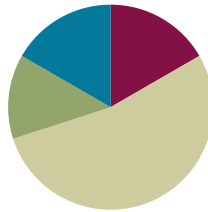


Lesson 5

Objective: Make a ten to add within 100.

Suggested Lesson Structure

■ Fluency Practice	(10 minutes)
■ Concept Development	(22 minutes)
■ Application Problem	(18 minutes)
■ Student Debrief	(10 minutes)
Total Time	(60 minutes)



Fluency Practice (10 minutes)

- Happy Counting: Say Ten Way **2.OA.2** (2 minutes)
- Put Together/Take Apart **2.OA.2** (3 minutes)
- Make the Next Ten Within 100 **2.OA.2** (5 minutes)

Happy Counting: Say Ten Way (2 minutes)

Note: Continued work with counting the Say Ten Way gives students confidence and allows them to build proficiency.

- T: Let's Happy Count the Say Ten Way. Let's start at 6 tens 2. Ready?
- S: 6 tens 2, 6 tens 1, 6 tens, 5 tens 9, 6 tens, 6 tens 1, 6 tens, 5 tens 9, 5 tens 8, 5 tens 9, 6 tens.
- T: Excellent! Try it for 30 seconds with your partner. Partner B, you are the teacher today.



NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

If students need more support to understand two-digit numbers as tens and ones, use the Hide Zero cards as used in Lesson 2.

Partner A models the tens; Partner B, the ones. Pairs move together and overlap the cards to model the number (e.g., 24). Likewise, they move apart for the *break apart* portion, separating the cards to model the value of the tens and ones (e.g., 20 and 4).

Put Together/Take Apart (3 minutes)

Note: Students remember the relevance of ten-plus facts to larger numbers.

Put Together

- T: When I say a ten-plus fact, you say the answer on my signal.
- T: $10 + 5$. (Signal.)
- S: 15.
- T: $10 + 2$.
- S: 12.

Continue with the following possible sequence: $10 + 9$, $20 + 1$, $20 + 4$, $50 + 4$, $80 + 4$, $30 + 8$, $40 + 8$, $70 + 8$, $90 + 8$.

Take Apart

T: Now, when I say 13, you say $10 + 3$.

T: 13. (Signal.)

S: $10 + 3$.

Continue with the following possible sequence: 17, 11, 16, 18, 28, 78, 14, 34, and 94.

Make the Next Ten Within 100 (5 minutes)

Materials: (T) Rekenrek (S) Personal white board

Note: In this fluency activity, students apply their knowledge of partners to ten to find analogous partners to 20, 30, and 40, which prepares them for today's lesson.

For 30 seconds, say numbers 0–10. Students say partners to ten at the signal. Then, remove the Rekenrek.

T: (Show 9.) Say the number.

S: 9.

T: Tell me the number sentence to make ten.

S: $9 + 1 = 10$.

T: (Move 1 bead to make 10. Show 19.)

T: Say the number.

S: 19.

T: Write the number sentence to make 20.

S: $19 + 1 = 20$.

Continue with the following possible sequence: 29, 39; 5, 15, 25, 35; 8, 18, 28, 38; 7, 17, 27, and 37.

Concept Development (22 minutes)

Materials: (S) Personal white board

T: (Write $39 + 4$.) Talk to your partner about how you would solve this problem.

S: We can draw 39 circles and 4 Xs and count them all. → I can count on starting at 39. 40, 41, 42, 43.
→ You can add 1 to make 40 and add the 3. $40 + 3 = 43$.

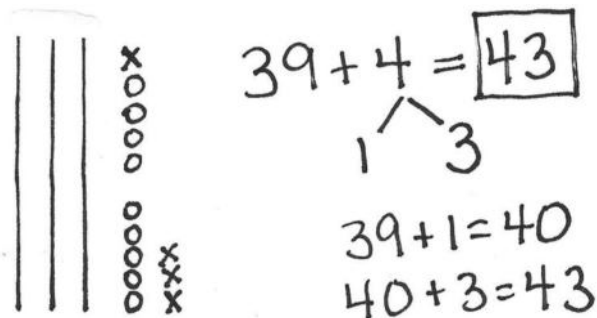
T: Draw 39 using quick tens and circles.

S: (Draw.)

T: Show me your board! (Pause. Ask students to redraw to show 9 either as a 5-group column or in a ten-frame configuration.)

T: Now draw 4 Xs. (Quietly remind certain students to complete the ten first.)

