers are in the vase right now?" (3)
- "Let's count on from 3 to 5 to figure out how many flowers we need to draw." (4,5)
- "We need to draw two more flowers, so go ahead and draw two flowers in your vase." (draw two flowers on your paper being projected on the camera)
- "This problem has the total first. How many flowers did Jill get in total on her birthday?" (5) "5 flowers so everyone write 5 before the equals sign. How many flowers did Jill have in her vase before we drew more flowers?" (3) "Our first part we are going to put in our addition number sentence is 3. We had to draw 2 flowers which was our mystery number so put that as our last part after the addition sign in our number sentence. You should have 5 = 3+2."
- "Now it needs us to make a number bond. What was the total again?" (5) (write 5 in the total of the number bond) "What were my two parts?" (3 and 2) (write 3 and 2 in the parts of the number bond)
- Repeat the same process for problem 2
- "The third question states, Bill had 2 trucks. His friend, James, came over with some more. Together they had 5 trucks. How many trucks did James bring over? When a problem says some more, that is our hint that will be our mystery number. So we need to figure out how many trucks James brought. We know that Bill has 2 trucks so I want you to look at your picture and circle 2 trucks. Label that B for Bill. Now how can we figure out how many trucks James has?" (count the remaining trucks or count on from 2 to 5)
- "We are going to the remaining trucks in the picture." (1, 2, 3)
- "So now we know that Bill had 2 trucks and James had 3 trucks so in total they had 5 trucks. Let's go ahead and fill out our number bond." (fill out the number bond)
- "The blank is stating James brought __ trucks and we said he brought 3 so we are going to write 3. The number sentence wants us to find the mystery number which is how many trucks James brought and that was 3." (write 3 in the number sentence)
- Repeat the same process for problem 4
- Check students papers before having them move onto fluency

Math Fluency Practice (5 minutes - remaining time):

- Once students have completed and had their problem set worksheet checked, have them log onto Zearn to practice math fluency

Assessments (do not use *thumbs up or thumbs down*):

- Assess as student volunteers answers
- Assess student responses (agree/disagree and their reasoning)
- Check answers during concept development to ensure students understand mistakes that were made and the proper way of finding the answer
- Check problem set after completion and work through misconceptions

Accommodations/Modifications (differentiation/rigor):

- Call on lower students that are willing to attempt a problem and work through it with them if incorrect
- Have struggling/confused students stay on the carpet with a clipboard to work through the problem set together for 1on 1 teaching
- During concept development adjust difficulty of problems based on student understanding

Classroom Management Techniques:

- Praising students who are on task, participating, and are properly using materials
- Remind students to use full body listening, either verbally or pointing to the diagram near the teachers chair in front of the meeting carpet
- McDonalds (proper rug sitting technique)
- Proximity

- State voice level expectations during each section of the lesson

Resources and Materials
List of tools and materials used in the planning of and during the instruction of the lesson. ***Cite all resources you do not create yourself****.*

- **Application Problem Slide**

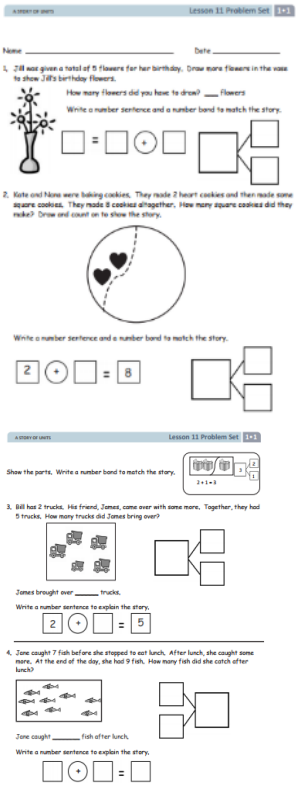
RDW

Application Problem

There are 8 children in the afterschool cooking club. How many boys and how many girls might be in the class? Draw a picture and write a number sentence to explain your thinking.

Extension: How many other combinations of boys and girls could be made? Write a number bond for each combination you can think of.

- **Concept Development:**
  - **Bear counters x5**
  - **Mystery box with 2 bear counters**
  - **+ = and ? magnets**
- **Problem Set Worksheet**



- **Fluency Practice (Zearn on Chrome Books)**