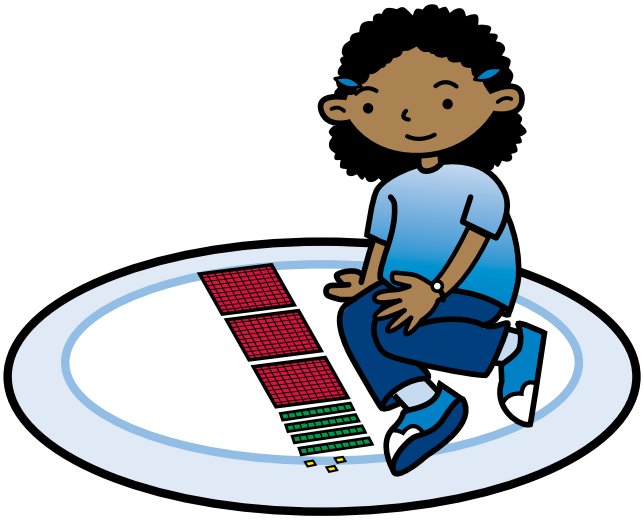
Bridges in Mathematics
Grade 2 Unit 5

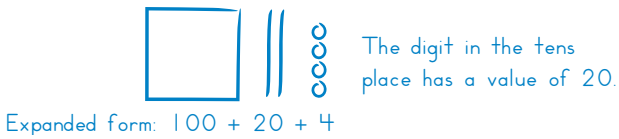
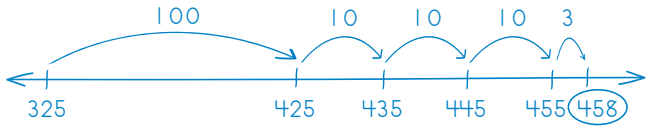
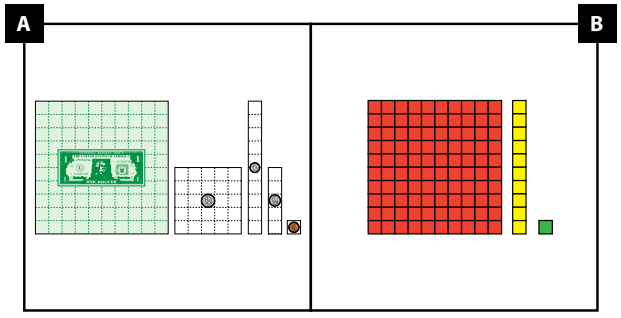
Place Value to 1,000



In this unit, your student will:

- Work with 3-digit place value and place objects into groups of ones, tens, and hundreds
- Add and subtract 10 or 100 to or from 3-digit numbers and skip-count by 10s and 100s
- Add and subtract within 1,000
- Solve problems involving coins and dollar bills

Your student will practice these skills by solving problems such as these:

PROBLEM	COMMENTS
How can you write the number 124 in expanded form? What is the value of the digit in the tens place? 	Expanded form is a way to write a number that shows the place value of each digit. The expanded form of 673, for example, is 600 + 70 + 3. Drawing a quick sketch of base ten number pieces is one way to help students visualize the expanded form of a number.
What number belongs in the circle? 	To identify the unknown number on a number path, it is important that students first look at the known numbers to determine the counting pattern (in this case, counting by 10s). The number paths in this unit include counting patterns of 1s, 10s, and 100s.
What is the sum of 325 + 133? 	Understanding how to add 100, 10, or 1 to any 3-digit number helps students develop flexible addition strategies. The same can be said for subtracting 1, 10, or 100 and subtraction strategies. This problem, for example, shows how a student might add 325 + 133 using what they know about adding 100, 10, or 1 to a number.
How are these pictures the same? How are they different? 	In this Same & Different activity, students observe similarities and differences between two math tools used throughout this unit: money value pieces (A) and base ten number pieces (B). Students use money value pieces to solve money-related problems. Students often find them helpful because the pieces are proportionally sized to match each value, with each small square representing a value of 1 cent. For example, 2 dime pieces and 4 nickel pieces are the exact same size (20 squares) because they are each equal to 20¢.

Frequently Asked Questions About Unit 5

Q: Why is there an emphasis on skip-counting by 10s and 100s?

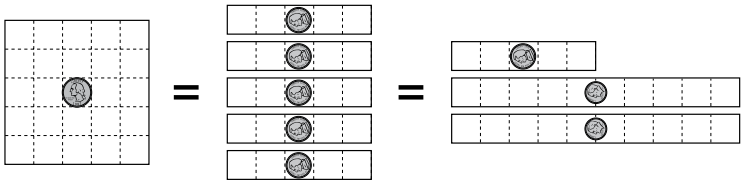
A: As students skip-count forward and backward, they learn to recognize structures in the base ten number system. This practice helps students think about each number's place in the counting sequence and the distance between numbers. When counting by 10s, students recognize that the ones digit stays constant, while the tens digit increases sequentially, as in 27, 37, 47, 57. The structure is similar for adding or subtracting 100, as in 127, 227, 327, 427.

Skip-counting helps students develop mental strategies to add and subtract efficiently and flexibly with 3-digit numbers. The earlier sample problem that asks, "What is the sum of 325 + 133?" is an excellent example of how a student might apply this understanding when adding two 3-digit numbers.

Q: Why is money included in a unit on place value?

A: Pennies, dimes, and dollars follow the base ten number system (similar to ones, tens, and hundreds). Students have learned that numbers can be made in different ways. For example, 42 is 4 tens and 2 ones, but it can also be 3 tens and 12 ones. This flexible grouping is the same for money. A quarter is 25 cents, but so is 5 nickels, or 2 dimes and 1 nickel. The use of money value pieces can help make these equivalences make sense visually. Patience, practice with coins or money value pieces, and time all help students acquire this practical skill. Students' work with coins and bills will continue in Unit 7.

Some ways to represent 25¢



Q: How can I support my student's learning?

A: Encourage your student to look for and discuss 3-digit numbers throughout the day. What can they tell you about the number? How many different ways can they represent the number? Also look for opportunities related to money, such as having your student help you make change or gather a collection of coins with a specific total value. Coins and money value pieces are available digitally using the Money Pieces app.

To further support your student in learning mathematics, you can:

- Visit mathathome.mathlearningcenter.org and work through some or all of the activities in Grade 2: Set 5 together. These activities complement the learning that takes place in the classroom during Unit 5 and provide fun ways to engage children in mathematical thinking. This set also includes digital versions of familiar games that your student has learned at school, such as Three Spins to Win.
- Visit apps.mathlearningcenter.org and invite your student to explore the Money Pieces, Number Pieces, Number Line, and Number Chart apps. Throughout Unit 5, students explore these tools in their physical forms in the classroom.
- Read books with your student that focus on place value, money, and adding and subtracting within 1,000. Some suggestions include:
  - *The Coin Counting Book* by Rozanne Lanczak Williams
  - *More Penguin Place Value: Hundreds, Tens, and Ones* by Kathleen L. Stone
  - *Fair Bear Share* by Stuart J. Murphy, illustrated by John Speirs
  - *Lemonade in Winter: A Book About Two Kids Counting Money* by Emily Jenkins & G. Brian Karas
  - *The Penny Pot* by Stuart J. Murphy, illustrated by Lynne Cravath