T: Write the number sentence with the solution.



- T: $39 + 4$ equals?
- S: 43.
- T: $39 + 4$ equals 40 plus ...?
- S: 3.
- T: (Write $39 + 4 = 40 + 3$.)
- T: Let's show $39 + 4$ using a number bond. We started with 39. How did we break apart 4 so we can make 40?
- S: 1 and 3. (Write number bond as shown in the image on the previous page.)

Repeat the process with the following suggested sequence: $49 + 5$, $79 + 5$, $48 + 5$, $78 + 5$, $7 + 29$, $7 + 48$, and $77 + 6$. Students should demonstrate understanding using at least one representation such as quick tens and ones or number bonds.



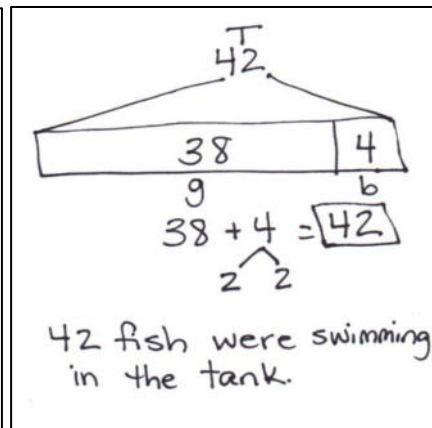
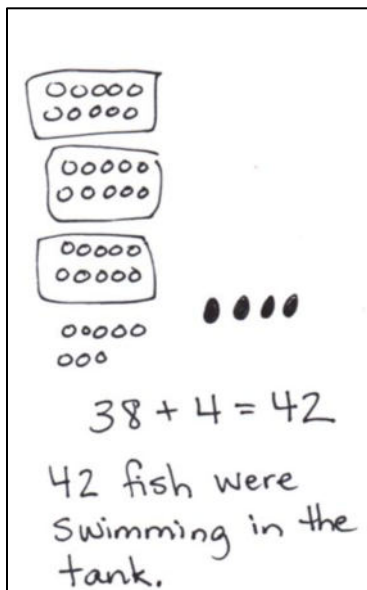
NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Scaffold questioning to guide connections, as in $49 + 5$:

- How many more does 9 need to make a 10? How about 19? 29?
- Where can we get 1 more?
- What should we take out of the other addend?
- How does your number bond match your quick ten drawing?

Application Problem (18 minutes)

Mia counted all the fish in a tank. She counted 38 goldfish and 4 black fish. How many fish were in the tank?



NOTES ON APPLICATION PROBLEMS:

These are the four steps of the problem-solving process:

- Read.
- Draw.
- Write a number sentence.
- Write a word sentence.

This process provides accommodation for students with disabilities and English language learners since it is both visual and kinesthetic.

Note: If students do not use the tape diagram, model it after two students have shared their solution strategies. Be sure to make connections between the different representations in students' drawings. "What part of the drawing using the ten-frames represents the goldfish?" "What part of the tape diagram represents the goldfish?" "Which drawing is more efficient?"

This Application Problem follows the Concept Development to provide an opportunity for students to apply the make ten strategy in the context of a *put together total unknown* problem. The allotted time period includes 8 minutes to solve the Application Problem and 10 minutes to complete the Problem Set.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students should solve these problems using the RDW approach used for Application Problems.

Student Debrief (10 minutes)

Lesson Objective: Make a ten to add within 100.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- Look at Problems 1(a) and (b). How does knowing $9 + 3$ help you solve $19 + 3$?
- What other patterns do you notice in the Problem Set? Explain how the patterns help you solve the problems.
- Compare $43 + 5$ and $48 + 5$. What is different about them?
- Can you figure out the math goal of today's lesson? What name would you give this lesson?

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lessons. The questions may be read aloud to the students.

