Teacher Edition Sampler
Grade 2

Reveal MATH®

Reveal the Full Potential in Every Student

Grade 2

Unit 2:
Place Value to 1,000

UNIT 2 PLANNER
Place Value to 1,000

PACING: 9 days

LESSON		MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE
Unit Opener	IGNITE! Different Ways to Balance	Explore how to balance a scale using one-pound and ten-pound weights and represent solutions with base-ten blocks.		
2-1	Understand Hundreds	Students explain hundreds with regard to place value – 100 is one hundred or 10 tens, 200 is two hundreds or 20 tens, and so on.	Students explain their understanding of 100 as 10 groups of ten using the term *each*.	Students exchange ideas for mathematical problem-solving with a peer and provide thoughtful and constructive feedback.
2-2	Understand 3-Digit Numbers	Students understand what the digits in a 3-digit number represent. Students represent 3-digit numbers.	Students explain that the digits of a 3-digit number represent amounts of hundreds, tens, and ones and represent 3-digit numbers using the term *notice*.	Students foster personal curiosity about mathematics by relating a mathematical concept to their own lives and interests.
2-3	Read and Write Numbers to 1,000	Students read and write numbers to 1,000.	Students discuss and write 3-digit numbers using the term *different ways*.	Students actively listen without interruption as peers describe how they approached a complex mathematical task.
2-4	Decompose 3-Digit Numbers	Students decompose 3-digit numbers by grouping the hundreds, tens, and ones in different ways.	Students identify and decompose 3-digit numbers and justify different ways to decompose the same number using the word *group*.	Students identify multiple possible solutions for a given math problem.
Math Probe	Building Numbers	Compose and recompose numbers based on different place-value combinations, with regrouping as needed.		
2-5	Compare 3-Digit Numbers	Students use words and symbols to compare 3-digit numbers.	Students compare two 3-digit numbers using the verb *compare*.	Students self-motivate and sustain engagement to work independently to complete a challenging mathematical task.
Unit Review **Fluency Practice**				
Unit Assessment **Performance Task**				

FOCUS QUESTION:
How can I use place value to understand and compare numbers to 1,000?

LESSON	KEY VOCABULARY		MATERIALS TO GATHER	RIGOR FOCUS	STANDARD
	Math Terms	**Academic Terms**			
2-1	hundreds tens	in common relate to	• base-ten blocks	Conceptual Understanding	2.NBT.A.1 2.NBT.A.1.a
2-2	base-ten blocks digit ones place-value chart	decide explanation	• *3-Digit Numbers* Teaching Resource • base-ten blocks	Conceptual Understanding	2.NBT.A.1 2.NBT.A.1.b
2-3	decompose expanded form standard form word form	in common wonder	• base-ten blocks • notecards	Conceptual Understanding, Procedural Skill and Fluency	2.NBT.A.3
2-4	decompose place value	explanation apply	• base-ten blocks	Conceptual Understanding	2.NBT.A.1 2.NBT.A.3
2-5	compare equal to (=) greater than (>) less than (<)	relationship true	• base-ten blocks • *Number Cards 0–10* Teaching Resource	Conceptual Understanding	2.NBT.A.4

Unit Overview

Focus

Place Value to 1,000

In this unit, students will explore concepts related to our base-ten place-value system to 1,000. We call it a base-ten system because it takes 10 of one unit to equal one unit in the next greater place-value position. Students will model with math to build their understanding that 10 groups of ten is equal to 100. They will also build understanding that each digit in a place-value chart has a value. Students will use their understanding of place value to decompose 3-digit numbers by grouping the hundreds, tens, and ones in different ways.

Students will draw on their knowledge of reading and writing numbers to discover how to write equivalent names for the same 3-digit number, in word form, expanded form, and standard form. They will also compare 3-digit numbers, using words and symbols to show the comparisons.

Students will extend their understanding of place value and number sense concepts learned in previous grades. These include:

- **Understand place value:** Students understand hundreds and the digits in a 3-digit number.
- **Represent numbers in different forms:** Students read and write numbers up to 1,000.
- **Compare numbers:** Students compare 3-digit numbers.

Coherence

What Students Have Learned

- **Understand Tens and Ones** Students learned that 10 can be thought of as a bundle of 10 ones – called a "ten." (Grade 1)
- **Understand Place Value** Students learned a 2-digit number represents amounts of tens and ones. (Grade 1)
- **Comparing Numbers** Students compared two 2-digit numbers using comparison symbols. (Grade 1)

What Students Are Learning

- **Understand Hundreds** Students understand that 100 can be thought of as 10 groups of ten.
- **Understand Place Value** Students understand that the digits of a 3-digit number represent amounts of hundreds, tens, and ones. They read and write numbers using standard form, expanded form, word form, and decompose by grouping the hundreds, tens, and ones in different ways.
- **Comparing Numbers** Students compare two 3-digit numbers using comparison symbols.

What Students Will Learn

- **Use Place Value to Count** Students use place value to count within 1,000 and skip count by 5s, 10s, and 100s. (Unit 3)
- **Add and Subtract** Students use place value to add and subtract within 1,000. (Units 9 and 10)
- **Understand Place Value** Students understand that the digits of a 4-digit number represent amounts of thousands, hundreds, tens, and ones. (Grade 3)

Rigor

Conceptual Understanding

Students develop understanding of

- The place value of hundreds.
- Reading and writing numbers to 1,000 in a variety of ways.
- Decomposing 3-digit numbers in different ways.
- Using place value to compare 3-digit numbers.

Procedural Skill and Fluency

Student build proficiency with

- The place value of three-digit numbers.
- Reading and writing numbers by exploring standard form, word form, and expanded form.
- Comparing 3-digit numbers using comparison symbols.

Application

Students apply their knowledge of

- Place value to count within 1,000 and skip count by 5s, 10s, and 100s.
- Place value to add and subtract within 1,000 to solve problems.

Application is not a targeted element of rigor for the standards in this unit.

ETP Effective Teaching Practices

Use and Connect Mathematical Representations

Making connections between different mathematical representations deepens a student's understanding of the concept as well as the tools for problem solving.

Representations are used to introduce and develop a student's foundational knowledge of place value. This will deepen their understanding of decomposing numbers, which they will apply to addition later in Grade 2.

Students use base-ten blocks to build a foundational knowledge of groups of hundreds, tens, and ones. They will use the base-ten blocks to understand the value of each place in a place-value chart. Base-ten blocks will be used to write the value of a 3-digit number in different ways. Place-value charts will be used to compare two 3-digit numbers.

Working with a variety of visual representations helps students build a conceptual understanding of place value and the sequence of written numerals. As students use base-ten blocks and the place-value chart, spend time questioning students to further their understanding.

- When introducing a tool, focus questions on the characteristics and patterns students see within the tool by allowing exploratory time.
- Pose questions that allow students to make connections between the representations and the numerical form of the numbers.
- Provide opportunities for students to ask and answer their own questions based on what is still unclear about their understanding of place value to 1,000.

MPP Math Practices and Processes

Model with Mathematics

- Making connections among different mathematical representations deepens a student's understanding of the concept as well as the tools for problem solving.
- Numerous representations are used to organize the information and guide students to a solution. Each representation shows the information in a slightly different way. It is important that students see how each representation is connected to the other, as well as to the original problem. By connecting the representation back to the problem, students should be able to judge the reasonableness of their answers as well as justify their solutions. These connections allow students to not just state the correct answer, but to understand *why* an answer is correct. This is essential as students apply these skills in real-world situations.

This unit provides students with the opportunity to model mathematics in a number of different ways. Students use base-ten blocks and the place-value chart to understand the value of each digit in a 3-digit number and determine different ways to decompose. They are also able to connect their answers to a situation which helps them determine if their answers are reasonable and, if not, they are able to go back and adjust their process to come up with a more appropriate response. This may make some students uncomfortable, so some suggestions for building student's confidence in applying place-value understanding include:

- Relate models back to the problem situation to form connections.
- Discuss the similarities and differences between different representations so students can identify those they understand and why.

SEL Social and Emotional Learning

What Skills Will We Develop?

- **Self-Awareness – Curiosity** (Lesson 2-2): As students are learning, their curiosity can motivate them to achieve deeper understanding.
- **Self-Regulation – Independence** (Lesson 2-5): Independence can promote strong learning habits and contribute to class productivity.
- **Responsible Decision-Making – Identify Solutions** (Lesson 2-4): Identifying multiple possible solutions allows students to practice considering options prior to making responsible decisions.
- **Social Awareness – Respect** (Lesson 2-1): When students are respectful of one another, they strengthen their class community.
- **Relationship Skills – Effective Communication** (Lesson 2-3): Students who can communicate effectively are more likely to build strong relationships and contribute to a positive classroom culture.

LOM Language of Math

Vocabulary

Students will be using these key terms in this unit:

- **Digit*** (Lesson 2-2) This is a new term. Whole numbers 0-9 are single-digit numbers, but the digits 0-9 are the building blocks of other numbers. A digit's place in a number determines its value.
- **Decompose*** (Lessons 2-3, 2-4) This is also a new term. *Decompose* is used to describe taking a number apart. Explain that if something can be put together, or *composed*, it can also be taken apart.
- **Expanded form*** (Lesson 2-3) This is also a new term. A number written in *expanded form* shows the number as an expression based on place value, e.g., 300 + 40 + 9.
- **Greater than (>)*** (Lesson 2-5) This is also a new term. Students understand greater numbers in the ones and tens places in Grade 1. In this unit, the concept of *greater than* is extended to the hundreds place.
- **Hundreds*** (Lessons 2-1) This is also a new term. In Grade 1, students understood groups of 10 ones as *tens*, and will extend this understanding to understand groups of 10 tens as *hundreds*.
- **Less than (<)*** (Lesson 2-5) This is also a new term. Students understand lesser numbers in the ones and tens places in Grade 1. In this unit, the concept of *less than* is extended to the hundreds place.
- **Standard form*** (Lesson 2-3) This is also a new term. A number written in *standard form* is written using numerals. Standard form is considered the "regular" form of writing numbers.
- **Word form*** (Lesson 2-3) This is also a new term. A number written in *word form* is written using words. It shows the number as spoken, e.g., three hundred forty-nine.

MLD Math Language Development

Mathematical Verbs and Nouns

When speaking in math, clarity is key. When speaking (and writing) numbers, place value must be used. In this unit, students read 3-digit numbers in standard form, word form, and expanded form. It is important that students read the numbers precisely, using place value instead of digit names. For example, students should say, "three hundred twenty-four" instead of "three twenty-four." Also, be sure the word *and* is not spoken after the *hundred*. These differences will be important going forward as students begin working with decimals.

Decompose: Students may know compose from reading/language arts or musical terms. Ask what it means to *compose* an essay or a piece of music. Students will likely know that its meaning is *put together words and sentences* or *individual notes to make a whole*. Explain that the prefix *de-* can signal an opposite meaning, so *decompose* can be used to describe taking apart a whole. In this unit, *decompose* signals taking a number apart.

Hundreds flat: Students are familiar with using ones units and tens rods to show numbers, but this is their first introduction to the base-ten block used to represent hundreds. Remind students that tens rods show groups of 10 ones, and then show students, that in a similar way, hundreds flats show groups of 10 tens.

EL English Language Learner

Making Inputs Comprehensible

In this unit, students are provided with a number of scaffolds to support their comprehension of the language used to present and explain place value to 1,000. Because many of the words and phrases used in this section are comparison words, students are supported in understanding and using such words. Other terms, such as each and notice, are likely unfamiliar or unknown.

Lesson 2-1 – *each*
Lesson 2-2 – *notice*
Lesson 2-3 – *different ways*
Lesson 2-4 – *group*
Lesson 2-5 – *compare*

Number Routines

Build Fluency The number routines found at the beginning of each lesson help students build number sense and operational fluency. They also help students develop the thinking habits of mind that are important for proficient doers of math.

Would you Rather?

Purpose: Build flexibility with number sense and mental math operations; enhance decision-making.

Overview: Students choose between two options, both of which require mental computation. Students explain their choice and their rationale for their choice.

Mystery Number

- **Purpose:** Builds mathematical reasoning and thinking.
- **Overview:** Based on clues that are revealed one at a time, students determine the mystery number. With each clue, students propose possible solutions and eliminate proposed solutions that are no longer viable. The teacher records students' possible solutions and eliminations.

Sense-Making Routines

- **Notice & Wonder™: What do you notice? What do you wonder?** (Lessons 2-1, 2-3, 2-5) For Notice and Wonder, students are given an image and asked to tell about it and share any questions they may have. The sense-making routines are meant to provide an entry point into the lesson for all students. This is not a time to answer a question or teach the math objective, but rather a time to get students thinking in a comfortable setting.
  The teacher guides students in telling about the image. As the teacher guides the discussion, probing questions are provided at point of use, to ensure students touch on the math-related concept of the lesson.
- **Notice & Wonder: How are they the same? How are they different?** (Lesson 2-2) For How are they the same? How are they different, students are presented with three images. They consider how the images are similar and different. The teacher should encourage students to share their observations.
- **Which Doesn't Belong?** (Lesson 2-4) For Which Doesn't Belong, students are shown a series (usually 4) of images, quantities, or numbers, and students typically compare and contrast the images or use reasoning to help identify which item doesn't belong. Typically, a scenario exists in which every image could be understood not to belong. There should never be a definitive answer.
  As teachers guide students discussing the image, student inquiry that begins to focus on the mathematical concept should be emphasized. During the conversation, each choice should at some point become a focus of the discussion.

Math Language Routines

The Mathematical Language Routines used in this unit give teachers a structured, yet adaptable format for amplifying and developing students' social and academic language. These routines can also be used as formative assessment opportunities as students develop proficiency in English and mathematical language. They can be used in ways that support real-time-, peer-, and self-assessment. For more information on the Math Language Routines, see the Appendix.

- Lesson 2-1 – In order to optimize output, students participate in MLR1: Stronger and Clearer Each Time so that they have a structured and interactive opportunity to revise and refine their ideas and their verbal and written output regarding explaining hundreds.
- Lesson 2-2 – In order to support sense making and to cultivate conversation, students participate in MLR2: Collect and Display so oral words and phrases can be captured into a stable, collective reference.
- Lesson 2-3 – In order to maximize linguistic and cognitive meta-awareness, students participate in MLR7: Compare and Connect so that students' meta-awareness can be fostered as they compare and contrast ways to represent the same numbers.
- Lesson 2-4 – In order to maximize linguistic and cognitive meta-awareness and to cultivate conversation, students participate in MLR8: Discussion Supports so that they can have a rich and inclusive discussion about solving a mathematical problem related to decomposing 3-digit numbers.
- Lesson 2-5 – In order to support sense-making, students participate in MLR6: Three Reads so that they know what they are being asked to do, have the opportunity to reflect on the ways mathematical questions are presented, and are equipped with tools used to negotiate meaning.

Readiness Diagnostic

Unit 2

How Ready Am I?

Name _____

1. What number is the same as 10 ones?

A. 00 B. 1
C. 10 D. 100

2. What number is the same as 6 tens?

A. 6 B. 16
C. 60 D. 610

3. Which number is greater than 36?

A. 30 B. 35
C. 36 D. 37

4. Which of these is the same as 30?

A. 1 + 1 + 1 B. 3 + 0
C. 3 + 10 D. 10 + 20

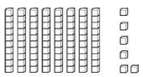
5. What number is 10 more than 46?

A. 56 B. 47
C. 45 D. 36

6. Which comparison is true?

A. 51 > 15 B. 27 > 72
C. 63 < 36 D. 79 = 97

7. What is the value of the base-ten blocks?



A. 68 B. 80
C. 86 D. 87

8. Caleb has 28 crayons. Josh has 10 fewer crayons than Caleb. How many crayons does Josh have?

A. 8 B. 18
C. 20 D. 28

9. Which of these is the same as 83?

A. 8 + 3 B. 8 + 30
C. 80 + 3 D. 80 + 30

10. Carlos has 49 toy cars. His brother has 37 toy cars. Which shows the correct comparison of the number of toy cars Carlos and his brother have?

A. 37 = 49 B. 37 > 49
C. 49 > 37 D. 49 < 37

Administer the Readiness Diagnostic to determine your students' readiness for this unit.

Targeted Intervention

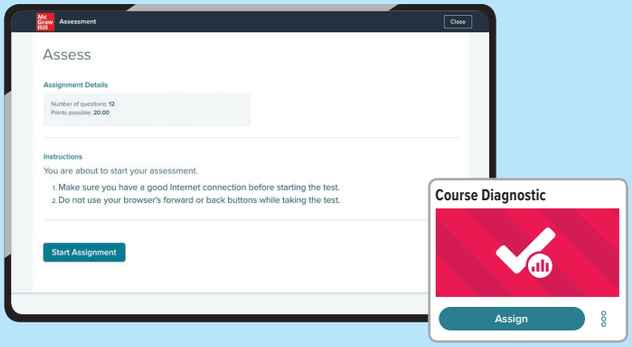
Use Guided Support intervention lessons available in the Digital Teacher Center to provide targeted intervention.

Item Analysis

Item	DOK	Skill	Guided Support Intervention Lesson	Standard
1	1	Recall how many ones make 10	Count to 50 by Tens	1.NBT.B.2.a
2	2	Identify a number of tens in standard form	Count to 100 by Tens	1.NBT.B.2.c
3	2	Compare 2-digit numbers	Compare Numbers 1 to 50	1.NBT.B.3
4	2	Decompose 2-digit numbers	Group Ones into Tens and Ones	1.NBT.B.2
5	2	Add 10	Find 10 More Than a Number	1.NBT.C.5
6	2	Compare 2-digit numbers	Compare Numbers 1 to 100 Using Symbols	1.NBT.B.3
7	2	Identify the value of base-ten blocks	Model Tens and Ones (50–99)	1.NBT.B.2
8	3	Subtract 10 to solve word problems	Find 10 Less Than a Number	1.NBT.C.5
9	2	Decompose 2-digit numbers	Group Ones into Tens and Ones	1.NBT.B.2
10	3	Compare 2-digit numbers to solve word problems	Compare Numbers 1 to 50 Using =, >, or <	1.NBT.B.3

GO ONLINE

Assign the digital Readiness Diagnostic to students or download and print PDFs from the Digital Teacher Center.



Focus Question

Introduce the Focus Question: *How can you use place value to understand and compare numbers to 1,000?*
Ask students to think about what they know about place value and comparing numbers.

- What do you already know about place value?
- What does it mean to compare numbers?
- What do you think you will be doing in the unit?

Remind students that at the end of the unit, they will reflect back on what they learned in this unit.

Family Letter

Each letter presents an overview of the math in the unit and home activities to support student learning.

STEM in Action

Videos

Students can watch the two STEM videos.

STEM Career: Nutritionist Sienna talks about the work of a nutritionist.

Sienna Counts by 10s Sienna explains how to skip count by 10s to 100.

STEM Project

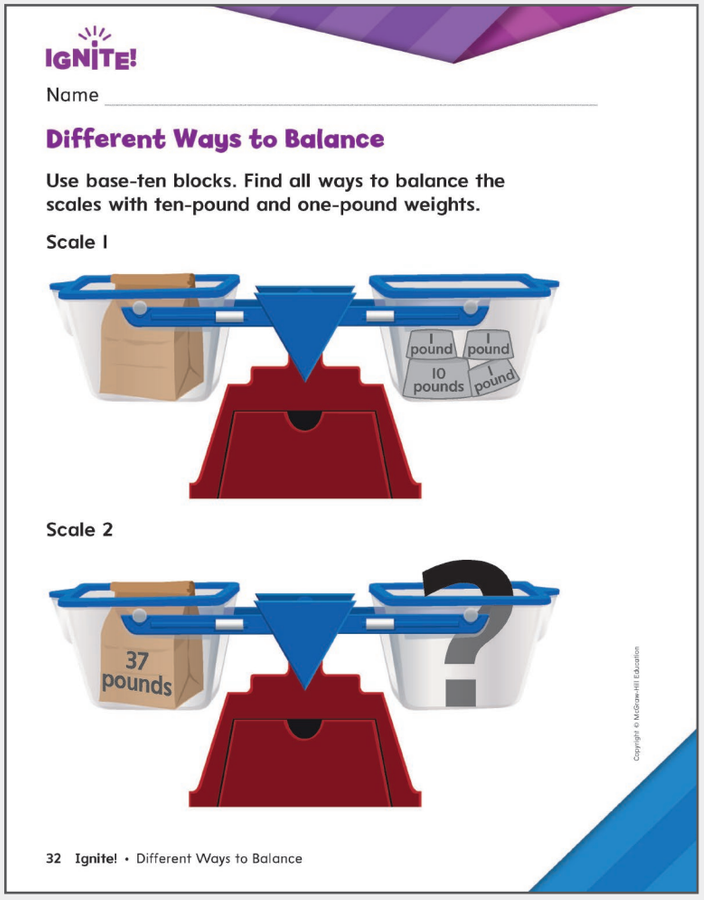
Students can complete the STEM Project during their workstation time.

Websketch Exploration

Students can complete the Websketch Exploration, **Place Value Counter Target,** during their workstation time.

STEM Career: Nutritionist

Sienna Counts by 10s



IGNITE!

Name _____

Different Ways to Balance

Use base-ten blocks. Find all ways to balance the scales with ten-pound and one-pound weights.

Scale 1

Scale 2

32 **Ignite!** • Different Ways to Balance

Ignite!

Different Ways to Balance

Students explore how to balance a scale using one-pound and ten-pound weights. Solutions are represented with base-ten blocks.

Materials: base-ten blocks (ones units and tens rods)

1. Direct attention to Scale 1 on the *Student Companion* page.
   - What do you notice about the scale?
   - What is the weight of the brown bag? Explain.
2. Ask students to think about another way to balance the scale using only ten- and one-pound weights.
   - How can you replace the weights on the right with another set of ten- and one-pound weights—while keeping the scale balanced? You may use your base-ten blocks to help you.
   - Are there any other ways to balance the brown bag using ten-pound and one-pound weights? Explain.
3. Direct attention to Scale 2.
   - Find all the ways to balance the scale using ten- and one-pound weights. Use base-ten blocks to represent your solutions.
   - Which solution used the fewest base-ten blocks?
   - Which solution used the most base-ten blocks?
4. Ask follow-up questions such as these:
   - What do you notice about the solution that uses the fewest weights?
   - What do you notice about the solution that uses the most weights?
   - A solution for Scale 2 is 2 ten-pound and 17 one-pound weights. If we switched the weights around to 2 one-pound and 17 ten-pound weights, would the scale still be balanced? Explain.
5. Make connections to place value.
   - How do these problems relate to place value?

Workstations

Reveal Math offers rich and varied resources that teachers can use to differentiate and enrich students' instructional experiences with the unit content. The table presents an overview of the resources available for the unit with recommendations for when to use.

	Activity	Description	Use After Lesson
Game Station	Game Station	Students work with 3-digit numbers.	
		• **Put Together Both Parts Unknown Task Cards**	2-1
		• **Represent that 3-Digit Number!**	2-2
		• **Represent that 3-Digit Number!**	2-3
		• **Numbers Different Ways Concentration**	2-4
		• **Largest Number**	2-5
Digital Station	Digital Game	**Special Delivery** Students add within 20.	2-1
Application Station	**Have students complete at least one of the Use It! activities for this unit.**		
	STEM Project Card	**A Lot to Recycle** Students write a summary of recycling data.	2-5
	Connection Card	**Color by Number** Students create a color-by-number picture and write the directions for completing it.	2-2
	Real World Card	**Class Celebration** Students save tickets to earn a class party.	2-2

Additional Resources

Use the resources below to provide additional support for this unit.

