

APL (Active Playful Learning) Learning Experience Title: Adding and Subtracting 10 Little Ducks

Grade Level or Course	1st Grade		
Quarter # Unit #: Unit Title	Quarter 1, Unit 3: Addition and Subtraction Part 1 (within 10)		
Featured APL Practice:	Small & Paired Groups 	Student Contributions 	Hands-on & Minds-on 
	Voice & Choice 	Meaningful Connections 	Enthusiasm & Positivity 
APL Summary Briefly describe connection between lesson and APL practice	This lesson is designed as an early introduction to solving problems in context (story problems) and as a way to reinforce ways to make 10. By taking a number problem and placing it into a real world context, students are able to make connections to their lived experiences. This also helps model how to solve problems using materials and make learning visible. Showing students that math exists in real life helps encourage deeper learning, rather than rote memorization. By presenting a problem students can imagine and make tangible with manipulatives or drawings, they will be better able to develop a conceptual understanding of novel problems as their learning progresses. To take the practice of meaningful connections further, the teacher may want to create their own problems based on their specific students' interests, cultures, and experiences. For example, if students love the movie Frozen, create problems using Anna, Elsa, Sven, or Olaf, or with a winter theme. If your students frequent a local restaurant or store, use those as a theme.		
Materials / Resources	-Story Problems to 10 Cards (enough sets for each student to have 1; or pair/group students and only make 1 copy) -Visual problems to 10 cards -Visual problems story mat -Manipulatives -Drawing Materials -Consider connecting to the 10 Little Ducks nursery rhyme		
Math Standards	Math SOLs (<i>write out the whole SOL</i>): 1.CE.1 g) Determine the unknown whole number that will result in a sum or difference of 10 or 20 (e.g., $14 - \underline{\quad} = 10$ or $15 + \underline{\quad} = 20$)		
Learning Objective(s)	<u>I can...</u> Use a variety of strategies (words, objects, drawings, or pictures) to solve story problems to make 10.		
Learning Experience Sequence - Follows Math Workshop Sequence - Teacher-facing language - Describe elements of the	Structure of Learning Experience:   Activate Prior Knowledge - Model solving a story problem for the students using something familiar or popular with your students and presenting it to them as a problem that you need their help to solve. For example, you		

learning experience here, within the model of Math Workshop

- Student and Teacher Actions: What should students be doing? What should teachers be doing?

might say, "Class, I need your help. I need 10 glue sticks (*scissors, pencils, crayons*) but I only have 6! I need to buy more but I don't know how many. Can you all tell me how many more glue sticks I need?" Set up the 6 glue sticks in a tens frame (magnetic or drawn on the board, large floor-made frame with painters tape, etc.) to help students visualize and activate their prior learning with a tens frame. When a student shares their answer, ask them to explain their thinking.

Use the [10 Little Ducks nursery rhyme](#) as an additional or alternative way to model what the students will be doing that is directly connected to the theme of the activity.

Repeat with at least one more example. Keep your total at 10 in all examples for now, but change the known number to provide more practice. Use these or similar problems to model strategies like using manipulatives, drawings, numbers, or words to figure out the solution.



Ensure Understanding of Task - Tell the students they will be given a similar problem on a card to solve using any strategy and materials they want. All of the problems will start with 10 as the total, and are set in the context of ducks in the water or on the grass. There are two options for cards to distribute: [Story Problems to 10](#) (using patterned/predictable text - model reading and preview: ducks, grass, water) or [Visual Problems to 10](#) (images only - print in color). They will be able to choose a set of manipulatives, create drawings, or use words or numbers to find the answer. When they finish solving and recording their strategy and solution, they will [Stand Up, Hand Up, Pair Up](#) with another finished student. They will take turns sharing their problems and the steps they took to solve it to justify their answer.



Establish Clear Expectations - Remind students of classroom expectations around the use of manipulatives and respectful independent and partner work.



Task Implementation - Give students one problem card each - either story or visual. These cards can remain loose or the students can glue them into a math notebook. See variation ideas below and determine which is the best fit for the class. Allow students to move around the room to access sets of manipulatives if they choose to use them. Also provide access to drawing materials and paper (loose or in a math notebook) for students to record their strategies and their future partner's strategy.

Card Variations: Students get a mix of different number pairs to solve, every student gets the same problem to solve (find a student with a different strategy for solving and record), or groups of students get different number pairs (jigsaw activity)

While students are working independently, monitor their progress and provide individualized support to students as needed.

As students finish, they should Stand Up, Hand Up, and Pair Up with another student who indicates they're ready. They will take turns reading or telling their number problem and explaining their solution, modeling with manipulatives if

	used. They will both record their partner's strategy on their paper. If there is time, they will repeat until the class is ready to move on.  Student Share - If there is time, have all students return to the carpet and ask a few students to volunteer to share how they helped to solve their problem. Consider noting students who used innovative or novel strategies, or students who overcame a struggle, during their independent work time and prompting them to share out. Also, see if students are ready to notice and connect problems that represent the inverse (ex: Student 1 had 7 ducks in the water and 3 in the grass, student 2 had 3 in the water 7 on the grass). Reflection (Resources): In a math notebook have students draw their own version of a problem using topics that are of interest to them. <i>There must be 10 total items in the picture separated into two groups.</i> Problem Frame (not necessary to give to students if they understand the prompt): There are 10 _____. # of them are _____. How many are left?
Scaffolding and Supports • Differentiation • Scaffolding • Remediation • Extension • EL Scaffolds (Elem) • EL Scaffolds (Sec) • QTEL Strategies (Elem) • QTEL Strategies (Sec)	<i>Grade-level teams and specialists collaborate to devise scaffolds and supports based on students' needs.</i> To account for a variation in reading ability: - Story Problems to 10 (using patterned/predictable text - model reading and preview: ducks, grass, water) - Visual Problems to 10 (images only - print in color) Increase rigor by making a copy of the problem cards and changing the starting number (10) to 20 or higher Use as intervention lesson by making a copy of the problem cards and changing the starting number (10) to 5 Change the theme of the lesson to match your students' unique interests and culture

For digital version and additional Meaningful Connections resources:

[APL-VA--meaningful connections](#)

Password = APLCLT1