SUMMARY

Students extend previous knowledge of place value, and addition and subtraction of 2-digit numbers, to add and subtract 3-digit numbers.

COMMON CORE STANDARD(S)

3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

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

ENGAGE AND EXPLORE

Engage students by having them solve problems that come up as Zack plans the 3rd grade Fun Day. Activate their prior knowledge of adding 2-digit numbers and place value as they solve these problems.

Ask students to consider the following problem: There are 29 students in one 3rd grade class and 28 in the other 3rd grade class. How many students will participate in the Fun Day? [57 students]

Direct students to write an addition expression they could use to solve the problem. Have students present their expressions then have the class discuss “How would you find the total?”

Ask students to consider the following problem: Zack needs 346 water balloons for the Fun Day. The water balloons come in packages of 100, 10, and single balloons. How can Zack get the balloons, buying the least number of packages? [Buy 3 of the 100 balloon packages, 4 of the 10 balloon packages, and 6 single balloons.]
Prompt students to share how their answer is related to the place value of 346. Have students discuss “What is the value of each digit in 346?” Review with them that the first place is the ones, the next place is 10 ones; the tens place, and the next place is 10 tens; the hundreds place.

In pairs, direct students to write the following numbers by place value.

\[
\begin{align*}
427 &= 308 \\
390 &= 536
\end{align*}
\]

Have them record the expressions in their notebook. Facilitate a conversation using the Before Discussion Questions.

**EXPLAIN**

**WATCH THE ADDITION & SUBTRACTION WITHIN 1,000 GENERATION GENIUS VIDEO AS A GROUP**
Facilitate a conversation using the Discussion Questions.

Return to the discussion about what the students observed when they added the 2-digit numbers and wrote numbers by place value during Engage and Explore. Did the patterns that they saw match what they saw when adding and subtracting 3-digit numbers? Ask students to add the two pairs of numbers at the end of Engage and Explore.

**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.

Challenge: If any advanced learners finish the problems early, challenge them to discover how they could find 587 + 446.

**EVALUATE**

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.