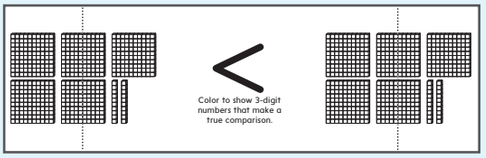
GO ONLINE

Vocabulary

Use the vocabulary cards to help students learn the vocabulary in this unit. Encourage students to write their own definitions of the key terms on the front side of the card.

Foldables

Use the unit foldables with Lessons 2-3 and 2-5.



Spiral Review

Students can complete the Spiral Review at any point during the unit as either a paper-and-pencil or digital activity.

Lesson	Standard
2-1	1.OA.A
2-2	1.OA.B
2-3	1.OA.C
2-4	1.OA.D
2-5	1.NBT.A

LESSON **2-1**

Understand Hundreds

Learning Target

- I can explain how 10 groups of ten equal 100.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **2.NBT.A.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

◇ **2.NBT.A.1.a** 100 can be thought of as a bundle of ten tens – called a "hundred."

Math Practices and Processes

MPP Model with mathematics.

MPP Look for and make use of structure.

Vocabulary

Math Terms	Academic Terms
hundreds	in common
tens	relate to

Materials

The materials may be for any part of the lesson.

- base-ten blocks

Focus

Content Objective	Language Objective	SEL Objective
• Students explain hundreds with regard to place value – 100 is one hundred or 10 tens, 200 is two hundreds or 20 tens, and so on.	• Students explain their understanding of 100 as 10 groups of ten using the term *each*. • Optimize output by participating in MLR1: Stronger and Clearer Each Time.	• Students exchange ideas for mathematical problem-solving with a peer and provide thoughtful and constructive feedback.

Coherence

Previous	Now	Next
• Students demonstrated that the digits of a 2-digit number represent amounts of tens and ones (Grade 1).	• Students demonstrate understanding of 100 as 10 groups of ten.	• Students identify the digits of a 3-digit number as representing amounts of hundreds, tens, and ones (Unit 2). • Students fluently add within 1,000. (Grade 3).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of place value to include hundreds.	• Students develop proficiency with hundreds. *Procedural skill and fluency is not a targeted element of rigor for this standard.*	• Students apply their understanding of hundreds and 3-digit numbers to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

GO ONLINE

Number Routine
Would You Rather? 5–7 min

Build Fluency Students build number sense as they compare expressions to determine which has more or less.

These prompts encourage students to talk about their reasoning:

- How did you determine which has more?
- How did you determine what to do?

Purpose Students think about a group of objects and explore ways to find the total amount of objects in the group.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip You may have students think individually about what they notice and wonder, and then share their ideas with partners before asking the whole group. Working independently first will give students an opportunity to think about their own ideas and understanding before hearing ideas from others.

ETP Pose Purposeful Questions

The questions that follow may be asked in any order. They are meant to help advance students' thinking about ways to count and are based on possible comments and questions that students may ,ake during the share out.

- How did you find the total number of hands?
- How many would there be if there was one more hand? How do you know?
- Is there another way you could have counted?

Math is... Mindset

- How can you show respect to others?

SEL Social Awareness: Respect

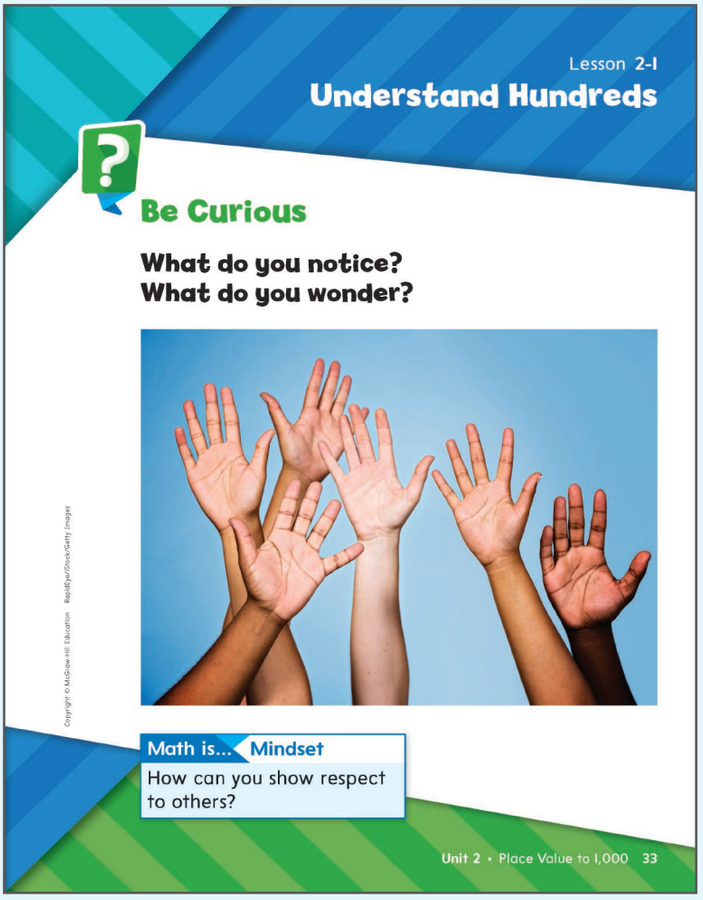
As students work with partners to complete the Notice & Wonder routine, remind them to show respect by listening attentively when others are sharing their ideas. Provide models of constructive and respectful feedback to guide students. As students share their ideas, encourage classmates to provide thoughtful feedback to one another. Remind students that respecting others is an important part of being a member of the class community.

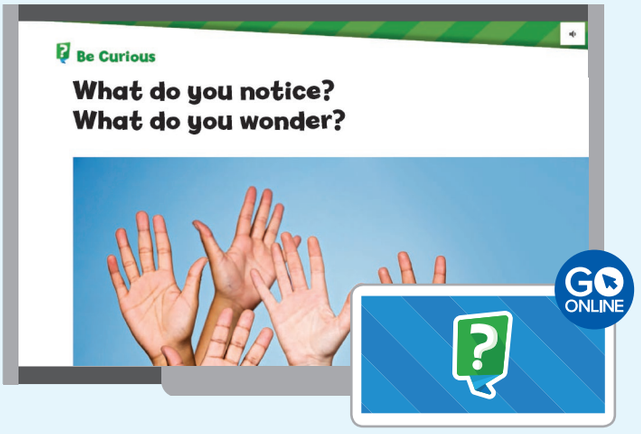
Transition to Explore & Develop

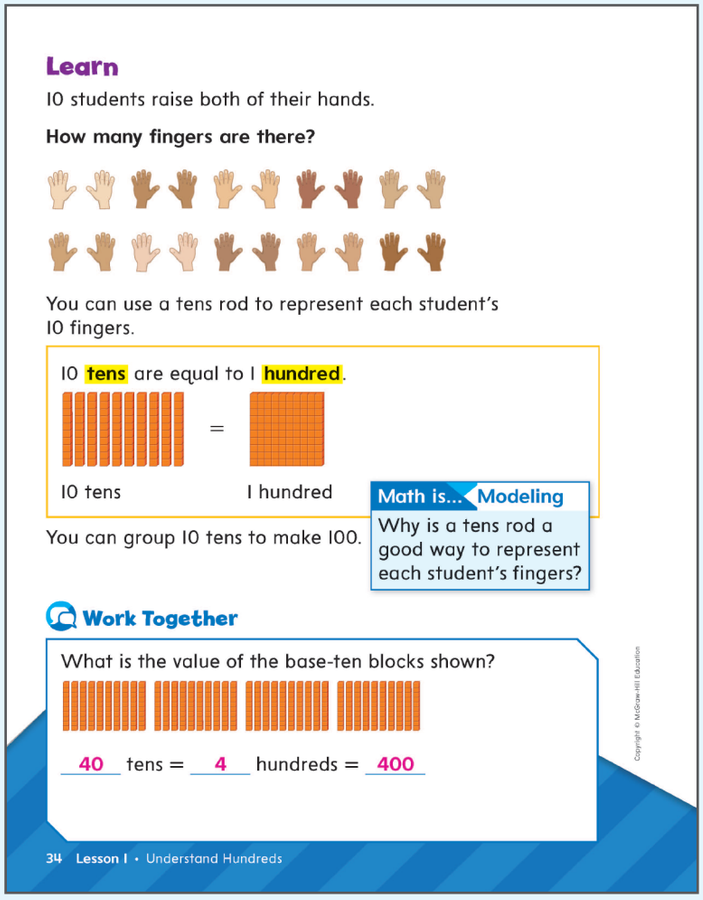
Ask questions that get students thinking about how objects might be grouped. Guide the discussion to have students think about different ways to count the same group of objects.

ETP Establish Goals to Focus Learning.

- What are some different ways you can group objects to count them?







Learn

10 students raise both of their hands.

How many fingers are there?

You can use a tens rod to represent each student's 10 fingers.

10 tens are equal to 1 hundred.

10 tens = 1 hundred

You can group 10 tens to make 100.

Math is... Modeling

Why is a tens rod a good way to represent each student's fingers?

Work Together

What is the value of the base-ten blocks shown?

40 tens = 4 hundreds = 400

34 Lesson 1 • Understand Hundreds

1 Pose the Problem

ETP Pose Purposeful Questions

- Look at the hands and fingers. What groups do you see?
- What can you say about the number of fingers on each hand? On each pair of hands?

2 Develop the Math

Choose the option that best meets your instructional goals.

MLR Compare and Connect

Have student individually, look at a set of ten rods and write down their idea for solving for how many hundreds. Then use a successive pairing structure where partners switch one, two, or three more times, strengthening and clarifying their idea orally and in writing each time.

3 Bring It Together

ETP Elicit Evidence of Student Thinking

- How can you show 10 tens?
- What other way can you show 10 tens?
- What can you name 10 groups of ten?

Key Takeaway

- You can group 10 tens to make 100.

Work Together

The Work Together activity can be used as a formative assessment opportunity that builds on students' understanding of 10 groups of ten equaling 100. Have students work on the activity in pairs before asking them to share their work.

Common Error: Students may incorrectly count the tens rods by 1s instead of by 10s. Make sure students understand that a tens rod is made up of 10 ones, so when counting tens rods, you must count by 10s.

LOM Language of Math

There are other words that indicate *tens* and *hundreds*. Ask students if they are familiar with any words that equal 10 or 100 of something. For example, students may be familiar with decade meaning 10 years, and century meaning 100 years.

CHOOSE YOUR OPTION

Activity-Based Exploration

Students explore groups of tens to make 1 hundred.

Materials: base-ten blocks

Directions: Have each student raise both of their hands and determine how many fingers they have in the air. Then, encourage students to brainstorm tools they can use to represent 10 fingers. Give each student a tens rod. Invite students to work with their classmates and add their tens rods to make 100. Once students can show how they combined tens to get 100, allow them to exchange 10 tens rods for 1 hundred flat. Invite students to find how many groups of 100 they can make using the tens rod from each student in the class.

Math is... Modeling

- Why is a tens rod a good way to show 10 fingers?

Students are modeling with math to build their understanding that 10 groups of ten equal 100 in order to solve problems.

ETP Support Productive Struggle

- How many groups of 10 make 100?
- How are the groups of tens and hundreds the same? How are they different?

Activity Debrief: Have groups share what they discovered during the exploration, encouraging them to provide a clear explanation of how many *tens* make a *hundred*.

- How do tens relate to a hundred?

Have students revisit the Pose the Problem question and discuss answers.

- How many fingers are there?

Guided Exploration

Students extend their understanding of place value to the hundreds place and build on their understanding that a group of 10 tens makes 1 hundred.

Math is... Modeling

- Why is a tens rod a good way to show each student's fingers?

Students think about ways to represent real-world situations using mathematics.

Have students work with a partner to skip count by 10s to find the value of 10 tens. Encourage students to record their thinking on paper using drawings or numbers.

ETP Facilitate Meaningful Discourse

- What do you notice about the number of ten rods and the value of the ten rods?
- What can you use to represent all 100 fingers?
- Why do you think we call the base-ten block for one hundred a flat?
- How do tens relate to a hundred?
- **Think About It:** How can you find the value of 20 tens?

EL English Learner Scaffolds

Entering/Emerging Support students' understanding of the word each. Say, *Hold up each hand*, and gesture holding up each hand in turn. Say, *Count each finger.* Model counting each finger. Continue using the game "Simon Says" to reinforce the meaning of the word each.

Developing/Expanding Support students' understanding of the word each. Say, *Hold up each hand*, and gesture holding up each hand in turn. Then play the game "Simon Says" to reinforce the meaning of the word. In pairs, have students continue the game alternately giving and receiving commands.

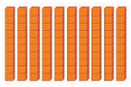
Bridging/Reaching Check students' understanding of the word *each*. Ask student pairs to play "Simon Says" giving commands using *each*, e.g. *Hold up each of your hands. Count each finger.* etc.

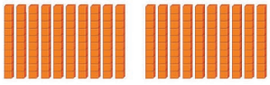
On My Own

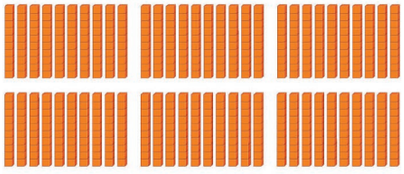
Name _____

What is the value of the base-ten blocks?

1.
10

2. 
100

3. 
200

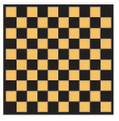
4. 
600

How can you use tens rods to show the problem? Fill in the answer.

5. Josh does 10 push-ups every day. How many push-ups does Josh do in 10 days?
100 push-ups

6. **STEM Connection** Sienna is helping her teacher pack first aid kits. Each kit has 10 groups of 10 bandages. She packs 8 kits. How many bandages does Sienna pack?
800 bandages

7. Dhruvi says there are 100 squares on a chessboard. How can you show the number of squares using base-ten blocks?
Sample answer: I can show 10 tens.



8. **Extend Your Thinking** Anya has room for 995 sport cards in her binder. A pack has 10 cards, and a set has 100 cards. How many packs and sets can she put in her binder?
Sample answer: 5 sets and 49 packs

Reflect

Why is it helpful to group 10 tens as 100?
Answers may vary.

Math is... Mindset
How have you shown respect to others?

Practice

Build Fluency from Understanding

Common Error: Exercises 1–2 Students may count a group of 10 as one and assume the correct answers to these questions to be 1 and 10 sequentially. Reinforce understanding that 1 and 10 represent the number of rods, not the value of the rods. Encourage students to think of the value of each rod.

Practice Item Analysis

Item	DOK	Rigor
1–2	1	Conceptual Understanding
3–4	2	Conceptual Understanding
5–6	3	Application
7	2	Procedural Skill and Fluency
8	4	Application

Reflect

Students complete the Reflect question.

- Why is it helpful to group 10 tens as 100?

Ask students to share their reflections with their classmates.

Math is... Mindset

- How have you shown respect to others?

Students reflect on how they practiced social awareness.

Learning Target

Ask students to Reflect on the Learning Target of the lesson.

- I can explain how 10 groups of ten equal 100.

To review today's lesson, have students watch the Math Replay video in their Digital Student Center.

Assign the On My Own practice to students from the Digital Teacher Center.

Exit Ticket Formative Assessment

The *Exit Ticket* assesses students' understanding of lesson concepts.

Metacognitive Check *Reflect on Your Learning* allows students to think about their level of understanding of the lesson content on a scale of 1 to 3 with 3 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	1	Relate hundreds to groups of 10	2.NBT.A.1.a
2	2	Relate hundreds to groups of 10	2.NBT.A.1.a
3	2	Relate hundreds to groups of 10	2.NBT.A.1.a

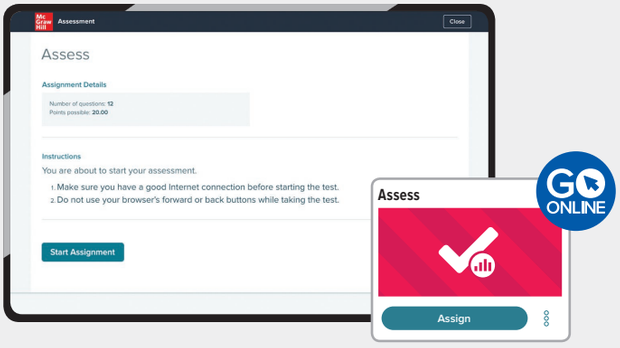
Data Use students' scores on the *Exit Ticket* to assign the differentiated resources available. When students complete the *Exit Ticket* in the digital workspace, their responses are auto-scored.

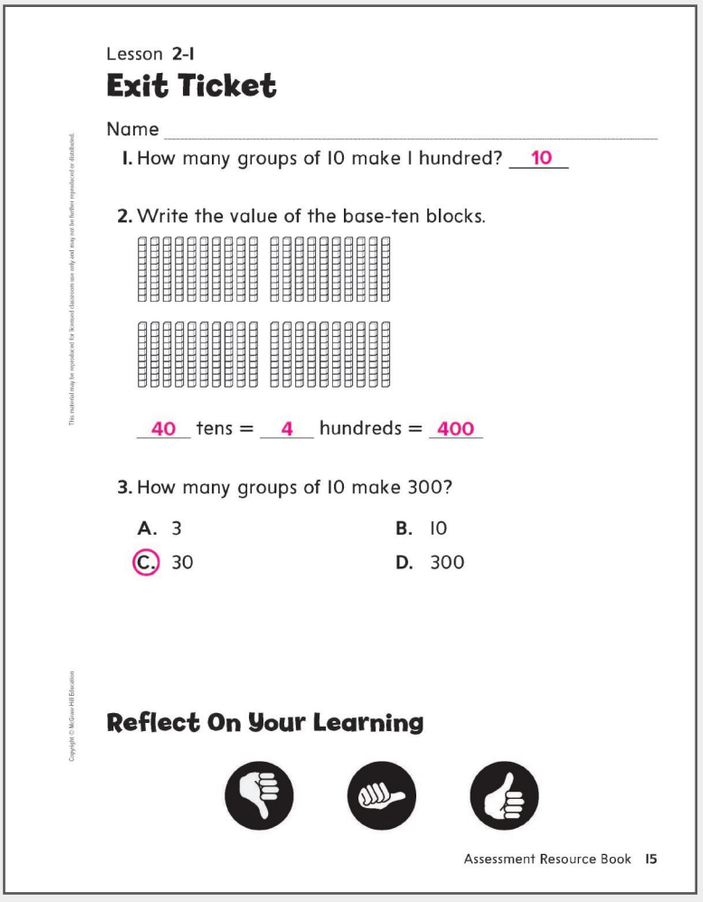
Exit Ticket Recommendations

If students score	Then have students do
3 of 3	Additional Practice or any of the B or E activities
2 or 3	*Take Another Look* or any of the B activities
1 or fewer of 3	Small Group Intervention or any of the R activities

Key for Differentiation

R Reinforce Understanding
B Build Proficiency
E Extend Thinking





Lesson 2-1

Exit Ticket

Name _____

1. How many groups of 10 make 1 hundred? 10

2. Write the value of the base-ten blocks.

40 tens = 4 hundreds = 400

3. How many groups of 10 make 300?

A. 3
B. 10
C. 30
D. 300

Reflect On Your Learning

Assessment Resource Book 15

Differentiate

10 min Select resources based on your classroom set up, or your students' needs.

R Reinforce Understanding

SMALL GROUP

Make Trades

Work with students in pairs. Provide each pair with 6 hundreds flats, 60 tens rods, and a spinner with sections labeled 10, 20, 30, 40, 50, and 60. Instruct students to spin the spinner and model that many using tens rods. Then have students trade each set of 10 tens rods for a hundreds flat. Have students explain how many hundreds make up the number of tens. Have students repeat the activity two more times.

B Build Proficiency

WORKSTATIONS

Practice It! Game Station

Put Together Both Parts Unknown Task Cards

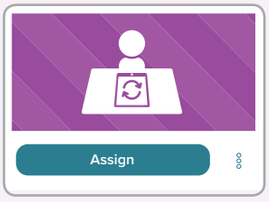
Students practice writing combinations that make a sum.

GO ONLINE

Take Another Look Lesson

Assign the interactive lesson to reinforce targeted skills.

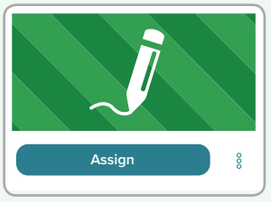
- Groups of Hundreds



GO ONLINE

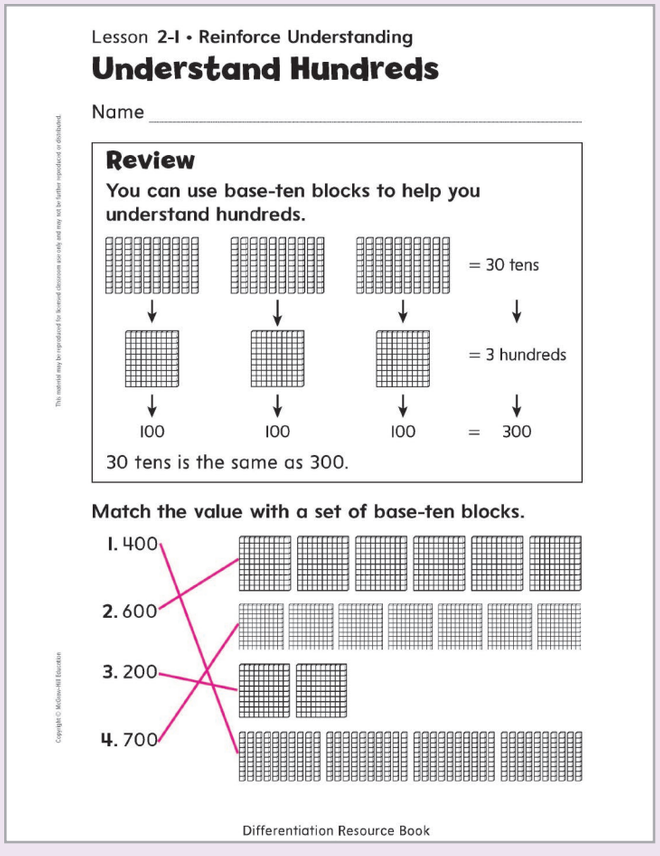
Interactive Additional Practice

Assign the digital version of the Student Practice Book.



INDEPENDENT WORK

Differentiation Resource Book, p. 1



Lesson 2-1 • Reinforce Understanding

Understand Hundreds

Name _____

Review

You can use base-ten blocks to help you understand hundreds.

= 30 tens

= 3 hundreds

100 100 100 = 300

30 tens is the same as 300.

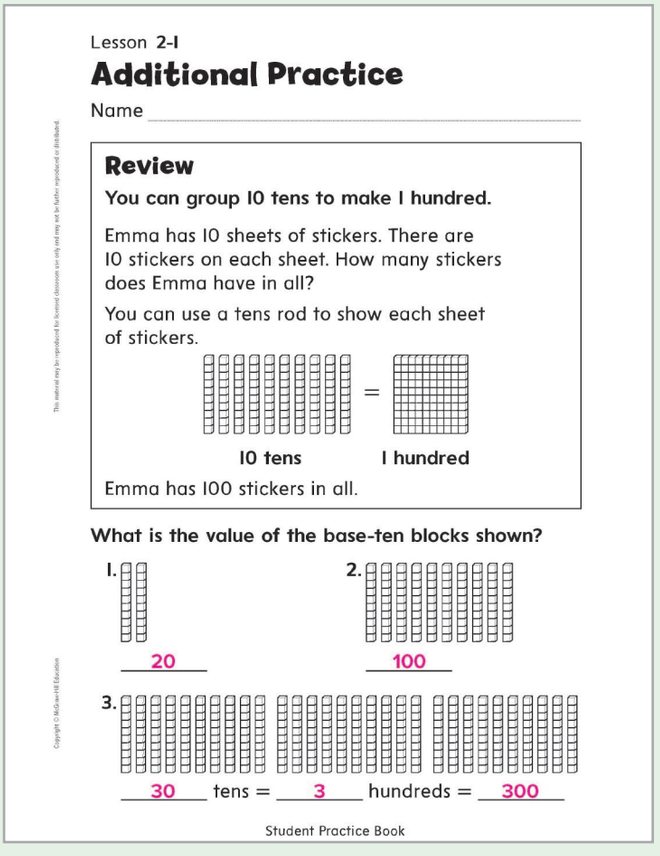
Match the value with a set of base-ten blocks.

