Lesson 18: All the Ways to Make 10 (Optional)

Standards Alignments

Addressing   K.CC.B.4.c, K.OA.A.1, K.OA.A.2, K.OA.A.3, K.OA.A.4
Building Towards   K.OA.A.4

Teacher-facing Learning Goals

- Compose and decompose 10 in multiple ways.

Student-facing Learning Goals

- Let's find all the ways to make 10.

Lesson Purpose

The purpose of this lesson is for students to find all of the compositions and decompositions of 10 in the context of a story problem.

In a previous unit, students found more than one solution to Put Together/Take Apart, Both Addends Unknown story problems. In a previous lesson, students used objects, images, and equations to make and break apart 10.

In this lesson, students solve a Put Together/Take Apart, Both Addends Unknown story problem with a total of 10. Then students work together to find all of the solutions to a Put Together/Take Apart, Both Addends Unknown story problem with a total of 10. Students may notice patterns in the solutions, such as that when one addend increases the other addend decreases, to help them determine if they have found all of the solutions. This lesson is optional because the standards do not require students to find all of the solutions for Put Together/Take Apart, Both Addends Unknown story problems.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section C in the curriculum materials.

Access for:

⊛ Students with Disabilities
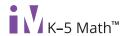
- Action and Expression (Activity 2)

🌐 English Learners

- MLR8 (Activity 1)

Instructional Routines

Number Talk (Warm-up)

Materials to Gather

- 10-frames: Activity 1, Activity 2
- Connecting cubes or two-color counters: Activity 1, Activity 2
- Materials from a previous activity: Activity 2
- Materials from a previous lesson: Activity 1
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	5 min
Cool-down	5 min

Teacher Reflection Question

As students worked together today, where did you see evidence of the mathematical community established over the course of the school year?

Cool-down (to be completed at the end of the lesson)   🕐   5 min

Find 2 Solutions

Standards Alignments

Addressing   K.OA.A.2, K.OA.A.3

Student-facing Task Statement

There are 10 birds on the wire.
Some of the birds are red.
The rest of the birds are blue.

How many of the birds are red?
Then how many of the birds are blue?

Show your thinking using objects, drawings, words, or numbers.
Find more than 1 solution to the problem.

Student Responses

Answers vary. Sample response:

- 4 red birds, 6 blue birds
- 7 blue birds, 3 red birds