SUMMARY

Students solve subtraction problems by drawing pictures, using objects, and using the connection between addition and subtraction.

COMMON CORE STANDARD(S)

K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

K.OA.A.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

K.OA.A.5 Fluently add and subtract within 5.

DURATION

Two 45-minute classroom periods

Engage and Explore, Explain, Elaborate page 1—one 45-minute classroom period
Elaborate page 2, Evaluate—second 45-minute classroom period

MATERIALS

Counters (10 per student).
Engage and Explore

Tell students that you need their help to figure out how many ducks visited your house yesterday. Pass out 10 counters to each student.

Say that 3 ducks visited you in the morning. Ask students to represent 3 using their counters. When students are done, draw or project 3 counters onto the board. Say that 2 ducks visited you in the evening. Ask students to represent 2 using their counters. When students are done, draw or project 2 counters onto the board.

Ask students to find how many ducks visited you in all. When students have found their answer, ask some students to tell you how they found their answer. Here are some strategies that students may use:

- Count all 5 counters: 1, 2, 3, 4, 5
- Count on 2 from 3: … 4, 5
- Remember the addition fact: $3 + 2 = 5$

Tell students that you can use a number sentence to show the number of ducks in all. Write $3 + 2 = 5$ on the board. Explain to students that the 3 and 2 show the numbers of ducks. The plus sign says that we are adding them together. The 5 shows how many ducks in all, and the equal sign says that the two amounts are equal. 3 and 2 together is equal to 5.

Repeat the process of students finding sums and representing the sums with equations until you feel students remember and are comfortable with addition. Keep sums within 10. Students should be comfortable with the concept and process of representing addition before you introduce them to subtraction.

Tell students that today they will learn how to use what they know about adding together to solve problems about taking apart.

Explain

Watch the Generation Genius Intro to Subtraction Video as a Group
Facilitate a conversation using the Discussion Questions.

Elaborate

Direct students to use their new understanding to complete the practice problem worksheets. Page 1 contains bare mathematical problems to solidify understanding of the process. Page 2 contains application problems for students to apply the process to solve real-world problems.
Have students gather in groups of 2 or 4 to compare and discuss their answers to the problems. Allow students enough time to communicate with their peers about their process and their thinking. Encourage students to use correct mathematical language when discussing their process. Have each group choose two questions they want more information about, or they want to discuss as a class.

When groups are ready, take questions from students. Encourage groups to answer questions brought up by other groups.

Students can play the online Kahoot! quiz game located below the video. It provides downloadable scores at the end of the quiz game. Alternatively, you can use the paper quiz, or the exit ticket questions. All these resources are located below the video in the assessment section.