1. 400
2. 600
3. 200
4. 700

Differentiation Resource Book

INDEPENDENT WORK

Student Practice Book, pp. 1–2



Lesson 2-1

Additional Practice

Name _____

Review

You can group 10 tens to make 1 hundred.

Emma has 10 sheets of stickers. There are 10 stickers on each sheet. How many stickers does Emma have in all?

You can use a tens rod to show each sheet of stickers.

=

10 tens 1 hundred

Emma has 100 stickers in all.

What is the value of the base-ten blocks shown?

1. 20
2. 100
3. 30 tens = 3 hundreds = 300

Student Practice Book

Extend Thinking

WORKSTATIONS

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with addition within 20.

Use It! Application Station

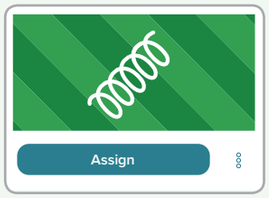
Color by Number Students create a color-by-number picture and write the directions for completing it.

The content of this card has concepts overed later in Lesson 2-2. You may want to assign this card to students ready to explore content covered later in this unit.

GO ONLINE

Spiral Review

Assign the digital Spiral Review to students or download and print PDFs of the Spiral Review from the Digital Teacher Center.



Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

INDEPENDENT WORK

Student Practice Book, pp. 1–2

Use base-ten blocks to show the problem.

4. Jayden read a book for 10 minutes each day for 10 days. How many minutes did Jayden read?

   100 minutes

5. Sofia uses 10 packs of beads to make 1 bracelet. There are 10 beads in each pack. She made 4 bracelets. How many beads did Sofia use to make the bracelets?

   400 beads

6. Carlos wants to put 720 of his blocks in his toy box. A small set has 10 blocks and a large set has 100 blocks. How can you write three ways Carlos can put small and large sets of blocks in his toy box?

   Sample answer: 2 small sets and 7 large sets; 12 small sets and 6 large sets; 22 small sets and 5 large sets

Math @ Home Activity

Provide opportunities for your child to use groups of ten to make groups of hundreds. For example, have your child place small objects, such as beans, in groups of tens to make 200 objects.

Student Practice Book

Differentiation Resource Book, p. 2

Lesson 2-1 • Extend Thinking

Understand Hundreds

Name _____

Mrs. Blake gives stickers to her helpers. A poster shows the stickers they have earned this year.

Mrs. Blakes' Helpers	
Name	Stickers
André	400
Javier	308
Rina	100
Tai	500
Malik	209

1. Mrs. Blake has a sticker book with 10 stickers on each page. How many pages of stickers does she need to use to give Rina stickers? Explain your thinking.

   Sample answer: Mrs. Blake needs to use 10 pages of stickers for Rina. I know that 10 sets of 10 is 100.

2. How many pages of stickers does Mrs. Blake need to use to give Malik stickers? Explain your thinking.

   Sample answer: Mrs. Blake needs to use 21 pages for Malik. I know that 209 is 2 groups of 100 and 9 more, so she will need to use 20 full pages and 9 stickers from 1 more page.

Differentiation Resource Book

LESSON **2-2**

Understand 3-Digit Numbers

Learning Targets

- I can identify the digits in a 3-digit number.
- I can show 3-digit numbers.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **2.NBT.A.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones: e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

◇ **2.NBT.A.1.b** The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Look for and make use of structure.

Vocabulary

Math Terms	Academic Terms
base-ten blocks	decide
digit	explanation
ones	
place-value chart	

Materials

The materials may be for any part of the lesson.

- *3-Digit Numbers* Teaching Resource
- base-ten blocks

Focus

Content Objective	Language Objective	SEL Objective
• Students explain what the digits in a 3-digit number represent. • Students represent 3-digit numbers.	• Students explain that the digits of a 3-digit number represent amounts of hundreds, tens, and ones and represent 3-digit numbers using the term *notice*. • Support sense-making and cultivate conversation by participating in MLR2: Collect and Display.	• Students foster personal curiosity about mathematics by relating a mathematical concept to their own lives and interests.

Coherence

Previous	Now	Next
• Students explained that the digits of a 2-digit number represent amounts of tens and ones (Grade 1). • Students demonstrated that 100 can be thought of as 10 groups of ten (Unit 2).	• Students explain that the digits of a 3-digit number represent amounts of hundreds, tens, and ones. • Students represent 3-digit numbers.	• Students read and write numbers to 1,000 using standard, word, and expanded form (Unit 2). • Students fluently add within 1,000. (Grade 3).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of numbers to represent 3-digit numbers as groups of hundreds, tens, and ones.	• Students use their knowledge of place value to show a 3-digit number. *Procedural skill and fluency is not a targeted element of rigor for this standard.*	• Students apply their knowledge of hundreds, tens, ones to solve world problems. *Application is not a targeted element of rigor for this standard.*

GO ONLINE

Number Routine
Would You Rather? 5–7 min

Build Fluency Students build number sense as they compare expressions to determine which has more or less.

These prompts encourage students to talk about their reasoning:

- How did you determine which has more?
- How did you determine what to do?

Purpose Students think about the three groups and their individual components.

Notice & Wonder™

- How are they the same? How are they different?

Teaching Tip Pair students and provide them time for sharing their observations and ideas on what is the same and different between the words.

ETP Pose Purposeful Questions

he questions that follow may be asked in any order. They are meant to help advance students' thinking about how the same letters can be rearranged to create different words and are based on possible comments and questions that students may make during the share out.

- How do the letters change in each group?
- What other ways can you group or rearrange these letters?

Math is... Mindset

- When might you use math outside of class?

SEL Self-Awareness: Curiosity

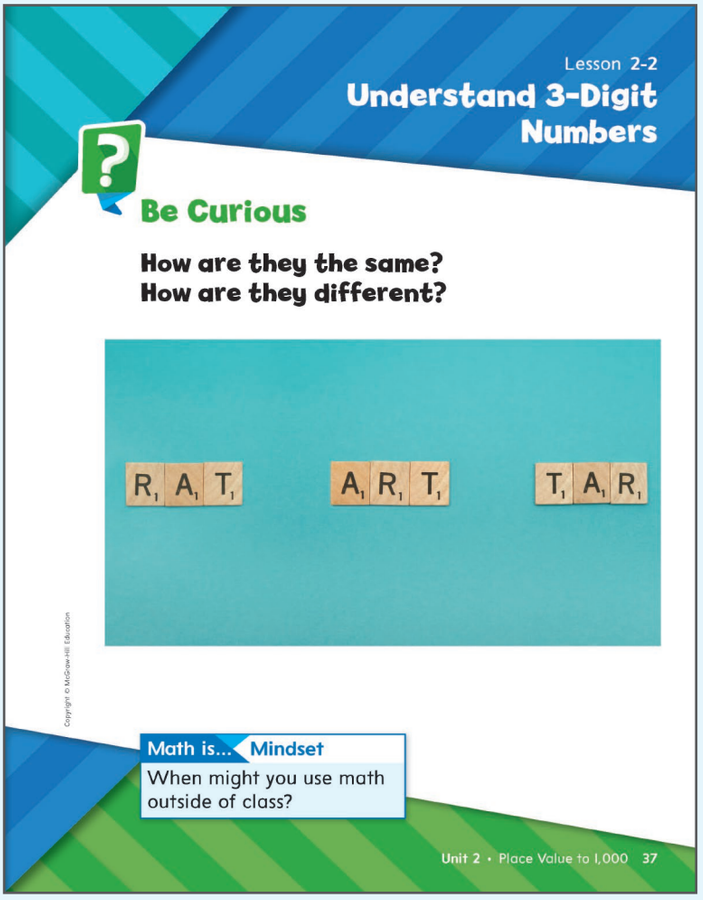
Curiosity can naturally motivate students to want to learn more. As students determine how the groups of letters are the same and how they are different, encourage them to think about each letter individually. Then, have students consider the role each letter plays or the sound it makes when combined with other letters to make a word. Invite students to relate this to their own lives by thinking of something they know that changes depending on the order of each part.

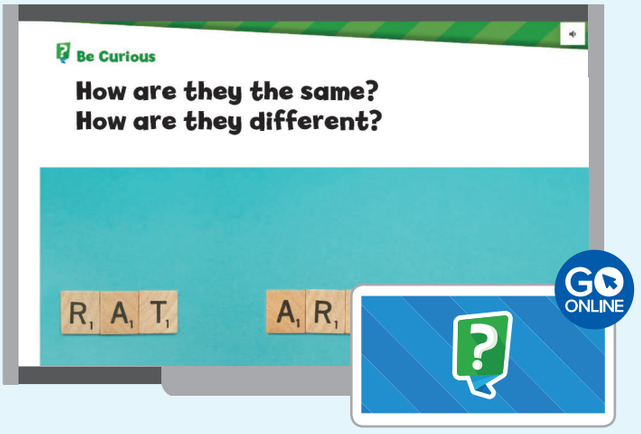
Transition to Explore & Develop

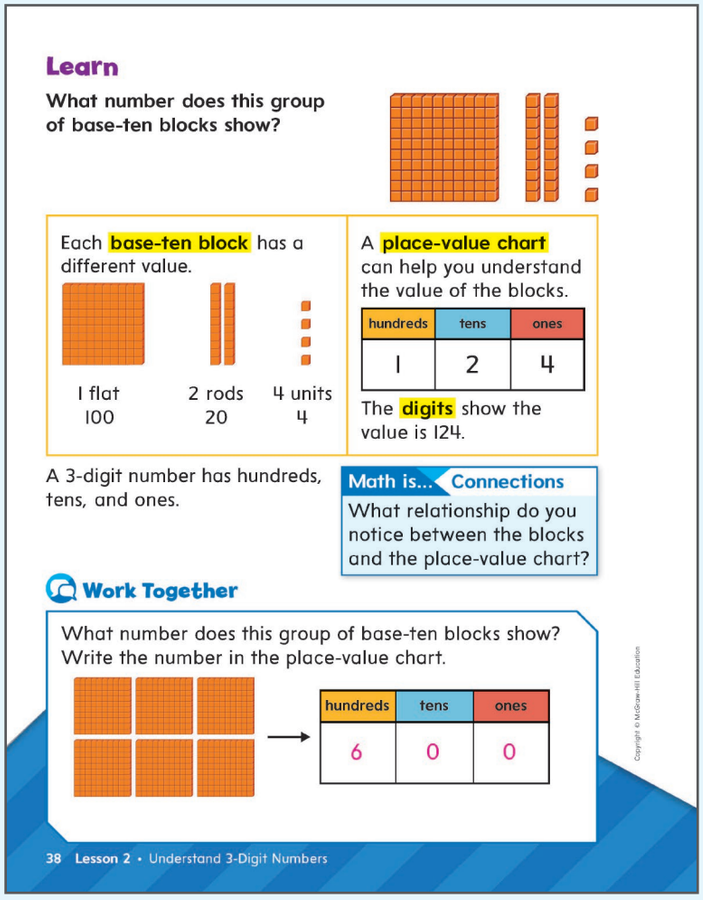
Ask students questions to get them thinking about how the order of the same letters effects the meaning of the word they make. Lead students to understand that three different digits might be arranged in a similar way, and that the digits that comprise the numbers, like letters, might have different meanings.

ETP Establish Goals to Focus Learning

- Let's think about how the order of digits in a number might affect the value of the number.







Learn

What number does this group of base-ten blocks show?

Each **base-ten block** has a different value.

1 flat 100 | 2 rods 20 | 4 units 4

A **place-value chart** can help you understand the value of the blocks.

hundreds	tens	ones
1	2	4

The **digits** show the value is 124.

A 3-digit number has hundreds, tens, and ones.

Math is... Connections

What relationship do you notice between the blocks and the place-value chart?

Work Together

What number does this group of base-ten blocks show? Write the number in the place-value chart.

hundreds	tens	ones
6	0	0

38 Lesson 2 • Understand 3-Digit Numbers

1 Pose the Problem

MLR Collect and Display

As students discuss the two questions, write key words and phrases you hear, such as *hundreds, tens, ones,* and *digits*. Display the words and phrases for student reference and use the student-generated expressions to help make connections between student language and math vocabulary.

ETP Pose Purposeful Questions

- What is the value of each type of base-ten block?
- What tool could you use to help determine the value of the base-ten blocks?

2 Develop the Math

Choose the option that best meets your instructional goals.

3 Bring It Together

ETP Elicit Evidence of Student Thinking

- How do you decide where to put each digit in the place value chart?
- How does a place-value chart help us understand the value of a digit?

Key Takeaway

- A 3-digit number has hundreds, tens, and ones.

Work Together

The Work Together activity can be used as a formative assessment opportunity to check students' place value understanding of 3-digit numbers. Have students work on the activity in pairs before asking them to share their work.

Common Misconception: Students may not know to use the numeral 0 to show zero tens and zero ones.

LOM Language of Math

The word *digit* is a multiple-meaning word. Explain to students that it can mean a value, as we use it in the lesson, or a thumb, finger, or toe. Have pairs of students generate sentences using both words and meanings, such as, "I have 10 digits on my hands, and I can write the digits 0 and 1 to show this value." Challenge students to create as many different sentences as possible.

CHOOSE YOUR OPTION

Activity-Based Exploration

Students create 3-digit numbers with *base-ten blocks* to develop understanding of the value of each *digit* in a 3-digit number.

Materials: *3-Digit Numbers* Teaching Resource (1 per student), base-ten blocks

Directions: Students choose between one and nine of each type of base-ten block (hundreds flats, tens rods, and ones units). Review the value of each type of block. Students record the number of hundreds, tens, and *ones* that they have in the place-value chart on their *3-Digit Numbers* Teaching Resource. Then students record the value of the blocks as a 3-digit number on the line next to the place-value chart. Have students trade blocks with a classmate and record the 3-digit number represented by the blocks. Students continue to trade with classmates until they have recorded five or more 3-digit numbers.

ETP Support Productive Struggle

- How many digits are shown with the blocks?
- What is the value of each digit in the place-value chart?
- What happens if you only use two types of blocks?

Math is... Connections

- What relationship do you notice between the blocks and the place-value chart?

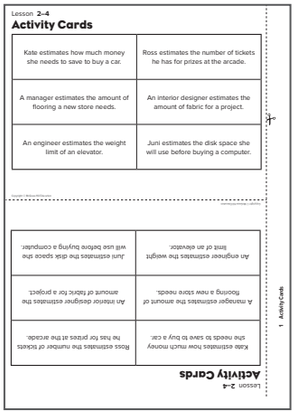
Students explain how base-ten blocks relate to a place-value chart.

Activity Debrief: Have groups share what they discovered during the exploration. Encourage students to explain how they used the base-ten blocks or place-value chart to understand the value of the 3-digit numbers they created.

Have students revisit the Pose the Problem question and discuss answers.

- What number does this group of base-ten blocks represent?

The PDF of the Teaching Resource is available in the Digital Teacher Center.


Lesson 2–4
Activity Cards

Kate estimates how much money she needs to save to buy a car.	Ross estimates the number of tickets he has for prizes at the arcade.
A manager estimates the amount of flooring a new store needs.	An interior designer estimates the amount of fabric for a project.
An engineer estimates the weight limit of an elevator.	Juni estimates the disk space she will use before buying a computer.

Guided Exploration

Students begin to understand that each digit in a 3-digit number has a value. *Base-ten blocks* or a place-value chart can be used to help determine the value of each *digit*. Determining the value of each digit can help students understand the value of a 3-digit number.

ETP Use and Connect Mathematical Representations

- **Think About It:** How many digits are shown by the blocks?
- What is the value shown by each digit in the place-value chart?

Help students understand that a 3-digit number is named first with the hundreds value and then the combination of the tens and *ones* values.

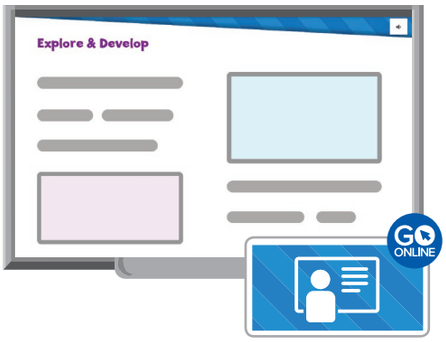
- What happens if we write the numbers in the place-value chart in a different order?

Have students discuss how the value of a number would change if there were zero tens. Invite them to write or share examples of 3-digit numbers with zero tens.

Math is... Connections

- What relationship do you notice between the blocks and the place-value chart?

Students explain how base-ten blocks relate to a place-value chart.

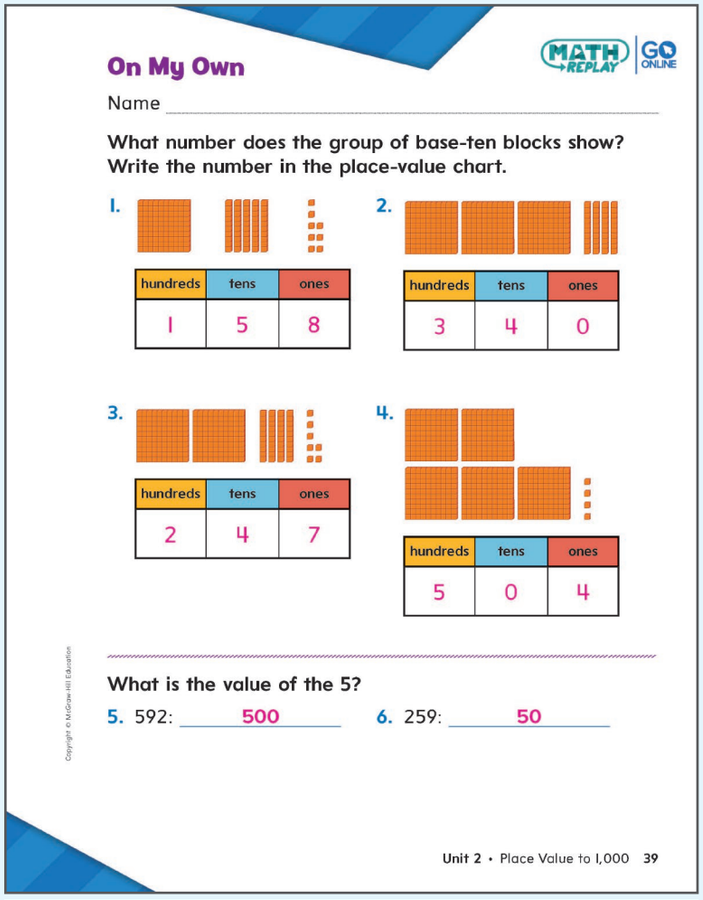


EL English Learner Scaffolds

Entering/Emerging Support students in understanding the meaning of the term *notice*. Write on the board: notice = see. I notice ___. Gesture to your eye and then point to various things in the classroom. Say, *I notice [a whiteboard/a window/a desk]*. Have students repeat after you. As they're able, have students fill in the blanks with their own ideas.

Developing/Expanding Support students in understanding the meaning of the term *notice*. I notice ___. Gesture to your eye then point to various things in the classroom. Say, *I notice [a whiteboard/a window/a desk]*. Have students repeat after you. Ask, *Do you know another word that means* notice? (see)

Bridging/Reaching Ask students to tell you the meaning of the word *notice*. (to see something; to become aware of something) Ask students to say what they notice about the place-value chart using *I notice that* ___.



On My Own

Name _____

What number does the group of base-ten blocks show? Write the number in the place-value chart.

1.

hundreds	tens	ones
1	5	8

2.

hundreds	tens	ones
3	4	0

3.

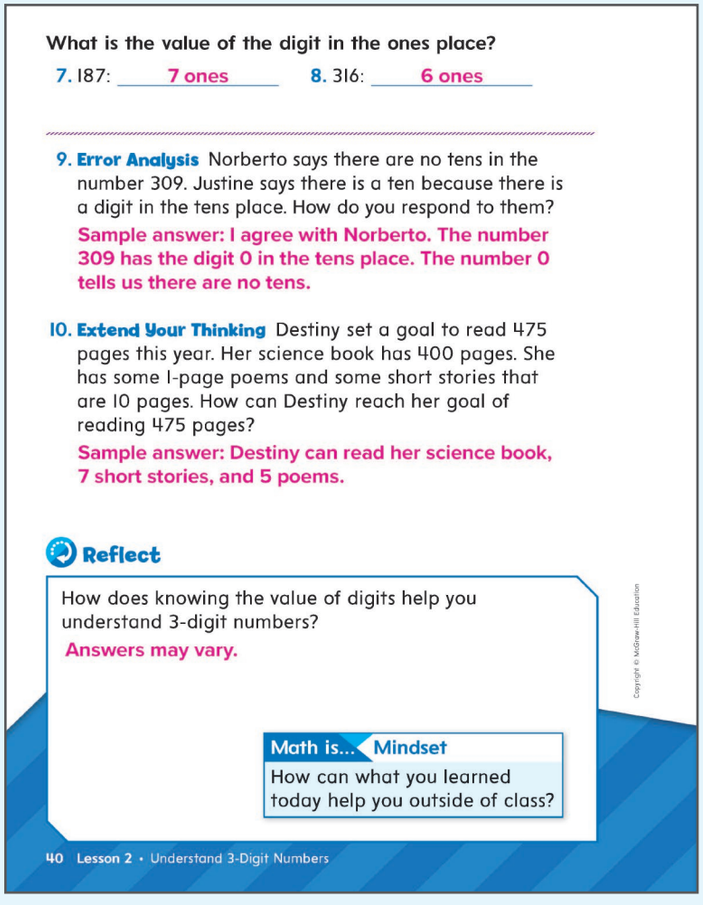
hundreds	tens	ones
2	4	7

4.

hundreds	tens	ones
5	0	4

What is the value of the 5?

5. 592: 500 6. 259: 50



What is the value of the digit in the ones place?

7. 187: 7 ones 8. 316: 6 ones

9. **Error Analysis** Norberto says there are no tens in the number 309. Justine says there is a ten because there is a digit in the tens place. How do you respond to them?
Sample answer: I agree with Norberto. The number 309 has the digit 0 in the tens place. The number 0 tells us there are no tens.

10. **Extend Your Thinking** Destiny set a goal to read 475 pages this year. Her science book has 400 pages. She has some 1-page poems and some short stories that are 10 pages. How can Destiny reach her goal of reading 475 pages?
Sample answer: Destiny can read her science book, 7 short stories, and 5 poems.

Reflect

How does knowing the value of digits help you understand 3-digit numbers?
Answers may vary.

Math is... Mindset
How can what you learned today help you outside of class?

Practice

Build Fluency from Understanding

Common Error: Exercises 3–4 Students may incorrectly identify the value of the hundreds digit 5 as 50, because they have developed a habit of associating the lead digit with tens before they began working with hundreds. Students also might give a value of 5 for either answer. Use a place-value chart to reinforce the value of the digit 5 in each number.

Practice Item Analysis

Item	DOK	Rigor
1–4	1	Conceptual Understanding
5–6	2	Procedural Skill and Fluency
7–8	2	Procedural Skill and Fluency
9	3	Application
10	4	Application

Reflect

Students complete the Reflect question.

