Make It, Break It, Toss it

Objective

Students will be able to...

- compose and decompose three-digit numbers represented by hundreds, tens, and ones.
- understand that 100 can be thought of as a bundle of ten tens called a "hundred."
- understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, and 900 refer to one, two, three, four, five, six, seven, eight, and nine hundreds (and 0 tens and 0 ones), respectively.

Materials

- Base-ten blocks (one tub per group)
- Straws (about 119-150)
- Pencils, markers, or writing tools (one per student; one for teacher)
- Paper (one per group or per student)
- Make It, Break It, Toss It Place Value Mat (one per group)
- Make it, Break It, Toss It Practice (one per group or per student)

Social Emotional Learning

Self-management: Discuss with students what they can do to stay focused and on task. Brainstorm self-management ideas to help them complete the activities and demonstrate care for themselves, materials, and others around them. Have students paraphrase instructions and what others say before starting the activity.

Self-management: Give students support and authentic feedback for sharing their ideas and different ways of counting. All ideas are welcome. Use phrases like "I saw the way you used your math tools appropriately" and "I saw how you and your partner worked quietly in your area."

Key Terms

Term	Definition
digit	a single numeral from 0 to 9, used to create numbers
place value	the value of a specific digit based on its position within a given number (e.g., the ones place or tens place); often displayed on a place value mat to organize by ones, tens, hundreds, etc.
ones	the place value location that represents values between 0 and 9
tens	the place value location that represents a value between 10 and 90
hundreds	the place value location that represents a value between 100 and 900

Number Sense

Connect

Step 1

Pair students and strategically give each group a pile of 112-119 straws and a copy of Make It, Break It, Toss It Place Value Mat. Without detailed instruction, ask students to count the straws. Allow students to count in any way they'd like or are able to. Pay attention to the way students bundle and count the straws. Focus on and call attention to any student pair(s) that bundle straws by tens. Have them demonstrate their work and verbal counting.

Step 2

Survey students as they record their findings on their paper sheets using the place value mats as a scaffold. When groups are done, write the number of total straws given to each group on the board and ask each group to write the value of each digit in a number.

Demonstrate how to bundle the straws into groups of ten. Ask students how the place value chart was used to place the bundles. Ask students to describe how they were able to place bundles on the ones, tens, and hundreds places. Discuss why bundling straws into tens is a good strategy for counting these groups.

Demonstrate

Step 1

Ask students how similar/different it will be when bundling tens into a hundred. Demonstrate as students guide the process. Ask them about the relationship between 10 tens and 1 hundred. Ask students to demonstrate their work by using longs and flats of the base-ten blocks. If they don't arrive there on their own, guide students to the conclusion that both amounts are equivalent.

Step 2

Model large numbers like 479, 586, and 903, connecting the concrete representations with expanded, word, and standard notations. Discuss how digits have values according to the place in which they are. Make sure to include examples of numbers with zeros in any place.

Practice

Step 1

Pair students and distribute a copy of Make It, Break It, Toss It Practice and a copy of the Make It, Break It, Toss It Place Value Mat. Students will use base-ten blocks and the place value mat to show their work. They will practice representing numbers in different forms.

Step 2

Allow students time to work and show how to bundle in groups of tens or hundreds and how to represent numbers in different forms. Provide paper and pencil for students to record and show their work recording different number representations. Offer guidance as needed. Meet with student pairs to discuss the activity, the way they worked, and why they worked that way.







Accommodation: Students currently below grade level may start by practicing bundling ones into tens, as well as representing numbers in the range of 50 to 120. Have students write numbers in word, standard, or expanded form.

Accommodation: Create and have ready an anchor chart or sentence strips at students' desks to help them write numbers in word form.

Extension: Students currently above grade level may transition into creating number riddles using the place value chart and different notations.

Enrichment/Extension: Have students create a bingo card with numbers expressed in various forms.

X.

Date

Make it, Break It, Toss It Place Value Mat

Use the following place value mat to model and represent amounts.

Hundreds	Tens	Ones

X

Name

Date

Make it, Break It, Toss It Practice

Write the number represented by the base-ten blocks in word, standard, and expanded form in the space provided.

Base-Ten Blocks	Answer

Date

Make it, Break It, Toss It Practice (continued)

Use base-ten blocks to model the numbers below. Write each number in word form and expanded form in the space provided.

492	156	203

5 ones 0 tens 3 hundreds	4 hundreds 2 ones 9 tens	10 tens 12 ones

20 tens	5 hundreds	30 tens
15 ones	24 ones	17 ones

X