Adding Multiples of Ten

Teacher Guide

Duration: 30–45 minutes

Standards for Mathematics

MA.1.5.G
Apply properties of operations to add and subtract two or three numbers.

Focus Strategy

Lean and Whisper: Students lean one shoulder in toward one neighbor to answer a question that has a one- or two-word (or short) answer. This strategy engages all students in answering a question without disrupting the flow of the classroom. This is used for KG1 students as a specific type of the "Shoulder Partner" strategy.

Learning Outcomes

- Add multiples of 10 to multiples of 10 within 90.
- Apply place value concepts to solve addition problems.

Key Vocabulary

- Place value
- Addition

Materials

- Base 10 Blocks (10 Tens for each group of 3 students)
  - Optional: 100 objects, stacked in sets of 10 (See the activity Subtracting Sets of Ten.)
  - Optional: Use paper Base 10 Blocks (See Blackline Master after activity.)

Activity Preparation

- Gather Base 10 Blocks for small groups of students (9 ten-stacks per group)

TEACHER DO: Write 20 + 60 = _____ on the board vertically.

TEACHER SAY: *We are working on using what we know about numbers to add sets of 10 to two-digit numbers. Since you have had a lot of practice using ten-stacks with subtraction, you are going to get your own set of ten-stacks to use in a small group. First, I am going to put you into groups of 3 and hand out the ten-stacks. Remember, each ten-stack has 10 cubes in it.*

TEACHER DO: Separate students into groups of 3 and hand out 9 ten-stacks to each group.

TEACHER SAY: *I have written a problem on the board. Let's read it together.*

TEACHER DO: Point to the numbers as you read aloud: 20 + 60 = _____.

STUDENTS DO: Say 20 plus 60 equals blank.

TEACHER SAY: *We are going to do one together first. Then I am going to let you and your group solve one on your own using your ten-stacks. The first thing we need to do is create a group of 20 using ten-stacks. Lean and Whisper to your group and discuss how many ten-stacks will give us 20 cubes.*

STUDENTS DO: Lean and Whisper their thinking to their group.

TEACHER SAY: *Show me on your fingers how many ten-stacks will give us 20 cubes.*

STUDENTS DO: Show answer on fingers.

TEACHER SAY: *That is correct. Two ten-stacks will give us 20. Create a set of 2 ten-stacks and lay them in front of your group. Place any remaining ten-stacks out of the way.*

STUDENTS DO: Create a set of 2 ten-stacks.

TEACHER SAY: *Our math problem is 20 plus 60. What else do we need to do? Raise your hand if you know.*

STUDENTS DO: Raise hand to share their thinking.

TEACHER SAY: *Yes, we need to make 60 so we can add it to 20. How many ten-stacks do we need to make 60? Show me on your hands.*

STUDENTS DO: Show answer on hands.

TEACHER DO: Confirm accurate thinking. Correct errors in thinking.

TEACHER SAY: *6 ten-stacks is 60. Go ahead and make 60 using your ten-stacks.*

STUDENTS DO: Use ten-stacks to make 60.

TEACHER SAY: *How many do we have all together? Let's say it together.*

STUDENTS DO: Say answer together aloud.

TEACHER DO: Listen for incorrect answers. Confirm the correct answer. Write the answer on the board to complete the problem you wrote earlier: 20 + 60 = 80.

TEACHER SAY: *Let's read our completed problem together.*

TEACHER DO: Point to numbers as you read aloud: 20 plus 60 equals 80.

STUDENTS DO: Read problem aloud with the teacher.

TEACHER SAY: *Are you ready to try one on your own? Work with your group to solve this math problem: 40 plus 30 equals blank. Blank stands for the answer I just do not know yet.*

TEACHER DO: Write 40 + 30 = _____ on the board.

TEACHER SAY: *You may begin. When you find the answer, stand up in place so I know you are finished.*

STUDENTS DO: Use the ten-stacks to solve the problem with their group. Stand up in place when they have finished the problem.

TEACHER DO: Walk around the room and assist groups as needed. When all students are finished, ask a group to share their answer and record the answer on the board. If needed, walk through the problem to explain. If there is time left, do other similar problems. Collect the ten-stacks when the activity is complete.

STUDENTS DO: Work with group to solve problems.

TEACHER DO: Repeat with more addition problems if time allows. With a few minutes left, ask students a reflection question.

TEACHER SAY: *How is what we did today like what we did to solve subtraction problems? How is it different?*

STUDENTS DO: Reflect on the question, then raise hand to volunteer. Selected students share their thinking.

Base 10 Blocks

Leave the blocks together for Hundreds. Cut them into strips of ten blocks for Tens. Cut the strips of ten blocks into single blocks for Ones.