- How does knowing the value of digits hep you understand 3-digit numbers?

Ask students to share their reflections with their classmates.

Math is... Mindset

- How can what you learned today help you outside of class?

Students reflect on how they practiced self-awareness.

Learning Targets

Ask students to Reflect on the Learning Targets of the lesson.

- I can identify the digits in a 3-digit number.
- I can show 3-digit numbers.

To review today's lesson, have students watch the Math Replay video in their Digital Student Center.

Assign the On My Own practice to students from the Digital Teacher Center.

Exit Ticket Formative Assessment

The *Exit Ticket* assesses students' understanding of lesson concepts.

Metacognitive Check *Reflect on Your Learning* allows students to think about their level of understanding of the lesson content on a scale of 1 to 3 with 3 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	1	Recall the place values of 3-digit numbers	2.NBT.A.1.b
2	2	Identify the value of digits in 3-digit numbers	2.NBT.A.1.b
3	2	Identify the value of digits in 3-digit numbers using base-ten blocks	2.NBT.A.1.b
4	2	Identify the value of digits in 3-digit numbers	2.NBT.A.1.b

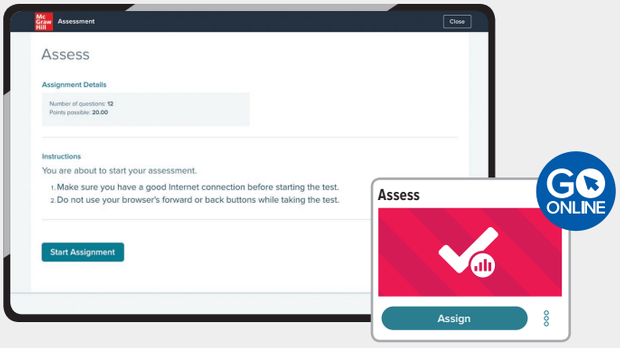
Data Use students' scores on the *Exit Ticket* to assign the differentiated resources available. When students complete the *Exit Ticket* in the digital workspace, their responses are auto-scored.

Exit Ticket Recommendations

If students score	Then have students do
4 of 4	Additional Practice or any of the B or E activities
3 or 4	*Take Another Look* or any of the B activities
2 or fewer of 4	Small Group Intervention or any of the R activities

Key for Differentiation

R Reinforce Understanding
B Build Proficiency
E Extend Thinking



Lesson 2-2

Exit Ticket

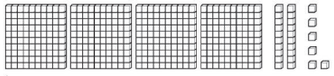
Name _____

1. A 3-digit number has hundreds, tens, and ones.

2. What is the value of the 7 in the number 279?

A. 7 B. 10 C. 70 D. 6

3. Write the value of the base-ten blocks in the place-value chart.



hundreds	tens	ones
4	2	6

4. Which numbers have a 5 in the ones place? Choose all the correct answers.

A. 435 B. 530 C. 659 D. 985

Reflect On Your Learning

16 Assessment Resource Book

Differentiate

10 min Select resources based on your classroom set up, or your students' needs.

R Reinforce Understanding

SMALL GROUP

Building a Number

Work with students in groups of 3. Provide each group with a bag of 9 hundreds flats, a bag of 9 tens rods, and a bag of 9 ones units. Each student pulls a number of blocks from their bag and writes the 3-digit number in a place-value chart. If students are struggling with the place-value chart, show them a flat over the hundreds, a tens rod over the tens, and a ones unit over the ones. Repeat the activity.

B Build Proficiency

WORKSTATIONS

Practice It! Game Station

Represent that 3-Digit Number!

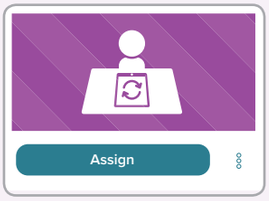
Students practice representing numbers using a place-value chart, expanded form, and word form.

GO ONLINE

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

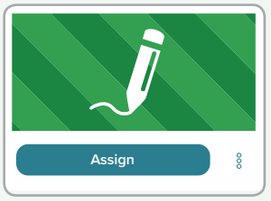
- Model Hundreds, Tens, and Ones
- Understand Numbers to 999
- Digits in Numbers (100–999)



GO ONLINE

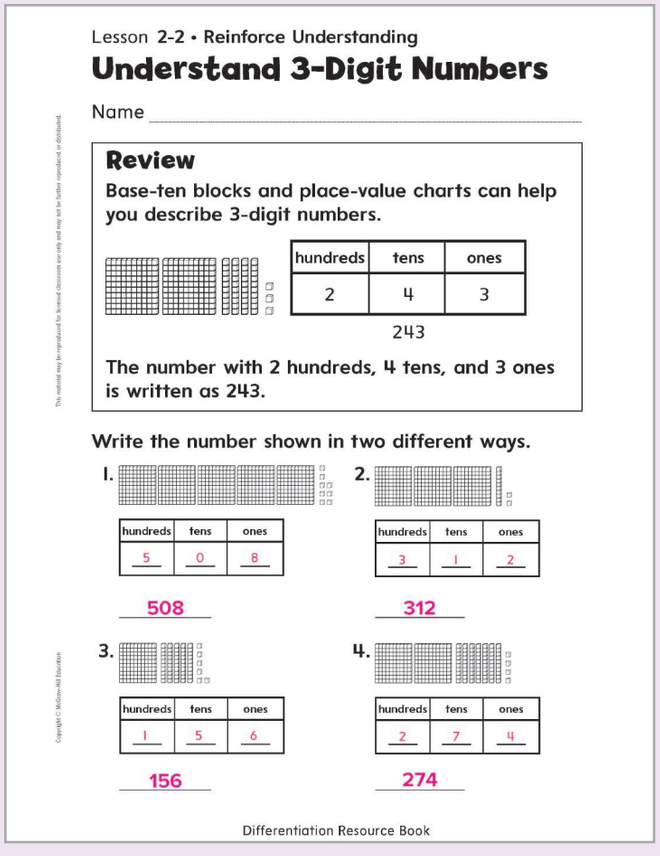
Interactive Additional Practice

Assign the digital version of the Student Practice Book.



INDEPENDENT WORK

Differentiation Resource Book, p. 3



Lesson 2-2 • Reinforce Understanding

Understand 3-Digit Numbers

Name _____

Review

Base-ten blocks and place-value charts can help you describe 3-digit numbers.

hundreds	tens	ones
2	4	3

243

The number with 2 hundreds, 4 tens, and 3 ones is written as 243.

Write the number shown in two different ways.

1.

hundreds	tens	ones
5	0	8

508

2.

hundreds	tens	ones
3	1	2

312

3.

hundreds	tens	ones
1	5	6

156

4.

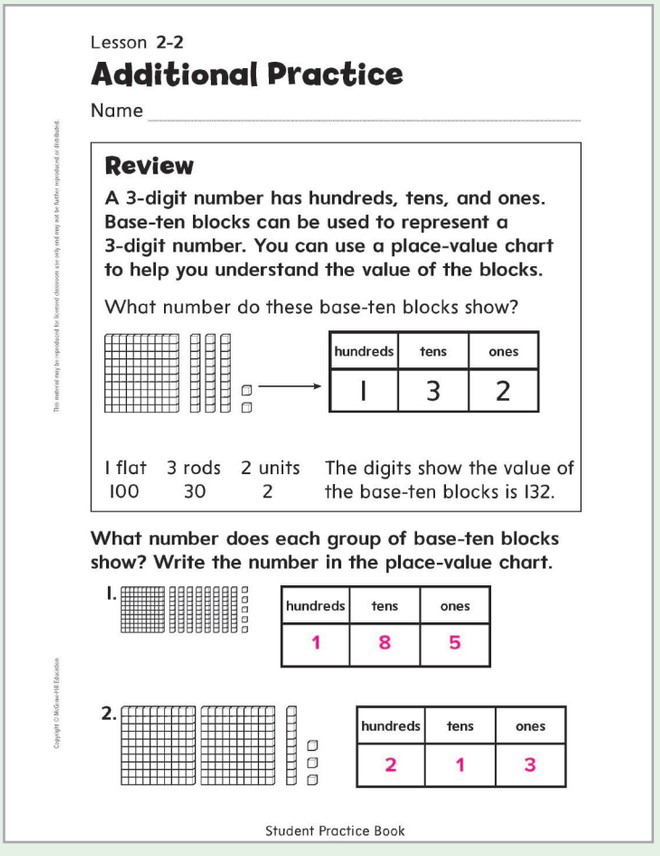
hundreds	tens	ones
2	7	4

274

Differentiation Resource Book

INDEPENDENT WORK

Student Practice Book, pp. 3–4



Lesson 2-2

Additional Practice

Name _____

Review

A 3-digit number has hundreds, tens, and ones. Base-ten blocks can be used to represent a 3-digit number. You can use a place-value chart to help you understand the value of the blocks.

What number do these base-ten blocks show?

hundreds	tens	ones
1	3	2

1 flat 100 | 3 rods 30 | 2 units 2 | The digits show the value of the base-ten blocks is 132.

What number does each group of base-ten blocks show? Write the number in the place-value chart.

1.

hundreds	tens	ones
1	8	5

2.

hundreds	tens	ones
2	1	3

Student Practice Book

Extend Thinking

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with addition within 20.

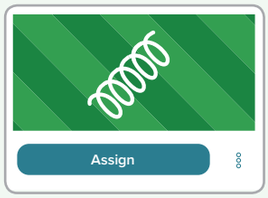
WORKSTATIONS

Use It! Application Station

Class Celebration Students save tickets to earn a class party.

Spiral Review

Assign the digital Spiral Review to students or download and print PDFs of the Spiral Review from the Digital Teacher Center.



GO ONLINE

Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

INDEPENDENT WORK

Student Practice Book, pp. 3–4

What is the value of the 8 in each number?

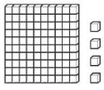
3. 389: 80 4. 807: 800

What is the value of the digit in the ones place in each number?

5. 431: 1 6. 729: 9

Solve the problem.

7. Ben says the base-ten blocks have a value of 140. Is Ben correct? How do you respond to him?



No. Sample answer: The base-ten blocks have a value of 104, not 140.

8. Rosa is trying to exercise 175 minutes. She has already walked 110 minutes. She can do jumping jacks for 1 minute at a time. She can jog for 10 minutes at a time. How can Rosa reach her goal? Explain.

Sample answer: Rosa can jog 6 times and do jumping jacks for 5 minutes. If Rosa jogs 6 times then she exercises for 110 + 10 + 10 + 10 + 10 + 10 = 170 minutes. Then if she does jumping jacks for 5 minutes she will have exercised for 170 + 5 = 175 minutes.

Math @ Home Activity

Create a place-value chart that shows hundreds, tens, and ones. Describe a number to your child. Have him or her write numbers on self-sticking notes that he or she will place in the chart to show the hundreds, tens, and ones in your number. Then switch roles and repeat the activity.

Student Practice Book

Differentiation Resource Book, p. 4

Lesson 2-2 • Extend Thinking

Understand 3-Digit Numbers

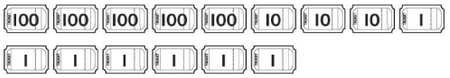
Name _____

1. Lena brings these $100, $10, and $1 bills to the fair.

She buys a ride ticket for $10 and a game ticket for $1. How much money does Lena have left?

$ 331

2. Lena wins these 100 point, 10 point, and 1 point prize tickets.



Lena needs two more 100 point tickets to get a stuffed flamingo. How many prize points does the stuffed flamingo cost?

737 points

Differentiation Resource Book

LESSON **2-3**

Read and Write Numbers to 1,000

Learning Targets

- I can read numbers to 1,000.
- I can write numbers to 1,000.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **2.NBT.A.3** Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

Vocabulary

Math Terms	Academic Terms
decompose	in common
expanded form	wonder
standard form	
word form	

Materials

The materials may be for any part of the lesson.

- base-ten blocks
- notecards

Focus

Content Objective	Language Objective	SEL Objective
• Students read and write numbers to 1,000.	• Students discuss and write 3-digit numbers using the term *different ways*. • Maximize meta-language by participating in MLR7: Compare and Connect.	• Students actively listen without interruption as peers describe how they approached a complex mathematical task.

Coherence

Previous	Now	Next
• Students decomposed 2-digit numbers (Grade 1). • Students represented 3-digit numbers using base-ten blocks (Unit 2).	• Students epresent 3-digit numbers in word form, expanded form, and standard form. • Students use base-ten blocks to represent 3-digit numbers.	• Students decompose 3-digit numbers in different ways (Unit 2). • Students fluently add within 1,000. (Grade 3).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of 3-digit numbers to include different representations.	• Students develop proficiency with reading and writing 3-digit numbers.	• Students apply their understanding to interpret different forms of 3-digit numbers in real-world problems. *Application is not a targeted element of rigor for this standard.*

GO ONLINE

Number Routine Would You Rather? 5–7 min

Build Fluency Students build number sense as they compare expressions to determine which has more or less. These prompts encourage students to talk about their reasoning:

- How did you determine which has more?
- How did you determine what to do?

Purpose Students explore different representations of the same quantity.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip Allow students to drive the discussion, encouraging all students to participate. After writing student responses on the board, work with them to identify the questions and statements with a mathematical focus. Circle these statements to focus the discussion on different ways of representing the same quantity.

ETP Pose Purposeful Questions

The questions that follow may be asked in any order. They are meant to help advance students' thinking about representing numbers in different ways and are based on possible comments and questions that students may make during the share out.

- What do these images have in common?
- How are the images different?
- What other ways can you show this same value?

Math is... Mindset

- What can you do to be a good listener?

SEL Relationship Skills: Effective Communication

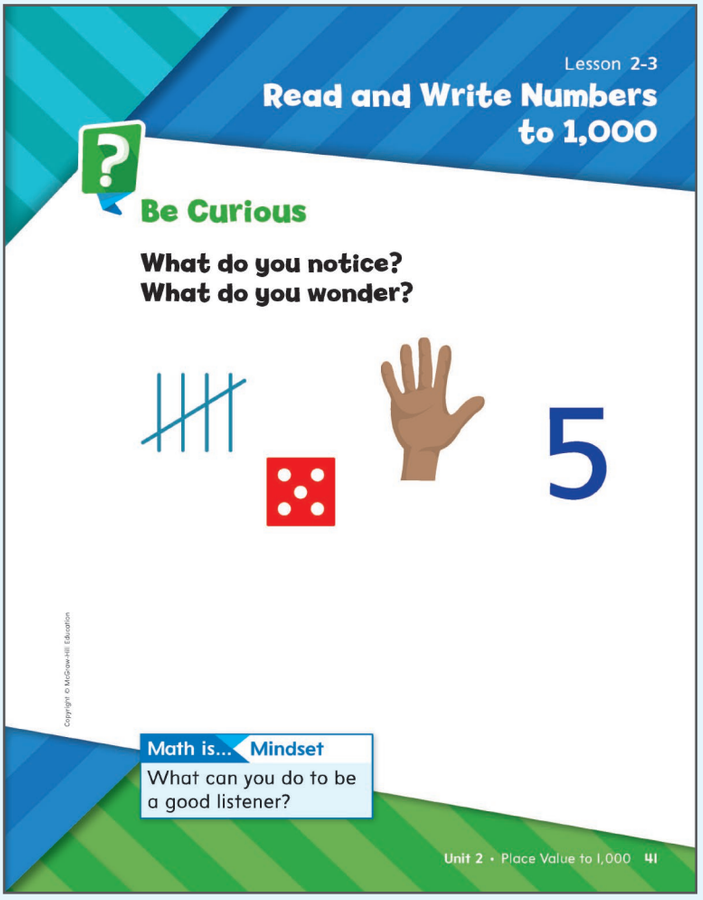
As students engage in collaborative discourse around the Notice & Wonder routine, encourage them to actively and respectfully listen to one another. Invite students to think about and share what active listening looks and sounds like. As students discuss what they notice and wonder about different representations of the same quantity, encourage classmates to listen as well as provide thoughtful feedback. Capitalize on opportunities to also model these behaviors when students are speaking.

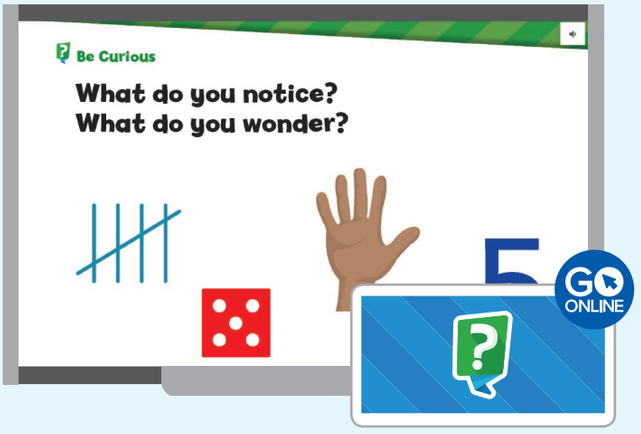
Transition to Explore & Develop

Ask questions that get students thinking about how a number or quantity can be represented in different ways. If students use terms such as *word form* or *standard form*, bring that into the discussion.

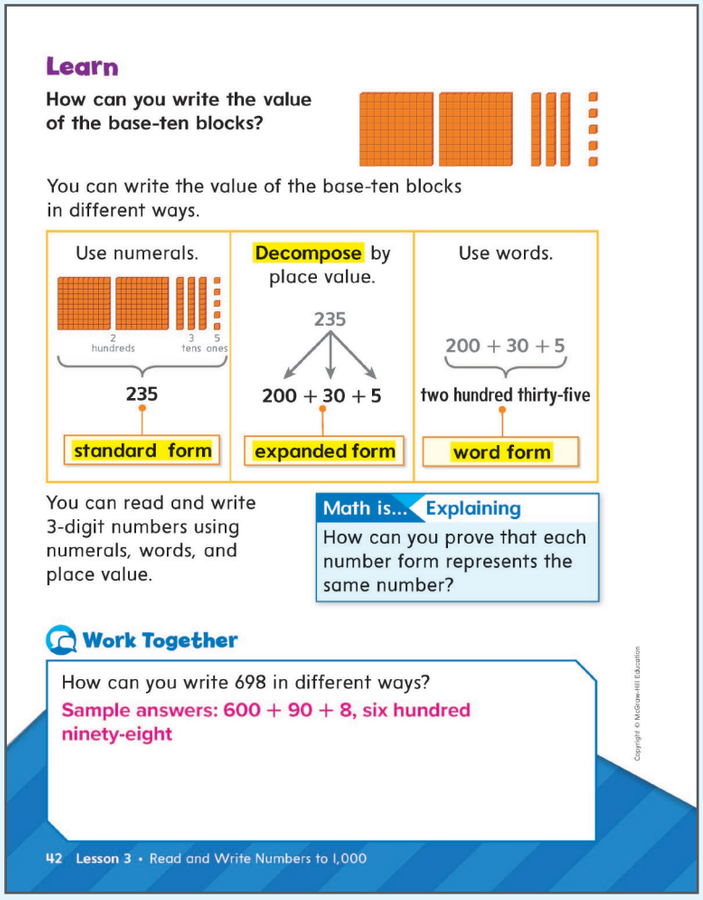
ETP Establish Goals to Focus Learning

- Let's think about different ways we can show a number.





Explore & Develop 20 min



1 Pose the Problem

ETP Pose Purposeful Questions

- How many base-ten blocks are there?
- Are there other ways to show this same number?

2 Develop the Math

Choose the option that best meets your instructional goals.

MLR Compare and Connect

Pair students and provide them with a 3-digit number in standard and word form. Prompt students to identify and explain correspondences between the different representations. Then have them decompose the number by place value. Revisit this activity throughout the lesson.

3 Bring It Together

ETP Elicit Evidence of Student Thinking

- When would using word form be useful?
- When might expanded form be useful?
- What do all representations of the same number have in common?

Key Takeaway

- You can read and write 3-digit numbers using numerals, words, and place value.

Work Together

The Work Together activity can be used as a formative assessment opportunity to check students' understanding of showing numbers in different ways. Have students work on the activity in pairs before asking them to share their work.

Common Misconception Students may omit the hyphen when writing numbers in word form. Use a hyphen when writing the word form of two-word numbers from twenty-one to ninety-nine.

LOM Language of Math

Help students transfer the meaning of *expanded* as *enlarged or extended* to better understand *expanded form*. Write a three-digit number, such as *936*, on one index card. Then write its expanded form, *900 + 30 + 6*, split among five cards. Place the expanded form cards below the original card and discuss how they physically show the meaning of the word *expanded* as *enlarged or extended*.

CHOOSE YOUR OPTION

Activity-Based Exploration

Students explore different ways to show 3-digit numbers.

Materials: base-ten blocks, notecards

Directions: Have students write one number between 0–9 on a notecard. Call three students to the front of the class to put their cards together to make a 3-digit number. Have everyone write down the number and use base-ten blocks to make a representation of it.

Through questioning, guide students to show the number using base-ten blocks, numerals, words, and decompose it by place value.

ETP Support Productive Struggle

- How many hundreds, tens, and ones are in this number?
- How can you show the number as the sum of its hundreds, tens, and ones?
- How can you show the number using words?

Have students form groups of three to create new 3-digit numbers. They will show their number using numerals, base-ten blocks, words, and by decomposing it by place value. Repeat steps as time allows.

Math is... Explaining

- How can you prove that each number form shows the same number?

Students can justify their thinking and broaden their understanding of 3-digit numbers.

Activity Debrief: Have groups share their numbers and explain how they wrote them in different ways. Introduce the terms *standard form*, *word form*, and *expanded form* for students to use to identify the different ways to write numbers.

Have students revisit the Pose the Problem question and discuss answers.

- How can you write the value of the base-ten blocks in different ways?

Guided Exploration

Students extend what they already know about representing 3-digit numbers to reading and writing them in different ways.

ETP Use and Connect Mathematical Representations

- What does it mean to expand something? How can you expand a number?
- How can you write numbers using only digits?
- How can you use words to show the value of a number?
- **Think about it:** How can you decompose 235 in a different way?

Math is... Explaining

- How can you prove that each number form shows the same number?

Students can justify their thinking and broaden their understanding of 3-digit numbers forms.

Have students come up with a 3-digit number and write it in standard form on the board. Then have students use base-ten blocks to show the number and write it in word form and expanded form.

- What does each way of writing the number have in common?

EL English Learner Scaffolds

Entering/Emerging Support students' understanding of the expression *different ways*. Write 124 on the board. Then write "one hundred twenty-four" on the board. Say, *The same number in different ways.* Continue writing numbers on the board and have volunteer students write the numbers in a different way.

Developing/Expanding Support students' understanding of the expression *different ways*. Write 124 on the board. Then write "one hundred twenty-four" on the board. Say, *These are the same numbers written in different ways.* Continue writing numbers on the board and have volunteer students write the numbers in a different way.

Bridging/Reaching Support students in using the expression *different ways* to compare numbers. Write a standard number and have volunteer students write the number in a different way. Ask them to describe the process.

On My Own

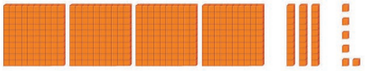
MATH REPLAY GO ONLINE

Name _____

What is an example of the number form? Draw a line to match.

1. expanded form — 700 + 10 + 1
   standard form — 711
   word form — seven hundred eleven

What number do the base-ten blocks show? Write the number in different forms.

2. 

standard form: 436

expanded form: 400 + 30 + 6

word form: four hundred thirty-six

How can you write the number in standard form?

3. two hundred ten 210
4. six hundred twenty-seven 627
5. nine hundred eighty-one 981

How can you write the number in expanded form?