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 5 Problem Set 2•1

Name: Evan Date: _____

1. Solve.

a. $9 + 3 = 12$ $\begin{array}{r} 9 \\ +3 \\ \hline 12 \end{array}$ $9 + 1 = 10$ $10 + 2 = 12$	b. $19 + 3 = 22$ $\begin{array}{r} 19 \\ +3 \\ \hline 22 \end{array}$
c. $18 + 4 = 22$ $\begin{array}{r} 18 \\ +4 \\ \hline 22 \end{array}$	d. $38 + 7 = 45$ $\begin{array}{r} 38 \\ +7 \\ \hline 45 \end{array}$
e. $37 + 5 = 42$ $\begin{array}{r} 37 \\ +5 \\ \hline 42 \end{array}$	f. $57 + 6 = 63$ $\begin{array}{r} 57 \\ +6 \\ \hline 63 \end{array}$
g. $6 + 68 = 74$ $\begin{array}{r} 6 \\ +68 \\ \hline 74 \end{array}$	h. $8 + 78 = 86$ $\begin{array}{r} 8 \\ +78 \\ \hline 86 \end{array}$

EUREKA MATH Lesson 5: Make a ten to add within 100. Date: 2/25/15 engage^{ny} 75

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 4 Problem Set 2•1

2. Maria solved $67 + 5$ as shown. Show Maria a faster way to solve $67 + 5$.

$67 + 5 = 72$

$\begin{array}{r} 67 \\ +5 \\ \hline 72 \end{array}$

$67 + 5 = 72$ $67 + 3 = 70$
 $\begin{array}{r} 67 \\ +5 \\ \hline 72 \end{array}$ $\begin{array}{r} 70 \\ +2 \\ \hline 72 \end{array}$

3. Use the RDW process to solve.

- Jessa collected 78 shells on the beach.
- Susan collected 6 more shells than Jessa.
- How many shells did Susan collect?

$78 + 6 = 84$
 $\begin{array}{r} 78 \\ +6 \\ \hline 84 \end{array}$

Susan collected 84 shells.

EUREKA MATH Lesson 4: Make a ten to add within 100. Date: 2/25/15 engage^{ny} 6

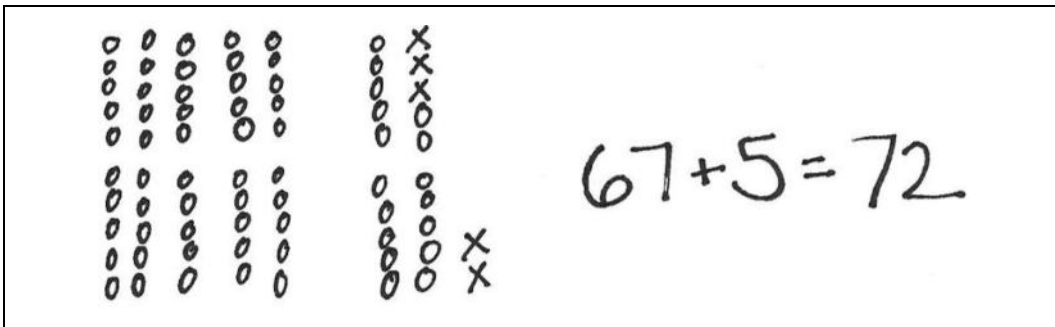
Name _____

Date _____

1. Solve.

a. $9 + 3 = \underline{\quad}$ 	b. $19 + 3 = \underline{\quad}$
c. $18 + 4 = \underline{\quad}$	d. $38 + 7 = \underline{\quad}$
e. $37 + 5 = \underline{\quad}$	f. $57 + 6 = \underline{\quad}$
g. $6 + 68 = \underline{\quad}$	h. $8 + 78 = \underline{\quad}$

2. Maria solved $67 + 5$ as shown. Show Maria a faster way to solve $67 + 5$.



3. Use the RDW process to solve.

Jessa collected 78 shells on the beach.
 Susan collected 6 more shells than Jessa.
 How many shells did Susan collect?

Name _____

Date _____

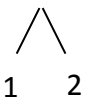
Solve.

a. $39 + 4 = \underline{\hspace{2cm}}$	b. $58 + 7 = \underline{\hspace{2cm}}$
--	--

Name _____

Date _____

1. Solve.

a. $9 + 3 = \underline{\quad}$ 	b. $29 + 5 = \underline{\quad}$
c. $49 + 7 = \underline{\quad}$	d. $59 + 6 = \underline{\quad}$
e. $18 + 4 = \underline{\quad}$	f. $48 + 6 = \underline{\quad}$
g. $58 + 6 = \underline{\quad}$	h. $78 + 8 = \underline{\quad}$

2. Solve.

a. $67 + 5 = \underline{\hspace{2cm}}$	b. $87 + 6 = \underline{\hspace{2cm}}$
c. $6 + 59 = \underline{\hspace{2cm}}$	d. $7 + 78 = \underline{\hspace{2cm}}$

3. Use the RDW process to solve.

There were 28 students at recess. A group of 7 students came outside to join them. How many students are there now?