6. 843 800 + 40 + 3

7. 391 300 + 90 + 1

8. **STEM Connection** Sienna writes the number of calories in her lunch as 398. How can Sienna write this number in word form?
   three hundred ninety-eight

9. **Extend Your Thinking** Hiro collects action figures. He has a bag with 30 action figures and a box with 100 action figures. His friend gives him 7 action figures. How many action figures does Hiro have?
   137 action figures

Reflect

What patterns do you notice when reading and writing 3-digit numbers?
Answers may vary.

Math is... Mindset
What have you done to be a good listener today?

Practice

ETP Build Fluency from Understanding

Common Error: Exercises 6–7 Students might write the answer to these questions as a single digit for each place value. Remind students to decompose by place value to show expanded form. If more support is necessary, have students read the number aloud and write the number for hundreds. They should then easily be able to write the tens and ones.

Practice Item Analysis

Item	DOK	Rigor
1	1	Conceptual Understanding
2–7	2	Procedural Skill and Fluency
8	2	Application
9	3	Application

Reflect

Students complete the Reflect question.

- What patterns do you notice when reading and writing 3-digit numbers?

Ask students to share their reflections with their classmates.

Math is... Mindset

- What have you done to be a good listener today?

Students reflect on how they developed stronger relationship skills.

Learning Targets

Ask students to Reflect on the Learning Targets of the lesson.

- I can read numbers to 1,000.
- I can write numbers to 1,000.

To review today's lesson, have students watch the Math Replay video in their Digital Student Center.

Assign the On My Own practice to students from the Digital Teacher Center.

GO ONLINE MATH REPLAY

Exit Ticket Formative Assessment

The *Exit Ticket* assesses students' understanding of lesson concepts.

Metacognitive Check *Reflect on Your Learning* allows students to think about their level of understanding of the lesson content on a scale of 1 to 3 with 3 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	1	Recall ways to write 3-digit numbers	2.NBT.A.3
2	2	Read and write 3-digit numbers	2.NBT.A.3
3	2	Read and write 3-digit numbers	2.NBT.A.3
4	2	Read and write 3-digit numbers	2.NBT.A.3

Data Use students' scores on the *Exit Ticket* to assign the differentiated resources available. When students complete the *Exit Ticket* in the digital workspace, their responses are auto-scored.

Exit Ticket Recommendations

If students score	Then have students do
4 of 4	Additional Practice or any of the B or E activities
3 or 4	*Take Another Look* or any of the B activities
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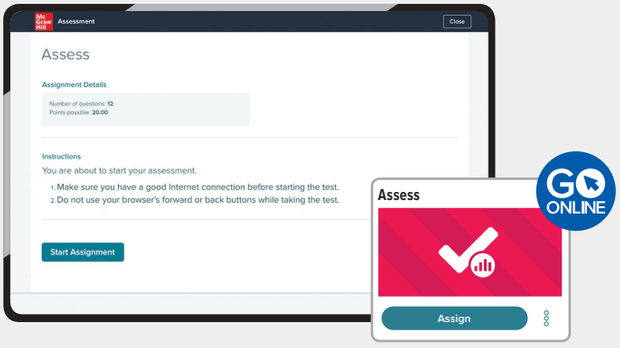
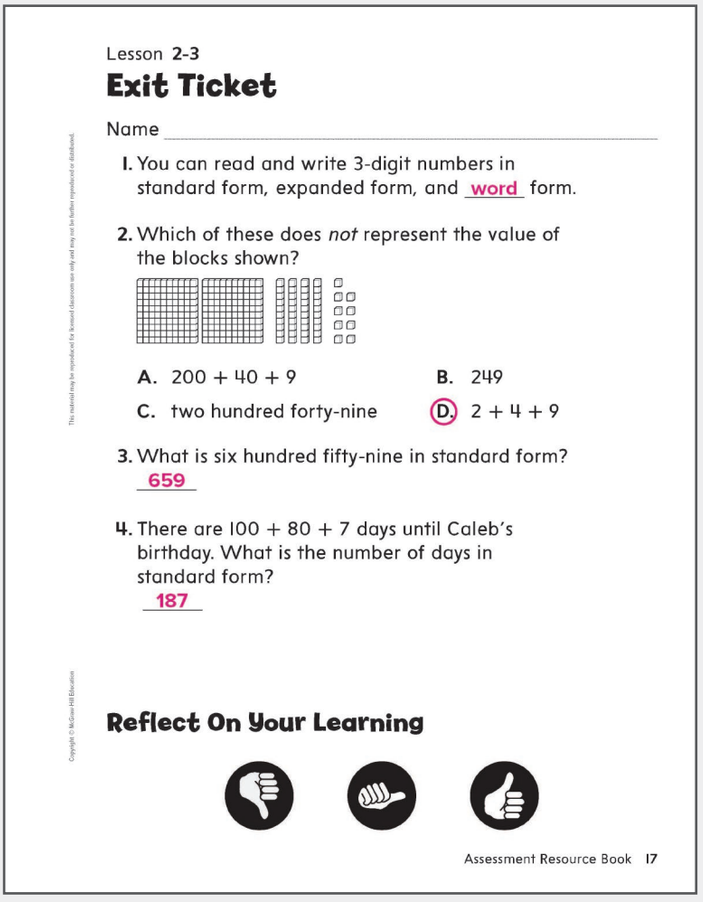
Key for Differentiation

R Reinforce Understanding
B Build Proficiency
E Extend Thinking





Lesson 2-3

Exit Ticket

Name _____

1. You can read and write 3-digit numbers in standard form, expanded form, and word form.

2. Which of these does *not* represent the value of the blocks shown?

A. 200 + 40 + 9
B. 249
C. two hundred forty-nine
D. 2 + 4 + 9

3. What is six hundred fifty-nine in standard form?
659

4. There are 100 + 80 + 7 days until Caleb's birthday. What is the number of days in standard form?
187

Reflect On Your Learning

Assessment Resource Book 17

Differentiate

10 min Select resources based on your classroom set up, or your students' needs.

R Reinforce Understanding

SMALL GROUP

Different Forms

Work with students in groups of 3. Provide each group with 3 number cubes. Each student rolls one cube. The numbers rolled represent the hundreds, tens, and ones places. The first student writes the number in standard form. The second writes the number in expanded form. The third writes the number in word form. Have students explain how they wrote their number. Switch roles and repeat the process.

B Build Proficiency

WORKSTATIONS

Practice It! Game Station

Represent that 3-Digit Number!

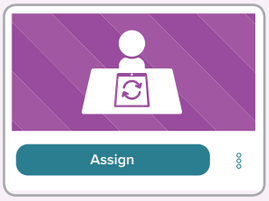
Students practice representing numbers using a place-value chart, word form, and expanded form.

GO ONLINE

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

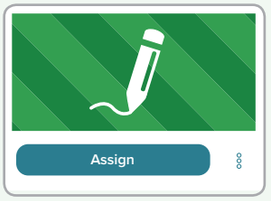
- Identify Numbers to 999
- Expanded Form (101-999)



GO ONLINE

Interactive Additional Practice

Assign the digital version of the Student Practice Book.



INDEPENDENT WORK

Differentiation Resource Book, p. 5

Lesson 2-3 • Reinforce Understanding

Read and Write Numbers to 1,000

Name _____

Review

You can write numbers in 3 different ways.

hundreds	tens	ones

Expanded form: 200 + 40 + 5

Standard form: 245

Word form: two hundred forty-five

Write the number shown in 3 different ways.

1.

Expanded form: 200 + 60 + 7

Standard form: 267

Word form: two hundred sixty-seven

2.

Expanded form: 400 + 10 + 2

Standard form: 412

Word form: four hundred twelve

Differentiation Resource Book

INDEPENDENT WORK

Student Practice Book, pp. 5–6

Lesson 2-3

Additional Practice

Name _____

Review

You can read and write 3-digit numbers using place value, words, and numerals.

Expanded Form

The base-ten blocks show 214.

Use place value.

200 + 10 + 4

214

Word Form

200 + 10 + 4

two hundred fourteen

Use words.

Standard Form

214

Use numerals.

How can you write the number in standard form?

1. one hundred one 101
2. three hundred twenty-five 325
3. five hundred sixty-two 562

How can you write the number in expanded form?

4. 236 200 + 30 + 6
5. 466 400 + 60 + 6
6. 784 700 + 80 + 4

Student Practice Book

Extend Thinking

WORKSTATIONS

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with addition through 20.

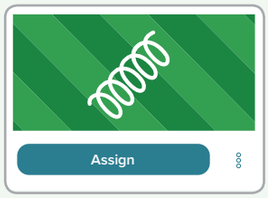
Use It! Application Station

Color by Number Students create a color-by-number picture and write the directions for completing it.

GO ONLINE

Spiral Review

Assign the digital Spiral Review to students or download and print PDFs of the Spiral Review from the Digital Teacher Center.



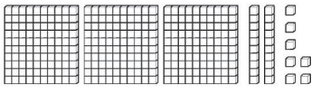
Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

INDEPENDENT WORK

Student Practice Book, pp. 5–6

7. Write the standard form, expanded form, and word form for the value of the base-ten blocks.



standard form: 327

expanded form: 300 + 20 + 7

word form: three hundred twenty-seven

8. Antonio has one hundred twelve rocks. How can he show the number of rocks in standard form?

112 rocks

9. Landon writes the standard form for three hundred twenty-six as 300206. Jane writes the standard form as 326. Who is correct? Explain.

Jane; Sample answer: Landon writes 300 for three hundred, 20 for twenty, and 6 for six. So, he writes 300206, and he should write 326.

10. Kate wrote the word form and expanded form of 725. How do you respond to her?

word form: seven hundred twenty-five

expanded form: 7 + 2 + 5

Sample answer: The word form is correct, but the expanded form should be 700 + 20 + 5.

Math @ Home Activity

Practice reading and writing 3-digit numbers with your child. Write a number in standard form. Ask your child to write the number in expanded form. Then have him or her write the number in word form. Have your child point to each part to show the connection between the forms. Check his or her work before moving on to another number.

Student Practice Book

Differentiation Resource Book, p. 6

Lesson 2-3 • Extend Thinking

Read and Write Numbers to 1,000

Name _____

Razi, Kate, and Alana live in the same city. How can you use the clues to decide where each one lives?

713 Madison Pl. 287 Oak Dr. 574 Lee St.

1. Kate lives in a building with the number 7 in the tens place. Where does Kate live?

574 Lee St.

2. When Razi writes his building number in word form, part of what he writes is "thirteen." Where does Razi live?

713 Madison Pl.

3. Alana likes to tell people her building number is 200 + 80 + 7. Where does Alana live?

287 Oak Dr.

Differentiation Resource Book

LESSON **2-4**

Decompose 3-Digit Numbers

Learning Target

- I can use my understanding of place value to decompose 3-digit numbers in different ways.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **2.NBT.A.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones: e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.

◇ **2.NBT.A.3** Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

Math Practices and Processes

MPP Look for and make use of structure.

MPP Attend to Precision

Vocabulary

Math Terms	Academic Terms
decompose	explanation
place value	apply

Materials

The materials may be for any part of the lesson.

- base-ten blocks

Focus

Content Objective	Language Objective	SEL Objective
• Students can decompose a 3-digit number by grouping the hundreds, tens, and ones in different ways.	• Students identify and decompose 3-digit numbers and justify different ways to decompose the same number using the word *group*. • Maximize meta-language by participating in MLR8: Discussion Supports.	• Students identify multiple possible solutions for a given math problem.

Coherence

Previous	Now	Next
• Students decomposed 2-digit numbers (Grade 1). • Students represented 3-digit numbers in standard, word, and expanded form (Unit 2).	• Students decompose 3-digit numbers. • Students identify and justify different ways to decompose the same number.	• Students will compare 3-digit numbers (Unit 2). • Students fluently add within 1,000. (Grade 3).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of 3-digit numbers and place value.	• Students develop proficiency with 3-digit numbers and place value. *Procedural skill and fluency is not a targeted element of rigor for this standard.*	• Students apply their understanding of 3-digit numbers and place value to solve real-world word problems. *Application is not a targeted element of rigor for this standard.*

GO ONLINE

Number Routine

Mystery Number

5–7 min

Build Fluency Students use clues to identify a target number. Students use place value to identify and analyze the value of a digit in a number.

These prompts encourage students to talk about their reasoning:

- Did your prediction change? If so, how?
- How did you use the first clue to make a guess at the number?
- How did you use the other clues to identify the target number?

Purpose Students compare different representations of decomposed 3-digit numbers.

Which Doesn't Belong?

- Which doesn't belong?

Teaching Tip Allow students discuss which doesn't belong with a partner in order to expose them to different perspectives. Invite pairs to explain their thinking, and encourage all students to participate in the discussion.

ETP Pose Purposeful Questions

The questions that follow may be asked in any order. They are meant to help advance students' thinking about place value and decomposing 3-digit numbers and are based on possible comments and questions that students may make during the share out.

- What other way can you show the numbers?
- What do all of the numbers have in common?

Math is... Mindset

- How could finding more than one possible answer be helpful?

SEL Responsible Decision-Making: Identify Solutions

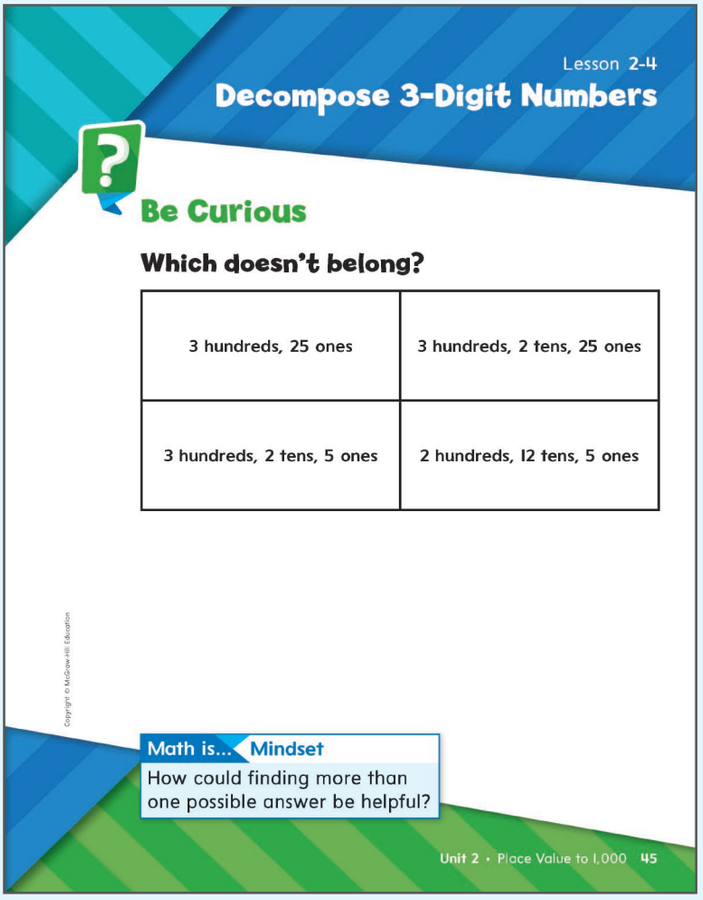
As students determine which doesn't belong, encourage them to identify multiple possible answers. Invite students to share their reasoning for how they identified which doesn't belong and remind them that some questions can have more than one correct answer. As students work with decomposing 3-digit numbers throughout the lesson, encourage them to identify more than one way to decompose each number.

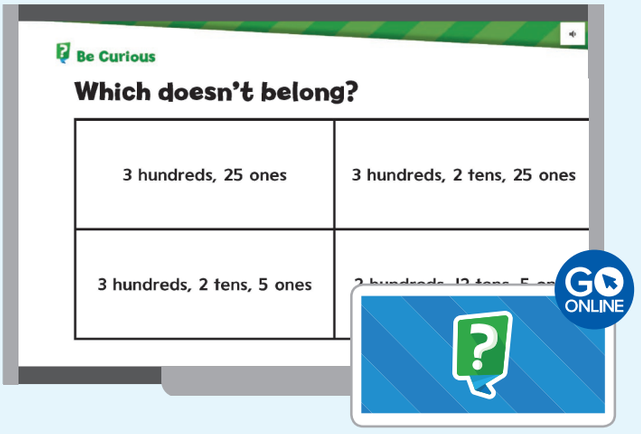
Transition to Explore & Develop

Ask questions that help students understand that the same number can be composed in different ways. Students might even begin to identify additional ways to decompose 325, such as 3 hundreds, 1 ten, and 15 ones. Guide the discussion so students begin to think about how they can use what they know about place value to help them decompose numbers.

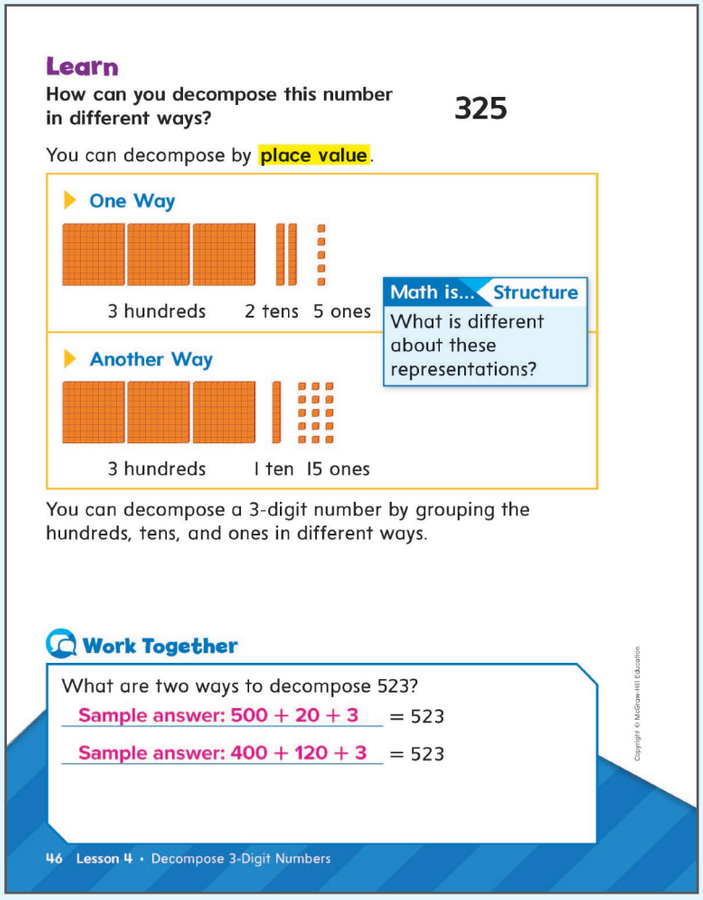
ETP Establish Goals to Focus Learning

- Let's think about how we can use place value to show the same number in different ways.





Explore & Develop 20 min



Learn

How can you decompose this number in different ways? **325**

You can decompose by **place value**.

One Way

3 hundreds 2 tens 5 ones

Math is... Structure
What is different about these representations?

Another Way

3 hundreds 1 ten 15 ones

You can decompose a 3-digit number by grouping the hundreds, tens, and ones in different ways.

Work Together

What are two ways to decompose 523?

Sample answer: 500 + 20 + 3 = 523

Sample answer: 400 + 120 + 3 = 523

1 Pose the Problem

MLR Discussion Supports

As students engage in discussing the two questions, press for details in students' explanations by challenging students to elaborate on why it's helpful to use place value when decomposing a 3-digit number. Model detailing the steps in the process and discussing helpful tools.

ETP Pose Purposeful Questions

- Why is it helpful to use place value when decomposing a 3-digit number?
- What tool could be helpful to show a 3-digit number decomposed in different ways?

2 Develop the Math

Choose the option that best meets your instructional goals.

3 Bring It Together

ETP Elicit Evidence of Student Thinking

- How can you decompose the number using expanded form?
- How else can you group the base-ten blocks to show the same number?
- How are the two decompositions different? How are they similar?

Key Takeaway

- You can decompose a 3-digit number by grouping the hundreds, tens, and ones in different ways.

Work Together

Students decompose the same number in two different ways. Have students work on the activity independently before having them share their work with a partner. Invite partners who decomposed the number in different ways than one another to share with the class.

Common Misconception Students may represent a 3-digit number by adding each digit rather than the value of each digit in its place. Give students ample practice with base-ten blocks and drawings to show bundling and regrouping the hundreds, tens, and ones in different ways to represent the same number.

LOM Language of Math

Help students build understanding of the word decompose by considering the prefix de- and the word compose. The prefix de- can mean to undo an action. Give students separate index cards with the words compose, frost, and clutter and another with the prefix de-. Have student pairs work together to identify the meanings of each word with and without the prefix de-.

CHOOSE YOUR OPTION

Activity-Based Exploration

Students explore different ways to decompose 3-digit numbers using *place value*.

Materials: base-ten blocks

Directions: Give each student base-ten blocks. Have students model a 3-digit number of their choice with the base-ten blocks. Have students record the 3-digit number and decompose it by place value, recording the number of hundreds, tens, and ones. Have students decompose the same 3-digit number as many ways as possible by grouping the hundreds, tens, and ones in different ways.

ETP Support Productive Struggle

- How can you apply your understanding of expanded form to help you decompose the number?
- How can you decompose one hundreds flat?
- How can you decompose one tens rod?
- What explanation can you give to prove that a 3-digit number is the sum of its decomposed parts?

Have students share with a partner and check each other's work, making sure each decomposition shows the same total value.

Math is... Structure

- How can the total value remain the same when you group hundreds, tens, and ones in different ways?

Students provide an explanation based on their understanding of place value and decomposing 3-digit numbers.

Activity Debrief: Have students share the different ways they decomposed their 3-digit numbers.

Have students revisit the Pose the Problem question and discuss answers.

- How can you decompose 325 in different ways?

Guided Exploration

Students apply their understanding of *place value* from Grade 1 to decompose 3-digit numbers in different ways.

ETP Facilitate Meaningful Discourse

- How can you use expanded form to show the number?
- How are the representations the same?
- Why is the total the same?

Math is... Structure

- What is different about this representation?

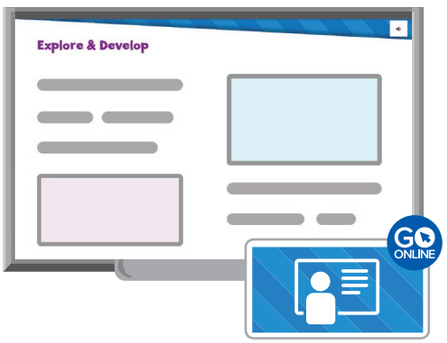
Students provide an explanation based on their understanding of place value and decomposing 3-digit numbers.

Students should provide an explanation that shows their understanding of decomposition, including identifying 1 ten decomposed into 10 ones or 1 hundred decomposed into 10 tens.

- How are the representations different? How are they the same?
- Why is the total still 325?

Invite students explore additional ways to decompose 325 using manipulatives, drawings, or base-ten blocks.

- **Think About It:** What is another way to decompose 325?



EL English Learner Scaffolds

Entering/Emerging Categorize classroom items on a desk and demonstrate forming them into groups to explain the term *group*. Say, e.g., *I'm grouping pens.* Give students a set of different colored counters, and have them sort by color and then by equal number.

Developing/Expanding Categorize classroom items on a desk and demonstrate forming them into groups to explain the term *group*. Say, e.g., *I'm putting the pens in one group.* Then write "hundreds, tens, and ones" on the board. Write scattered numbers that belong in each group on the board. Point to a number and ask, *Where do I group this number?* (The hundreds group)

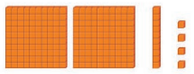
Bridging/Reaching Ask students to tell you the meaning of the word *group*. (a set of things) Ask, *What does it mean to group things?* Ask students to show how they group like numbers in hundreds, tens, and ones using base-ten blocks.

On My Own

MATH REPLAY GO ONLINE

Name _____

What number does the group of base-ten blocks show?

1. 

2 hundreds
1 ten
4 ones
The number is 214.

2. 

2 hundreds
0 tens
14 ones
The number is 214.

How can you decompose the number? Choose all the correct answers.

3. 364
   - A. 300 + 64 + 4
   - B. 300 + 60 + 4
   - C. 300 + 50 + 14
   - D. 400 + 60 + 4

4. 521
   - A. 400 + 20 + 1
   - B. 500 + 2 + 1
   - C. 500 + 10 + 11
   - D. 500 + 20 + 1

5. **Error Analysis** Bryn says she can write the number 482 as 3 hundreds, 18 tens, and 2 ones. Felix says he can write the number 482 as 4 hundreds, 6 tens, and 22 ones. How do you respond to them?
   Sample answer: Bryn and Felix are both correct; 300 + 180 + 2 = 482 and 400 + 60 + 22 = 482.

How can you decompose each number in two different ways?

6. 600 + 40 + 8 = 648
   600 + 20 + 28 = 648
   Sample answers

7. 900 + 30 + 0 = 930
   900 + 20 + 10 = 930
   Sample answers

8. **Extend Your Thinking** Meg decomposes 142 into 1 hundred, 4 tens, and 2 ones. Myles decomposes 142 into 1 hundred and 42 ones. How can you decompose 142 in a different way?
   Sample answer: 14 tens and 2 ones

Reflect

How can you use place value to decompose 3-digit numbers in different ways?
Answers may vary.

Math is... Mindset
How did you decide on the different ways you decomposed a number?

Practice

ETP Build Fluency from Understanding

Common Error: Exercise 5 Students may incorrectly identify the number of tens in Bryn's number as 18 instead of 180. If necessary, have students count 18 tens rods to help them successfully identify the number of tens.

Practice Item Analysis

Item	DOK	Rigor
1–2	1	Conceptual Understanding
3–4	2	Conceptual Understanding
5	3	Application
6–7	2	Procedural Skill and Fluency
8	3	Application

Reflect

Students complete the Reflect question.

- How can you use place value to decompose 3-digit numbers in different ways?

Ask students to share their reflections with their classmates.

Math is... Mindset

- How did you decide on the different ways you decomposed a number?

Students reflect on how they practiced responsible decision-making.

Learning Target

Ask students to reflect on the Learning Target of the lesson.

- I can use my understanding of place value to decompose 3-digit numbers in different ways.

To review today's lesson, have students watch the Math Replay video in their Digital Student Center.

Assign the On My Own practice to students from the Digital Teacher Center.

GO ONLINE MATH REPLAY

Exit Ticket Formative Assessment

The *Exit Ticket* assesses students' understanding of lesson concepts.

Metacognitive Check *Reflect on Your Learning* allows students to think about their level of understanding of the lesson content on a scale of 1 to 3 with 3 being the highest confidence.

Lesson Check Skill Tracker

Item	DOK	Skill	Standard
1	2	Decompose 3-digit numbers	2.NBT.A.1.a, 2.NBT.A.1.b
2	2	Decompose 3-digit numbers	2.NBT.A.1, 2.NBT.A.1.b
3	3	Decompose 3-digit numbers	2.NBT.A.1, 2.NBT.A.1.b

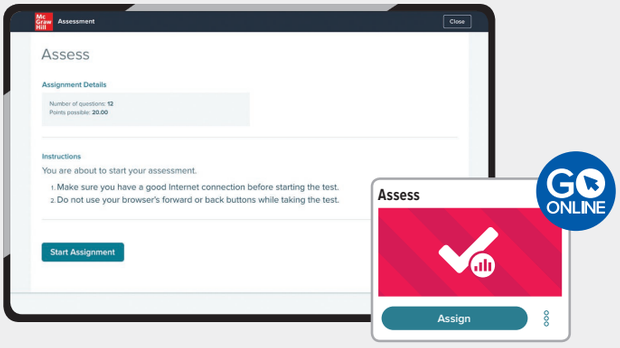
Data Use students' scores on the *Exit Ticket* to assign the differentiated resources available. When students complete the *Exit Ticket* in the digital workspace, their responses are auto-scored.

Exit Ticket Recommendations

If students score	Then have students do
3 of 3	Additional Practice or any of the B or E activities
2 or 3	*Take Another Look* or any of the B activities
1 or fewer of 3	Small Group Intervention or any of the R activities

Key for Differentiation

R Reinforce Understanding
B Build Proficiency
E Extend Thinking



Lesson 2-4

Exit Ticket

Name _____

1. Decompose 247 in two different ways.

200 + 40 + 7 Sample answers shown.

200 + 30 + 17

2. Amie decomposes 845 in different ways. Complete Amie's work.

8 hundreds, 4 tens, and 5 ones

8 hundreds, 2 tens, and 25 ones

8 hundreds, 1 ten, and 35 ones

8 hundreds, 3 tens, and 15 ones

8 hundreds, 0 tens, and 45 ones

3. Gabe has 186 trading cards. He wants to group the trading cards by tens and ones. How can he decompose 186 in two different ways using only tens and ones?

Sample answer: 18 tens and 6 ones or 17 tens and 16 ones

Reflect On Your Learning

18 Assessment Resource Book

Differentiate

10 min Select resources based on your classroom set up, or your students' needs.

R Reinforce Understanding

SMALL GROUP

Represent!

Work with students in groups of 3. Provide each group with three 6-sided number cubes and base-ten blocks. Each student rolls a cube to form a 3-digit number. The first student represents the number in standard form using the base-ten blocks. The other two students then must represent the same number in a different way, such as expanded or word forms. Students explain their representations. Repeat the steps.

B Build Proficiency

WORKSTATIONS

Practice It! Game Station

Numbers Different Ways Concentration

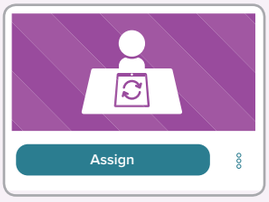
Students match numbers that are written in different ways.

GO ONLINE

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

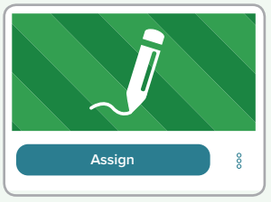
- Understand Numbers to 999
- Regroup Hundreds, Tens, and Ones



GO ONLINE

Interactive Additional Practice

Assign the digital version of the Student Practice Book.



INDEPENDENT WORK

Differentiation Resource Book, p. 7

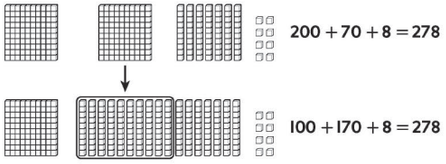
Lesson 2-4 • Reinforce Understanding

Decompose 3-Digit Numbers

Name _____

Review

You can decompose numbers by replacing a base-ten block with other base-ten blocks that have an equal value.



Decompose the number in two different ways.

1. 593 Sample answers:
   500 + 90 + 3 = 593
   400 + 190 + 3 = 593

2. 362 Sample answers:
   300 + 60 + 2 = 362
   200 + 150 + 12 = 362

3. 745 Sample answers:
   700 + 40 + 5 = 745
   500 + 240 + 5 = 745

Differentiation Resource Book

INDEPENDENT WORK

Student Practice Book, pp. 7–8

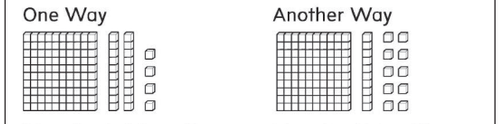
Lesson 2-4

Additional Practice

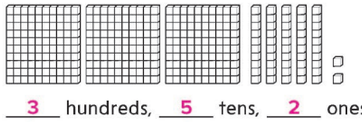
Name _____

Review

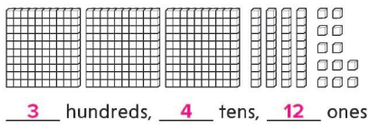
You can decompose a 3-digit number by grouping the hundreds, tens, and ones in different ways by place value.



1. Show 352 decomposed in two different ways.



3 hundreds, 5 tens, 2 ones



3 hundreds, 4 tens, 12 ones

Student Practice Book

Extend Thinking

WORKSTATIONS

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with addition through 20.

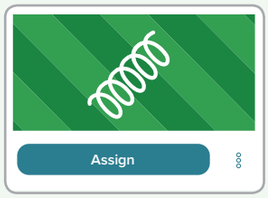
Use It! Application Station

Class Celebration Students save tickets to earn a class party.

GO ONLINE

Spiral Review

Assign the digital Spiral Review to students or download and print PDFs of the Spiral Review from the Digital Teacher Center.



Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

INDEPENDENT WORK

Student Practice Book, pp. 7–8

How can you decompose the number? Choose all the correct answers.

2. 567
   - A. 5 + 6 + 7
   - (B.) 500 + 60 + 7
   - (C.) 500 + 50 + 17
   - D. 567 + 67 + 7

3. 839
   - A. 800 + 3 + 9
   - (B.) 800 + 30 + 9
   - C. 800 + 30 + 19
   - (D.) 800 + 20 + 19

Decompose the number in two ways.

4. 700 + 50 + 8 = 758
   700 + 40 + 18 = 758

Ex. 4–5. Sample answers shown.

5. 900 + 20 + 4 = 924
   900 + 10 + 14 = 924

6. How can you decompose 132 into tens and ones? Explain. **Sample answer: There are 10 tens in 100. So, 132 = 10 tens + 3 tens + 2 ones = 13 tens + 2 ones.**

7. James says he can decompose 416 into 3 hundreds, 11 tens, and 6 ones. How do you respond to him? **Sample answer: He decomposes 1 hundred into 10 tens. 3 hundreds + 11 tens + 6 ones = 300 + 110 + 6 = 416**

Math @ Home Activity

Write a 3-digit number on a piece of paper. Have your child draw and cut out base-ten blocks to show how to decompose the number in two different ways. For example, your child could show how to decompose 235 in two different ways by drawing and cutting out 2 hundreds flats, 3 tens rods, and 5 ones units and 2 hundreds flats, 2 tens rods, and 15 ones units. Repeat the activity with a different 3-digit number.

Student Practice Book

Differentiation Resource Book, p. 8

Lesson 2-4 • Extend Thinking

Decompose 3-Digit Numbers

Name _____

1. Dawn and Vlad are birdwatching at Lake Park. Dawn writes the birds she sees as 300 + 120 + 1. How many birds does Dawn see? Fill in the number of birds in the table.

Wildlife at Lake Park	
Birds	421
Butterflies	108
Fish	279
Frogs	162

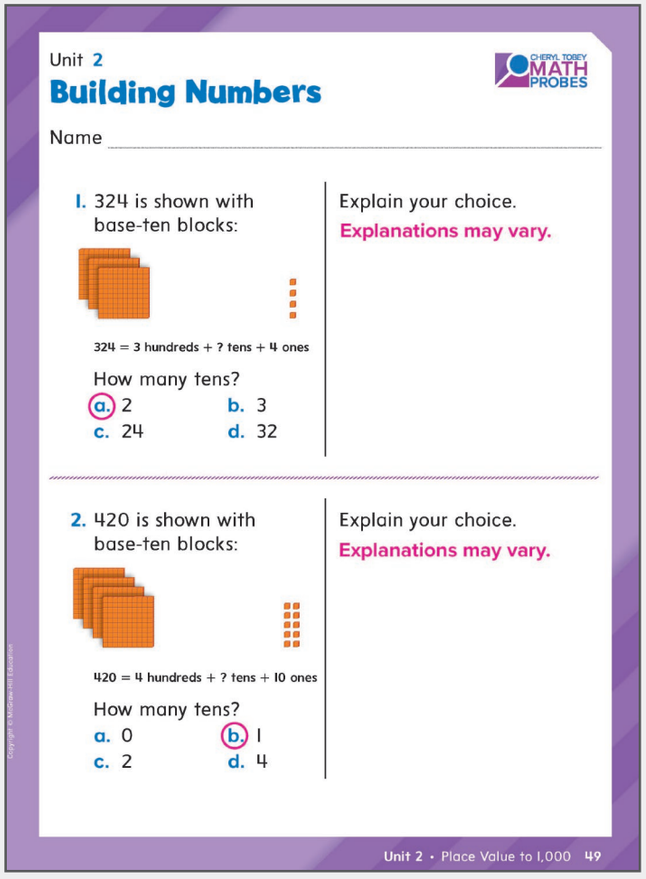
2. Vlad and Dawn see the same number of birds. Vlad writes the number of birds, too. It rains and erases his numbers. Now he has ___ + 10 + ___. What could be his missing numbers?

   Sample answer: 400 and 11

3. The Lake Park ranger writes down the number of butterflies. He writes 10 + 8. How can he fix his mistake?

   Sample answer: He needs to change the 10 to 100. The number of butterflies is 100 + 0 + 8.

Differentiation Resource Book



Unit 2
Building Numbers
CHERYL TOBEY MATH PROBES

Name _____

1. 324 is shown with base-ten blocks:

324 = 3 hundreds + ? tens + 4 ones

How many tens?
a. 2 b. 3
c. 24 d. 32

Explain your choice.
Explanations may vary.

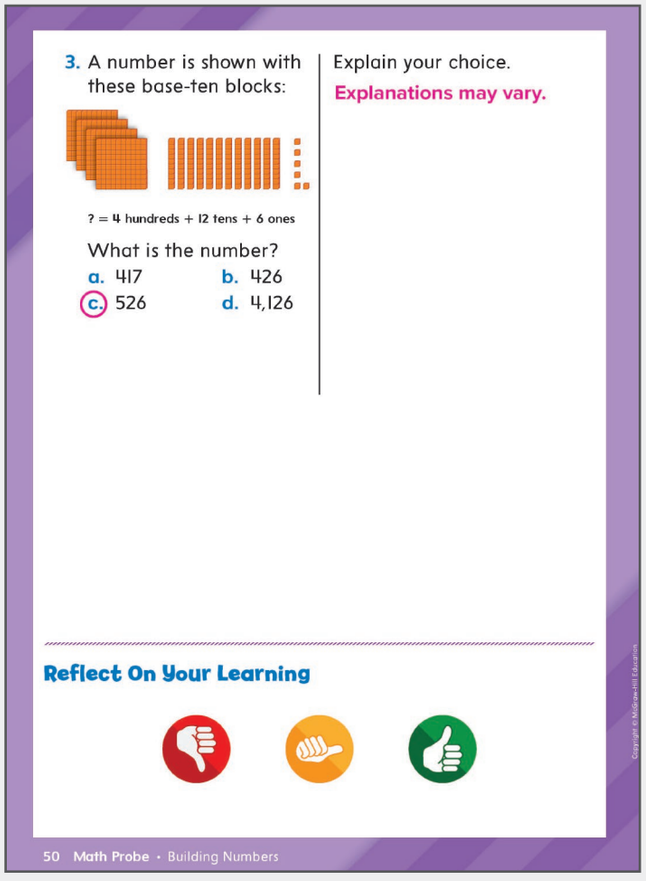
2. 420 is shown with base-ten blocks:

420 = 4 hundreds + ? tens + 10 ones

How many tens?
a. 0 b. 1
c. 2 d. 4

Explain your choice.
Explanations may vary.

Unit 2 • Place Value to 1,000 49



3. A number is shown with these base-ten blocks:

? = 4 hundreds + 12 tens + 6 ones

What is the number?
a. 417 b. 426
c. 526 d. 4,126

Explain your choice.
Explanations may vary.

Reflect On Your Learning

50 Math Probe • Building Numbers

Analyze The Probe

Formative Assessment

Students determine how many base-ten blocks are needed to build a number with the information provided. They circle the number of blocks that are missing in a place-value position (in items **1** and **2**) and the total number presented by the blocks (in item **3**). They justify their answers. Read the directions to the students. Have base-ten blocks available for students to use as needed.

Targeted Concept Compose and recompose numbers based on different place-value combinations, with regrouping as needed.

Targeted Misconceptions Some students have difficulty with the use of a singular group name, such as the word hundred, which needs to be understood in multiple ways. These ways include 100 single objects, 10 tens, and as a singular thing. Some students use a literal "what is the digit in the ____ place?" translation rather than decomposing and regrouping so that there is a single digit representing the value in each place- value position.

Authentic Student Work

Below are examples of correct student work and explanations.

Sample A

1. Sam wants to show 324 with some base-ten blocks:

324 = 3 hundreds + ? tens + 4 ones

How many tens blocks should Sam include?

a) 2
b) 7
c) 24
d) 34

Explain your choice.

three
four

Sample B

2. Sam wants to show 420 with some base-ten blocks:

420 = 4 hundreds + ? tens + 10 ones

How many tens blocks should Sam include?

a) 0
b) 1
c) 2
d) 4

Explain your choice.

because 10 ones = 1 ten
So you only need 1 ten
to make 20.

Sample C

3. Sam uses these base-ten blocks to show a number:

? = 4 hundreds + 12 tens + 6 ones

What is the number?

a) 417
b) 426
c) 526
d) 4,126

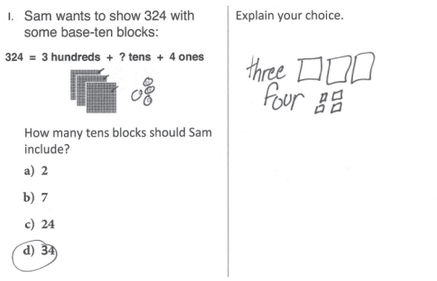
Explain your choice.

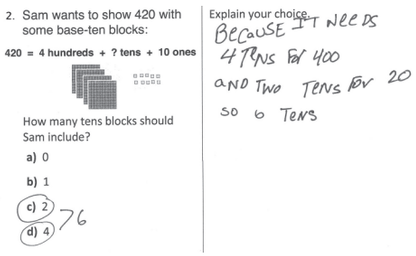
the ten's
Say that
ther are
12 ten's so
ther is another hundred.

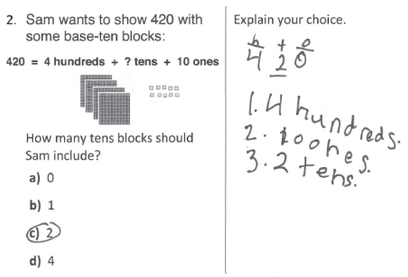
Collect and Assess Student Work

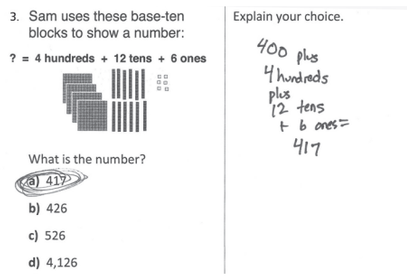
Collect and review student responses to determine possible misconceptions. See examples in If-Then chart.

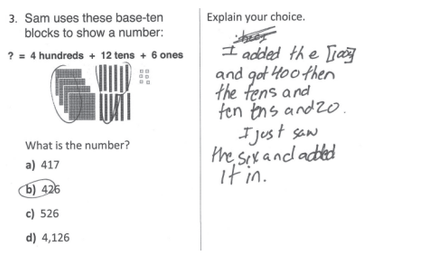
IF incorrect...	THEN the student likely...	Sample Misconceptions
1. b 2. a, d	chooses a digit from an incorrect place-value position.	
1. c, d	selects a group of two digits to match a group of two digits in the given number rather than selects the single digit that belongs in the tens place.	
2. c	is not observing the 10 ones, and that 10 ones = 1 ten. Rather, the student uses a literal "what is the digit in the tens place?" translation.	
3. a	incorrectly combines 12 tens + 6 ones to obtain 1 ten + 7 ones. The student then combines 1 ten + 7 ones with 4 hundreds to obtain 417 rather than 526.	
3. b	does not understand that 12 tens = 10 tens + 2 tens, or 1 hundred +2 tens; OR ignores the "1" in 12 tens.	
3. d	is not paying attention to the place-value groups of ones, tens, and hundreds. Instead, the student chooses the number that contains the digits in the order of the digits shown with the blocks.	

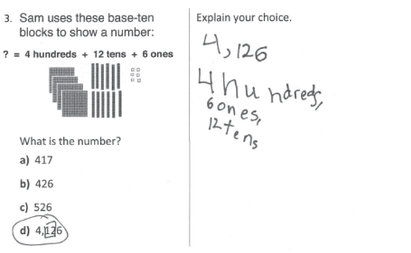












Many of the above difficulties result in a combination of correct and incorrect responses.
For correct responses, be sure to check for sound reasoning.

Take Action

Choose from the following resources or suggestions:

- Revisit place-value ideas in lessons 2-3–2-4.
- Provide opportunities for students to use base-ten blocks to represent a 3-digit number in multiple ways. Ask students to justify why the representations are equivalent.
- In addition to providing numbers to be represented with base-ten blocks, pose open-ended prompts such as, "If 14 base-ten blocks are used to create a number, what number could it be?"
- Reinforce the fact that the arrangement of the digits in the numeric representation of a number matters because the place value of a digit determines the value of the digit. Point out, however, that the arrangement of concrete materials does not matter.
- Ask place value questions such as: "How many tens are in the number 230?"

Revisit the Probe After additional instruction, have students review their initial answers to the probe. Use these questions for discussion:

- Are there any answers you would like to change? Explain why you might want to change them.
- Are there any questions that you still have about any of the items on this probe?

Metacognitive Check *Reflect on Your Learning* allows students to think about their level of understanding of the lesson content on a scale of 1 to 3 with 3 being the highest confidence.

LESSON **2-5**

Compare 3-Digit Numbers

Learning Targets

- I can compare 3-digit numbers.
- I can use words and symbols to show comparisons.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **2.NBT.A.4** Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Attend to precision.

Vocabulary

Math Terms	Academic Terms
compare	relationship
equal to (=)	true
greater than (>)	
less than (<)	

Materials

The materials may be for any part of the lesson.

- base-ten blocks
- *Number Cards 0–10* Teaching Resource

Focus

Content Objective	Language Objective	SEL Objective
• Students use words and symbols to compare 3-digit numbers.	• Students compare two 3-digit numbers using the verb *compare*. • Support sense-making by participating in MLR6: Three Reads.	• Students self-motivate and sustain engagement to work independently to complete a challenging mathematical task.

Coherence

Previous	Now	Next
• Students compared 2-digit numbers (Grade 1). • Students identified the value of each digit in a 3-digit number (Unit 2).	• Students compare two 3-digit numbers. • Students use symbols to show comparisons.	• Students compare lengths using standard units (Unit 7). • Students compare fractions by reasoning about their size (Grade 3).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students continue to develop their understanding 3-digit numbers and place value by comparing.	• Students develop proficiency with comparing 3-digit numbers. *Procedural skill and fluency is not a targeted element of rigor for this standard.*	• Students apply their understanding of comparing 3-digit numbers to solve real-world word problems. *Application is not a targeted element of rigor for this standard.*

GO ONLINE

Number Routine

Mystery Number

5–7 min

Build Fluency Students use clues to identify a target number. Students use place value to identify and analyze the value of a digit in a number.

These prompts encourage students to talk about their reasoning:

- Did your prediction change? If so, how?
- How did each clue identify different traits of the target number?

Purpose Students explore differences among different quantities of beads.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip First allow students to take time to think individually about what they notice and wonder. Then, invite students to be active members of the discussion by encouraging each student to either share or raise a hand if they also noticed or wondered something that was shared.

ETP Pose Purposeful Questions

The questions that follow may be asked in any order. They are meant to help advance students' potential to notice and wonder about the different quantities of beads in the jars and are based on possible comments and questions that students may make during the share out.

- What can you say about the number of beads in each jar?
- Does anyone have a different opinion about the number of beads in the jars?

Math is... Mindset

- What can you do to work on your own?

SEL Self-Regulation: Independence

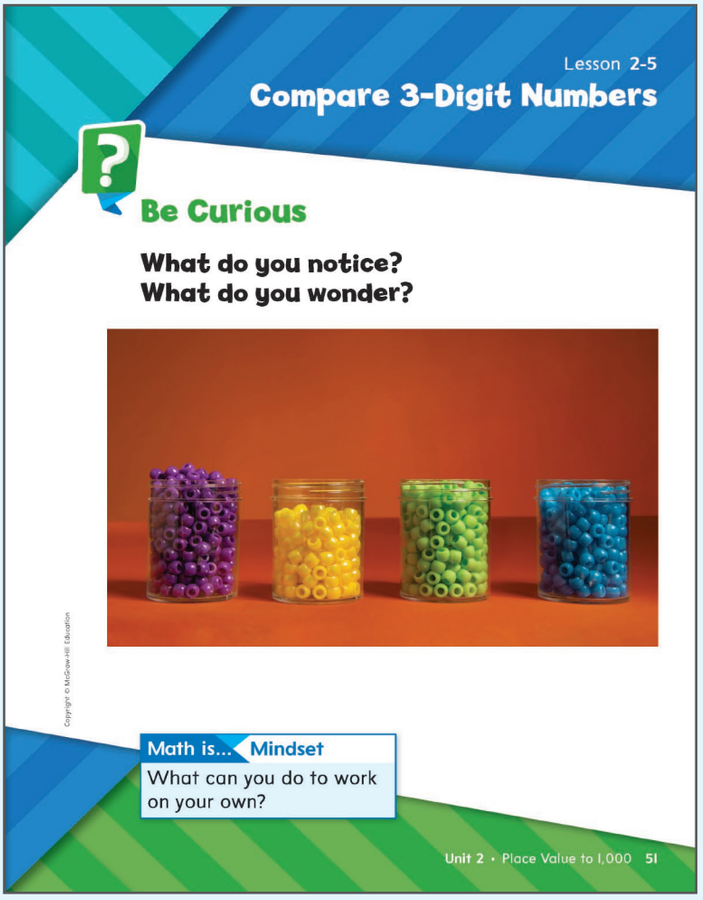
Begin the Notice & Wonder routine with a short timed period, such as 5 minutes, for students to work independently. Invite students to think about strategies that can help them stay on task and work on their own. In addition to developing a sense of independence, students will also be able to practice self-discipline, self-motivation, and focus.

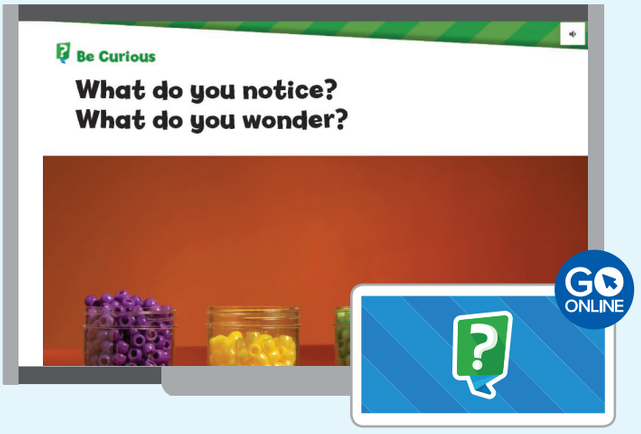
Transition to Explore & Develop

Ask questions that get students thinking about comparisons. Guide the discussion to have students build on what they know about comparisons. Encourage students as they use terms such as *compare, more, greater than, less than, and equal to* in discussion.

ETP Establish Goals to Focus Learning

- Let's think about what we know about comparing quantities.





Explore & Develop 20 min

Learn

How can you compare the number of beads in the jars?

Compare the hundreds first.

hundreds	tens	ones
3	1	1
2	7	3

300 is greater than 200.

311 > 273

If the hundreds have the same value, compare the tens.

hundreds	tens	ones
2	7	3
2	9	5

70 is less than 90.

273 < 295

You can use place value to compare 3-digit numbers.

Math is... Explaining

How can you use what you know about comparing 2-digit numbers to help you compare 3-digit numbers?

Work Together

What symbols can you use to show each comparison?

a. 600 (>) 599 b. 86 (<) 124 c. 523 (=) 523

1 Pose the Problem

ETP Pose Purposeful Questions

- Cover the jars of beads with your hand. How can you compare the beads in each jar if you only see the numbers?

2 Develop the Math

Choose the option that best meets your instructional goals.

MLR Three Reads

1st Read: Ensure that students understand that they are comparing the number of beads in each jar.

2nd Read: Focus students' attention on the numbers above each jar and discuss which number has more hundreds.

3rd Read: Brainstorm how to determine which jar has more beads.

3 Bring It Together

ETP Elicit Evidence of Student Thinking

- How did you use what you know about comparing 2-digit numbers to compare these numbers?
- Why are symbols useful for showing comparisons?

Key Takeaway

- One way to compare 3-digti numbers is to compare the value of the digit in the same places in the numbers: hundreds place, tens place and ones place.

Work Together

As students use symbols to show the comparison of two 3-digit numbers, encourage them to also use words to describe the comparison. Have students work on the activity independently before asking them to explain their thinking.

Common Misconception: Students may think that the number with the greatest digit has the greater value. Remind students to compare by place value, starting with the largest place value first.

LOM Language of Math

Help students understand the meaning of *compare* by providing them with opportunities to use the term in a non-mathematical context. Invite students to discuss comparisons of real-world topics, such as how different animals compare to one another.

CHOOSE YOUR OPTION

Activity-Based Exploration

Students explore different ways to compare 3-digit numbers.

Materials: *Number Cards 0-10* Teaching Resource (3 copies per pair)

Directions: Have students remove number card 10 the group of cards. Each student chooses three cards from a facedown stack. Have each student arranges their cards to make the greatest 3-digit number.

Partners will determine which 3-digit number is greater. Have students explain to their partner how their number compares using *greater than, less than,* or *equal to*. Students record their comparisons in their math notebook or on a piece of paper. Next, have students rearrange their three cards to make the least 3-digit numbers and compare these numbers. Again, students record their comparisons. Students may choose three new cards and repeat the steps to make more comparisons.

Math is... Explaining

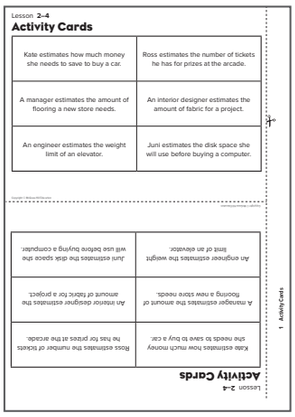
- How can you use what you know about comparing 2-digit numbers to help you compare 3-digit numbers?

Students explain the connection between comparing two 3-digit numbers and comparing two 1-digit or 2-digit numbers.

ETP Support Productive Struggle

- How did you determine which number was greater? Which number was the lesser?
- How can you show that your comparison is true?

Activity Debrief: Invite groups to share their comparisons and encourage them to explain what they did to compare. As they discuss their conclusions, encourage them to use the vocabulary words *greater than* and *less than* to describe their comparisons. Introduce each corresponding comparison symbol as way to show the comparison.


Lesson 2-4
Activity Cards

Kate estimates how much money she needs to save to buy a car.	Ross estimates the number of tickets he has for prizes at the arcade.
A manager estimates the amount of flooring a new store needs.	An interior designer estimates the amount of fabric for a project.
An engineer estimates the weight limit of an elevator.	Juni estimates the disk space she will use before buying a computer.

Have students revisit the Pose the Problem question and discuss answers.

- How can you compare the number of beads in the jars?

The PDF of the Teaching Resource is available in the Digital Teacher Center.

Guided Exploration

Students extend their knowledge of comparing numbers to 3-digit numbers.

ETP Facilitate Meaningful Discourse

- Why are base-ten blocks a useful tool to compare numbers?
- **Think About It:** What do you notice about the groups of base-ten blocks?
- We used two ways to compare numbers. Which way do you think is more efficient?

Math is... Explaining

- How can you use what you know about comparing 2-digit numbers to help you compare 3-digit numbers?

Students explain the connection between comparing two 3-digit numbers and comparing two 1-digit or 2-digit numbers.

Have students compare 549 to 594 using base-ten blocks or a place-value chart.

Make available *Number Cards 0–10* Teaching Resource for students to create 3-digit numbers to compare.

EL English Learner Scaffolds

Entering/Emerging Support students in understanding the meaning of the word *compare*. Put two sets of unequal counting chips on the desk. Count them aloud and write the numbers on the board. Say, *I can compare the numbers. This group has 12 and this group has 20.* Ask students to identify which number is greater.

Developing/Expanding Support students in understanding the meaning of the word *compare*. Put two sets of unequal counting chips on the desk. Count them aloud and write the numbers on the board. Ask students to identify which group is greater and which group is less. Repeat with other amounts.

Bridging/Reaching Ask students to explain the meaning of *compare*. (To see how two or more things or numbers are the same or different). Ask students to explain some strategies they know to compare numbers.

On My Own

MATH REPLAY GO ONLINE

Name _____

What is the meaning of the term? Draw a line to match.

1. greater than — more
   less than — fewer
   equal to — same

2. In what order do you compare the digits in a 3-digit number? Circle the correct answer.
   - A. ones first, then tens, and hundreds last
   - B. tens first, then ones, and hundreds last
   - C. hundreds first, then tens, and ones last
   - D. hundreds first, then ones, and tens last

How can you compare the numbers? Use >, <, or =.

3.

hundreds	tens	ones
1	0	3
	9	0

103 (>) 90

4.

hundreds	tens	ones
3	3	0
3	3	0

330 (=) 330

How can you compare the numbers? Use >, <, or =.

5. 100 (>) 99
6. 604 (>) 489
7. 953 (<) 981
8. 271 (<) 278

9. **STEM Connection** Sienna has a carton of 346 blueberries and a carton of 348 raspberries. Does Sienna have a greater number of blueberries or raspberries? Explain how you know.

Sample answer: Sienna has a greater number of raspberries. I compared the hundreds digits first, then the tens digits, and finally the ones digits. 346 is less than 348.

10. **Extend Your Thinking** Xi says 219 is greater than 437. How do you respond to Xi?

Sample answer: Xi is not correct. He compared the ones digits first. To compare 3-digit numbers, you must compare the hundreds digits first. 400 is greater than 200, so 437 is greater than 219.

Reflect

How do you use place value to compare 3-digit numbers?

Answers may vary.

Math is... Mindset

What helped you work on your own?

Practice

ETP Build Fluency from Understanding

Common Error: Exercises 5 Students may compare the first digit in each number, leading them to conclude that 99 is greater than 100. Remind students that they need to align numbers by place value. Suggest that they use place-value charts to make sure they are comparing digits in the same place-value position.

Practice Item Analysis

Item	DOK	Rigor
1	1	Conceptual Understanding
2	2	Conceptual Understanding
3–4	2	Procedural Skill and Fluency
5–8	2	Procedural Skill and Fluency
9	3	Application
10	4	Application

Reflect

Students complete the Reflect question.

- How do you use place value to compare 3-digit numbers?

Ask students to share their reflections with their classmates.

Math is... Mindset

- What helped you work on your own?

Students reflect on how they practiced self-regulation.

Learning Targets

Ask students to reflect on the Learning Targets of the lesson.

- I can compare 3-digit numbers.
- I can use words and symbols to show comparisons.

To review today's lesson, have students watch the Math Replay video in their Digital Student Center.

Assign the On My Own practice to students from the Digital Teacher Center.

GO ONLINE MATH REPLAY

Exit Ticket Formative Assessment

The *Exit Ticket* assesses students' understanding of lesson concepts.

Metacognitive Check *Reflect on Your Learning* allows students to think about their level of understanding of the lesson content on a scale of 1 to 3 with 3 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	1	Recall how to compare 3-digit numbers	2.NBT.A.4
2	2	Compare 3-digit numbers	2.NBT.A.4
3	2	Compare 3-digit numbers to solve word problems	2.NBT.A.4

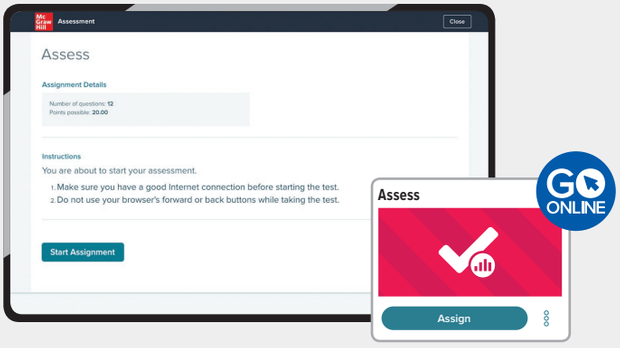
Data Use students' scores on the *Exit Ticket* to assign the differentiated resources available. When students complete the *Exit Ticket* in the digital workspace, their responses are auto-scored.

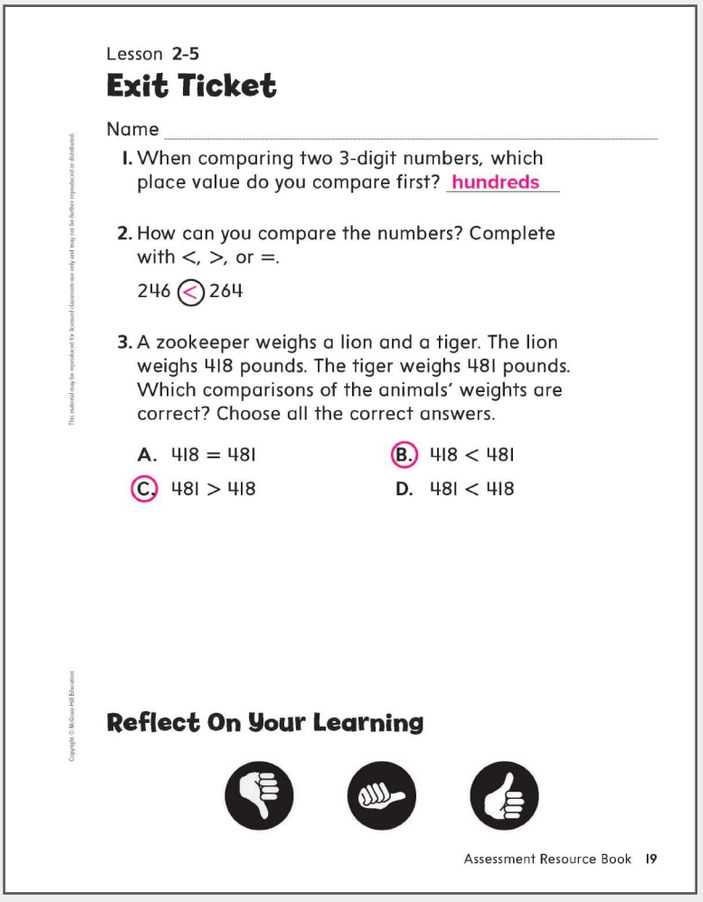
Exit Ticket Recommendations

If students score	Then have students do
3 of 3	Additional Practice or any of the B or E activities
2 or 3	*Take Another Look* or any of the B activities
1 or fewer of 3	Small Group Intervention or any of the R activities

Key for Differentiation

R Reinforce Understanding
B Build Proficiency
E Extend Thinking





Lesson 2-5

Exit Ticket

Name _____

1. When comparing two 3-digit numbers, which place value do you compare first? hundreds

2. How can you compare the numbers? Complete with <, >, or =.

   246 < 264

3. A zookeeper weighs a lion and a tiger. The lion weighs 418 pounds. The tiger weighs 481 pounds. Which comparisons of the animals' weights are correct? Choose all the correct answers.

   A. 418 = 481 B. 418 < 481
   C. 481 > 418 D. 481 < 418

Reflect On Your Learning

Assessment Resource Book 19

Differentiate

10 min Select resources based on your classroom set up, or your students' needs.

R Reinforce Understanding

SMALL GROUP

Greater or Lesser?

Work with students in pairs. Provide 6 number cubes. The first student rolls 3 number cubes and makes a 3-digit number. They predict if their number will be greater or less than their partner's. If students struggle making a prediction, encourage them to look at the digit in the hundreds place. The partner rolls and makes a 3-digit number. Students compare the numbers and determine if the prediction was correct.

B Build Proficiency

WORKSTATIONS

Practice It! Game Station

Largest Number

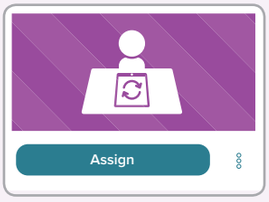
Students practice comparing numbers.

GO ONLINE

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

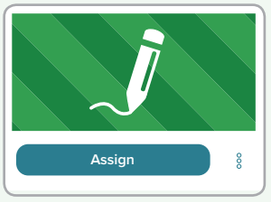
- Compare Whole Numbers < 1,000
- Order Numbers < 1,000



GO ONLINE

Interactive Additional Practice

Assign the digital version of the Student Practice Book.



INDEPENDENT WORK

Differentiation Resource Book, p. 9

Lesson 2-5 • Reinforce Understanding

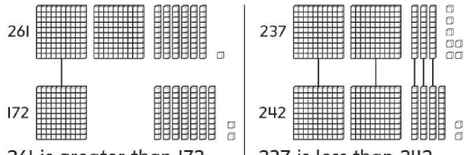
Compare 3-Digit Numbers

Name _____

Review

You can compare 3-digit numbers by looking at each place.

Start with hundreds. If the hundreds are the same, compare tens.

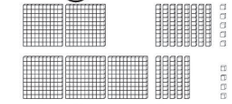


261 is greater than 172.
261 > 172

237 is less than 242.
237 < 242

Compare the numbers. Fill in <, >, =.

1. 285 < 354
2. 223 > 211



3. 572 > 386
4. 915 = 915
5. 474 < 492
6. 528 < 649
7. 823 > 651
8. 339 > 228

Differentiation Resource Book

INDEPENDENT WORK

Student Practice Book, pp. 9–10

Lesson 2-5

Additional Practice

Name _____

Review

You can use place value to compare 3-digit numbers.

Compare the values of the hundreds first.

hundreds	tens	ones
6	4	1
5	4	7

600 is **greater than** 500
So, 641 > 547

If the hundreds have the same value, compare the values of the tens.

hundreds	tens	ones
5	4	7
5	8	9

40 is **less than** 80.
So, 547 < 589

How can you compare the numbers? Use >, <, or =.

1.

hundreds	tens	ones
8	8	0
8	0	8

880 > 808

2.

hundreds	tens	ones
4	4	7
4	7	4

447 < 474

Student Practice Book

E Extend Thinking

WORKSTATIONS

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with addition within 20.

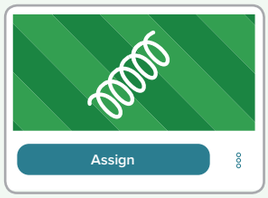
Use It! Application Station

A Lot to Recycle Students write a summary of recycling data.

GO ONLINE

Spiral Review

Assign the digital Spiral Review to students or download and print PDFs of the Spiral Review from the Digital Teacher Center.



Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

INDEPENDENT WORK

Student Practice Book, pp. 9–10

How can you compare the numbers? Use >, <, or =.

3. 155 < 317
4. 690 > 609
5. 298 > 297
6. 788 = 788
7. 521 < 525
8. 801 < 811

Circle the number *greater than* the number in the box.

9. 613 | 612 | **614**
10. 941 | **944** | 914

11. A number is greater than 3 hundreds, 8 tens, and 6 ones. The number is less than 3 hundreds, 8 tens, and 8 ones. What is the number?

    387

12. There are 112 second graders and 120 third graders at a school. Which grade has a greater number of students? Explain how you know.

    third grade; Sample answer: The hundreds are equal, so I looked at the tens place. Since 10 is less than 20, 112 is less than 120.

Math @ Home Activity

Create a flash card for each of the following symbols: >, <, and =. Write two 3-digit numbers on separate pieces of paper, hold them up, and have your child hold up a symbol card to correctly compare the numbers. Repeat the activity several times.

Student Practice Book

Differentiation Resource Book, p. 10

Lesson 2-5 • Extend Thinking

Compare 3-Digit Numbers

Name _____

Mr. An asks his students to bring in collections for show and tell. The table shows the number of objects each student brings.

Grade 2 Student Collections	
Juan	237 crayons
Amy	185 marbles
Nico	315 pennies
Max	179 postcards
Bianca	148 toy cars

1. The students show and tell in order of their number of objects. The person with the most goes last. Write the student names in the order they will show and tell.

Grade 2 Student Collections	
Bianca	148 toy cars
Max	179 postcards
Amy	185 marbles
Juan	237 crayons
Nico	315 pennies

Differentiation Resource Book

Unit Review Name _____

Vocabulary Review

Choose the correct word(s) to complete each sentence.

decompose	expanded form
hundreds	standard form
word form	

1. When you write a number decomposed by place value, it is written in **expanded form**. (Lesson 2-3)

2. When you write a number using only words, it is written in **word form**. (Lesson 2-3)

3. You **decompose** a number when you break it apart. (Lesson 2-3)

4. When you write a number using only digits, it is written in **standard form**. (Lesson 2-3)

5. In the number 476, 4 is in the **hundreds** place. (Lesson 2-1)

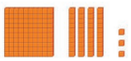
Review

6. What is the value of the base-ten blocks shown? (Lesson 2-1)

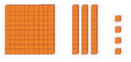
30 tens = **3** hundreds = **300**

7. Which shows 431? Circle the correct answer. (Lesson 2-2)

A. 

B. 

C. 

D. 

8. Ann is thinking of a number. It has 8 tens, 0 ones, 2 hundreds. Which shows Ann's number? Circle the correct answer. (Lesson 2-2)

A. 28 B. 82 C. 280 D. 802

9. Which shows 392 in expanded form? Circle the correct answer. (Lesson 2-3)

A. 300 + 90 + 2 B. 3 + 90 + 200

C. 3 + 9 + 2 D. 300 + 9 + 2

Students can complete the **Unit Review** to prepare for the **Unit Assessment.** Students may complete the Review in their Interactive eBook in the Digital Student Center.

Vocabulary Review

Item Analysis

Item	Lesson
1	2-3
2	2-3
3	2-3
4	2-3
5	2-1

Review

Item Analysis

Item	DOK	Lesson	Standard
6	2	2-1	2.NBT.A.1
7	1	2-2	2.NBT.A.1
8	2	2-2	2.NBT.A.1
9	1	2-3	2.NBT.A.3

To review the lessons in this unit, have students watch the Math Replay video in their Digital Student Center.

Assign the Unit Review practice to students from the Digital Teacher Center.

GO ONLINE MATH REPLAY

Item Analysis (continued)

Item	DOK	Lesson	Standard
10	2	2-3	2.NBT.A.3
11	2	2-3	2.NBT.A.3
12	2	2-3	2.NBT.A.3
13	2	2-4	2.NBT.A.1
14	2	2-4	2.NBT.A.1
15	2	2-4	2.NBT.A.1
16	2	2-4	2.NBT.A.1
17	1	2-5	2.NBT.A.4
18	1	2-5	2.NBT.A.4
19	1	2-5	2.NBT.A.4
20	1	2-5	2.NBT.A.4
21	1	2-5	2.NBT.A.4
22	1	2-5	2.NBT.A.4
23	3	2-5	2.NBT.A.4

Performance Task

Standards: 2.NBT.A.1, 2.NBT.A.3

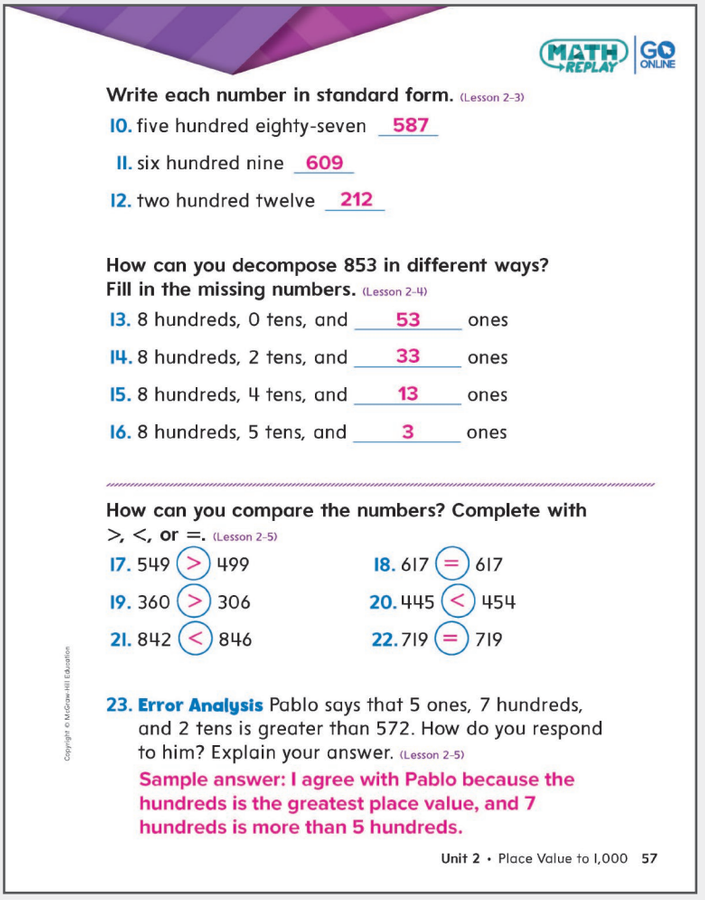
Rubric (4 points)

Part A (DOK 2) – 2 points	
2 POINTS	Students' work reflects proficiency with identifying the total number of hundreds, tens, and ones that are used to compose a 3-digit number. The student's equation and explanation are accurate.
1 POINT	Students' work reflects developing proficiency with identifying the total number of hundreds, tens, and ones that are used to compose a 3-digit number. The student's equation is accurate, but the explanation may not be correct.
0 POINTS	Students' work reflects a poor understanding with identifying the total number of hundreds, tens, and ones that are used to compose a 3-digit number. The student's equation and explanation are incorrect.

Part B (DOK 2) – 2 points	
2 POINTS	Students' work reflects proficiency with showing two other ways to decompose 395. The student's equations are accurate.
1 POINT	Students' work reflects developing proficiency with showing two other ways to decompose 395. The student correctly shows one way to decompose but incorrectly shows another way.
0 POINTS	Students' work reflects a poor understanding with showing two other ways to decompose 395. The student incorrectly writes both equations.

Reflect

The Reflect question provides an opportunity for students to express their understanding of the unit level focus question.



MATH REPLAY GO ONLINE

Write each number in standard form. (Lesson 2-3)

10. five hundred eighty-seven 587
11. six hundred nine 609
12. two hundred twelve 212

How can you decompose 853 in different ways? Fill in the missing numbers. (Lesson 2-4)

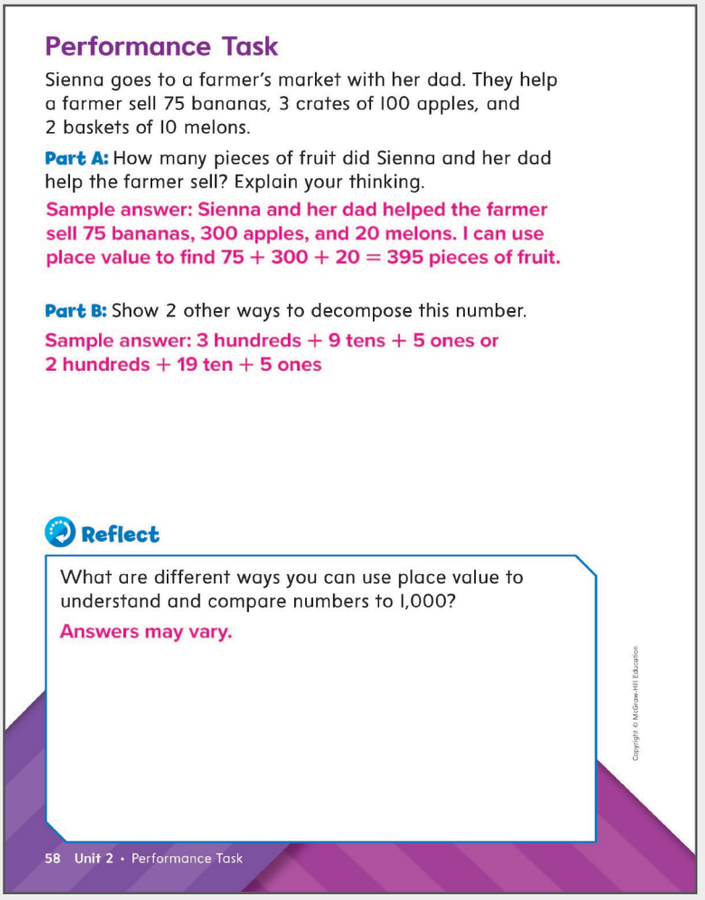
13. 8 hundreds, 0 tens, and 53 ones
14. 8 hundreds, 2 tens, and 33 ones
15. 8 hundreds, 4 tens, and 13 ones
16. 8 hundreds, 5 tens, and 3 ones

How can you compare the numbers? Complete with >, <, or =. (Lesson 2-5)

17. 549 > 499
18. 617 = 617
19. 360 > 306
20. 445 < 454
21. 842 < 846
22. 719 = 719

23. **Error Analysis** Pablo says that 5 ones, 7 hundreds, and 2 tens is greater than 572. How do you respond to him? Explain your answer. (Lesson 2-5)

Sample answer: I agree with Pablo because the hundreds is the greatest place value, and 7 hundreds is more than 5 hundreds.



Performance Task

Sienna goes to a farmer's market with her dad. They help a farmer sell 75 bananas, 3 crates of 100 apples, and 2 baskets of 10 melons.

Part A: How many pieces of fruit did Sienna and her dad help the farmer sell? Explain your thinking.

Sample answer: Sienna and her dad helped the farmer sell 75 bananas, 300 apples, and 20 melons. I can use place value to find 75 + 300 + 20 = 395 pieces of fruit.

Part B: Show 2 other ways to decompose this number.

Sample answer: 3 hundreds + 9 tens + 5 ones or 2 hundreds + 19 ten + 5 ones

Reflect

What are different ways you can use place value to understand and compare numbers to 1,000?

Answers may vary.

Fluency Practice

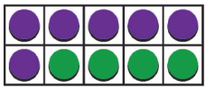
Unit 2

Fluency Practice

Name _____

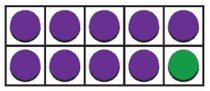
Fluency Strategy

You can use a ten-frame to help compose and decompose 10.



$6 + 4 = 10$ $\quad$ $4 + 6 = 10$
$10 - 6 = 4$ $\quad$ $10 - 4 = 6$

1. Use the counters in the ten-frame to write two addition equations and two subtraction equations.

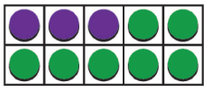


$9 + 1 = 10$ $\quad$ $10 - 1 = 9$
$1 + 9 = 10$ $\quad$ $10 - 9 = 1$

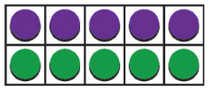
Fluency Flash

What is the sum or difference? Use the counters in the ten-frame to help.

2. $10 - 7 =$ 3



3. $5 + 5 =$ 10



Fluency Check

What is the sum or difference?

4. $10 - 8 =$ 2
5. $2 + 1 =$ 3
6. $8 + 2 =$ 10
7. $10 - 9 =$ 1
8. $6 - 2 =$ 4
9. $6 + 1 =$ 7
10. $8 - 0 =$ 8
11. $10 + 0 =$ 10
12. $4 + 6 =$ 10
13. $10 - 5 =$ 5

Fluency Talk

How does a ten-frame help you decompose 10?

Explanations may vary.

How can you explain to someone else how to add 0 to a number? How can you explain to someone else how to subtract 0 from a number?

Explanations may vary.

Fluency practice helps students develop procedural fluency, that is, the "ability to apply procedures accurately, efficiently, and flexibly." Because there is no expectation of speed, students should not be timed when completing the practice activity.

Build Fluency **Objective** Students compose and decompose 10 as a foundation for knowing the sums of all combinations of two 1-digit numbers from memory.

Fluency Progression

Unit	Skill	Standard
1	Add or Subtract 0, 1, and 2	1.OA.C.6
2	**Compose and Decompose 10**	**1.OA.C.6**
3	Use Doubles	2.OA.B.2
4	Make 10 to Add	2.OA.B.2
5	Make 10 to Subtract	2.OA.B.2
6	Use Near Doubles (Addition)	2.OA.B.2
7	Use Near Doubles (Subtraction)	2.OA.B.2
8	Use Known Facts	2.OA.B.2
9	Add or Subtract Multiples of 10	2.NBT.B.5
10	Use 10 (Within 100)	2.NBT.B.5
11	Choose a Strategy to Add (Two-Digit Addition)	2.NBT.B.5
12	Choose a Strategy to Subtract (Two-Digit Subtraction)	2.NBT.B.5

Fluency Expectations

Grade 1

- Add and subtract within 10.

Grade 2

- Add and subtract within 20 by memory.
- Add and subtract within 100.

Grade 3

- Add and subtract within 1,000.
- Multiply and divide within 100.

Carnival Game Tickets

Students draw on their understanding of place value of 3-digit numbers. Use the rubric shown to evaluate students' work.

Standards: 2.NBT.A.1.a, 2.NBT.A.1.b, 2.NBT.A.3, 2.NBT.A.4

Rubric (11 points)

Part A (DOK 1) – 1 point	
1 POINT	Student's work shows proficiency in recognizing hundreds. Student identifies the correct number.
0 POINTS	Student's work shows weak proficiency in recognizing hundreds. Student identifies an incorrect number.

Part B (DOK 2) – 2 points	
2 POINTS	Student's work shows an understanding of place values. Student identifies the correct numbers.
1 POINT	Student's work shows a developing understanding of place values. Student identifies some of the correct numbers.
0 POINTS	Student's work shows a poor understanding of place values. Student identifies incorrect numbers.

Part C (DOK 2) – 1 point	
1 POINT	Student's work shows proficiency in writing a number from given place values. Student writes the correct number.
0 POINTS	Student's work shows weak proficiency in writing a number from given place values. Student writes an incorrect number.

Part D (DOK 3) – 3 points	
3 POINTS	Student's work shows proficiency in comparing numbers. Student's answer, model, and explanation are correct.
2 POINTS	Student's work shows developing proficiency in comparing numbers. Student's explanation is incorrect.
1 POINT	Student's work shows developing proficiency in comparing numbers. Student's model and explanation are incorrect.
0 POINTS	Student's work shows weak proficiency in comparing numbers. Student's answer is incorrect.

Part E (DOK 2) – 2 points	
2 POINTS	Student's work shows proficiency in number decomposition. Student correctly decomposes the number in two ways.
1 POINT	Student's work shows developing proficiency in number decomposition. One of student's decompositions is correct.
0 POINTS	Student's work shows weak proficiency in number decomposition. Student incorrectly decomposes the number.

Part F (DOK 3) – 2 points	
2 POINTS	Student's work shows proficiency in solving multi-step word problems. Student's answer and explanation are correct.
1 POINT	Student's work shows developing proficiency in solving multi-step word problems. Student's explanation is incorrect.
0 POINT	Student's work shows weak proficiency in solving multi-step word problems. Student's answer is incorrect.

Unit 2

Performance Task

Name _____

Carnival Game Tickets

Liam and Samir play games at a carnival. They win tickets. They can trade in the tickets for prizes.

Part A

Liam plays Ring Toss and wins the tickets shown. How many points does he have?

300 points

Part B

Liam plays Spin the Wheel and wins the tickets shown. How many of each ticket does he win? How many points?

5 tens 2 ones

52 points

Part C

Samir has 3 hundred-point tickets, 5 one-point tickets, and 7 ten-point tickets. How many total points is this?

375 points

Part D

Who has more points, Liam or Samir? Draw base-ten blocks or use a place-value chart to support your answer.

	hundreds	tens	ones
Liam	3	5	2
Samir	3	7	5

Samir

How do you know?

Sample answer: Liam and Samir have the same number of hundred-point tickets, but Samir has more ten-point tickets.

Part E

Samir trades one of his hundred-point tickets for tens and ones tickets. Write how many of each ticket he might have in two different ways. Sample answer:

2 hundreds 17 tens 5 ones

2 hundreds 15 tens 25 ones

Part F

Liam uses some of his tickets to get a toy shark. He then has 2 hundred-point tickets, 1 ten-point ticket, and 5 one-point tickets left. Does Liam have enough points left to get a bouncy ball that costs 100 points, a top that costs 20 points, and a ring that costs 5 points? Explain.

Sample answer: He needs 125 points for the 3 prizes. He has 215 points on his tickets. 215 is greater than 125. Liam has enough points.

Unit Assessment

Two forms of the Unit Assessment, Form A and Form B, are available for either print or digital administration. The items on the two assessments are parallel items, assessing the same concept and standard. The table below provides the item analysis for both forms.

Both Unit Assessments are available in the Assessment Resource Book or as downloadable files from the Digital Teacher Center.

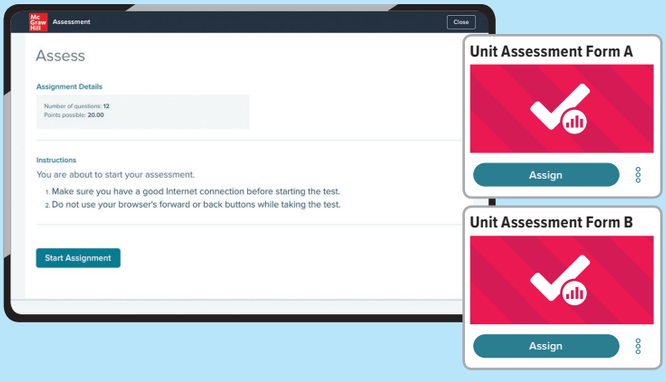
Data When students complete the Unit Assessment in the Digital Student Center, their responses are auto-scored.

Item Analysis

Item	DOK	Lesson	Guided Support Intervention Lesson	Standard
1	1	1	Groups of Hundreds	2.NBT.A.1.a
2	2	3	Identify Numbers to 999	2.NBT.A.3
3	2	2	Model Hundreds, Tens, and Ones	2.NBT.A.1.b
4	2	3	Identify Numbers to 999	2.NBT.A.3
5	2	4	Regroup Hundreds, Tens, and Ones	2.NBT.A.1.a, 2.NBT.A.1.b
6	2	3	Expanded Form (101–999)	2.NBT.A.3
7	2	3	Expanded Form (101–999)	2.NBT.A.3
8	2	5	Compare Whole Numbers < 1,000	2.NBT.A.4
9	1	1	Groups of Hundreds	2.NBT.A.1.a
10	2	1	Groups of Hundreds	2.NBT.A.1.a
11	2	2	Model Hundreds, Tens, and Ones	2.NBT.A.1.b
12	2	4	Regroup Hundreds, Tens, and Ones	2.NBT.A.1.a, 2.NBT.A.1.b
13	2	5	Compare Whole Numbers < 1,000	2.NBT.A.4
14	3	5	Compare Whole Numbers < 1,000	2.NBT.A.4
15	3	5	Compare Whole Numbers < 1,000	2.NBT.A.4

GO ONLINE

Assign the digital Unit Assessment (Form A or B) to students or download and print PDFs from the Digital Teacher Center.



Unit 2

Unit Assessment, Form A

Name _____

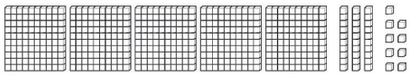
1. Which shows 800?

A. 800 tens
B. 80 ones
C. 8 tens
D. 8 hundreds

2. Write the number in standard form.

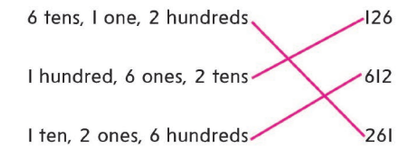
two hundred thirty-seven 237
eight hundred thirteen 813
one hundred six 106

3. Which number do the base-ten blocks show?



A. 539
B. 593
C. 935
D. 953

4. Match each number to its standard form.



Assessment Resource Book 23

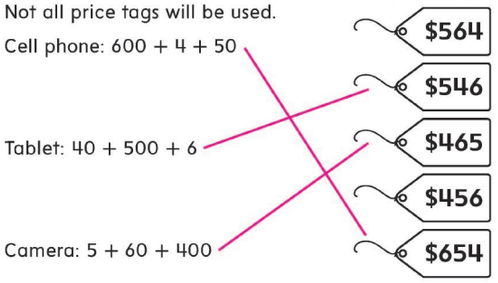
5. Decompose 536 in two different ways. **Sample answers shown.**

500 + 30 + 6 = 536
500 + 20 + 16 = 536

6. Which shows 418 in expanded form?

A. 400 + 10 + 8
B. 4 + 10 + 800
C. 400 + 1 + 8
D. 4 + 1 + 8

7. Peter is shopping for a cell phone, a tablet, and a camera. Match each item with the correct price tag. Not all price tags will be used.



8. Write <, >, or = to compare each pair of numbers.

396	<	401
219	<	319
180	>	108
771	>	717

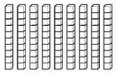
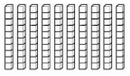
24 Assessment Resource Book

Unit 2
Unit Assessment, Form A (continued)

Name _____

9. Which show 10 groups of ten?
Choose all the correct answers.

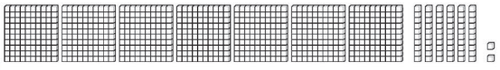
(A.) 100 (B.) 

C.  (D.) 

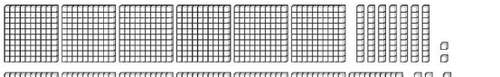
10. Julian does 10 sets of 10 sit-ups.
How many sit-ups does Julian do in all?

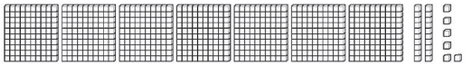
100 sit-ups

11. Which shows 627?

A. 

(B.) 

C. 

D. 

12. How can you show 764 in different ways? Write the missing numbers.

7 hundreds, 0 tens, and 64 ones

7 hundreds, 3 tens, and 34 ones

7 hundreds, 5 tens, and 14 ones

7 hundreds, 6 tens, and 4 ones

13. Which numbers are less than the number in the box?
Choose all the correct answers.

497

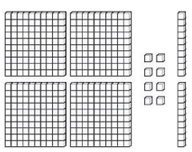
(A.) 476 B. 498

C. 497 (D.) 490

14. How can you determine which of two 3-digit numbers is greater than the other? Explain.

Sample answer: Compare the digits in the hundreds place first. If the digits in the hundreds place are the same, then compare the digits in the tens place. If the digits in the tens place are the same, then compare the digits in the ones place.

15. Clara uses base-ten blocks to make a number. She uses 4 hundreds, 8 ones, and 2 tens. Is the number Clara makes greater than, less than, or equal to 436? Explain your answer.



Sample answer: Clara's number is less than 436. Clara's number has 4 hundreds, so the hundreds are the same. It has 2 tens, which is less than the 3 tens in 436, so Clara's number is less.

Form B

Unit 2
Unit Assessment, Form B

Name _____

1. Which shows 600?

A. 600 tens (B.) 6 hundreds

C. 6 tens D. 60 ones

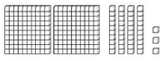
2. Write the number in standard form.

six hundred twenty-one 621

two hundred eighty 280

nine hundred one 901

3. Which number do the base-ten blocks show?



A. 234 (B.) 243

C. 423 D. 432

4. Match each number to its standard form.

1 ten, 4 hundreds, and 6 ones — 146

6 hundreds, 1 one, and 4 tens — 416

4 tens, 6 ones, and 1 hundred — 641

Stove: 400 + 2 + 70 — $247

Refrigerator: 20 + 4 + 700 — $724

Dishwasher: 7 + 200 + 40 — $472

$427

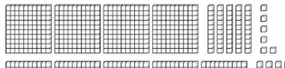
$742

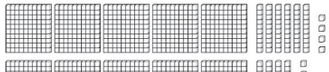
8. Write <, >, or = to compare each pair of numbers.

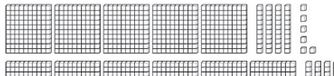
443	<	891
201	>	193
529	<	592
764	>	746

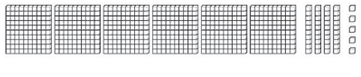
200 jumping jacks

11. Which shows 546?

A. 

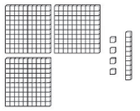
B. 

(C.) 

D. 

Sample answer: Compare the digits in the hundreds place first. If the digits in the hundreds place are the same, then compare the digits in the tens place. If the digits in the tens place are the same, then compare the digits in the ones place.

15. Artem uses base-ten blocks to make a number. He uses 3 hundreds, 4 ones, and 1 ten. Is the number Artem makes greater than, less than, or equal to 304? Explain your answer.



Sample answer: Artem's number is greater than 304. Artem's number has 3 hundreds, so the hundreds are the same. It has 1 ten, which is greater than the 0 tens in 304, so Artem's number is greater.

Grade 2

Unit 1: Math Is...

- Math Is Mine
- Math Is Exploring and Thinking
- Math Is In My World
- Math Is Explaining and Sharing
- Math Is Finding Patterns
- Math Is Ours

Unit 2: Place Value to 1,000

- Understand Hundreds
- Understand 3-Digit Numbers
- Read and Write Numbers to 1,000
- Decompose 3-Digit Numbers
- Compare 3-Digit Numbers

Unit 3: Patterns within Numbers

- Counting Patterns
- Patterns When Skip Counting by 5s
- Patterns When Skip Counting by 10s and 100s
- Understand Even and Odd Numbers
- Addition Patterns
- Patterns with Arrays
- Use Arrays to Add

Unit 4: Meanings of Addition and Subtraction

- Represent and Solve Add To Problems
- Represent and Solve Take From Problems
- Solve Two-Step Add To and Take From Problems
- Represent and Solve Put Together Problems
- Represent and Solve Take Apart Problems
- Solve Two-Step Put Together and Take Apart Problems
- Represent and Solve Compare Problems
- Represent and Solve More Compare Problems
- Solve Two-Step Problems with Comparison
- Solve Two-Step Problems Using Addition and Subtraction

Unit 5: Strategies to Fluently Add within 100

- Strategies to Add Fluently within 20
- More Strategies to Add Fluently within 20
- Represent Addition with 2-Digit Numbers
- Use Properties to Add
- Decompose Two Addends to Add
- Use a Number Line to Add
- Decompose One Addend to Add
- Adjust Addends to Add
- Add More Than Two Numbers
- Solve One- and Two-Step Problems Using Addition

Unit 6: Strategies to Fluently Subtract within 100

- Strategies to Subtract Fluently within 20
- More Strategies to Subtract Fluently within 20
- Represent Subtraction with 2-Digit Numbers
- Represent 2-Digit Subtraction with Regrouping
- Use a Number Line to Subtract
- Decompose Numbers to Subtract
- Adjust Numbers to Subtract
- Relate Addition to Subtraction
- Solve One-Step Problems Using Subtraction
- Solve Two-Step Problems Using Subtraction

Unit 7: Measure and Compare Lengths

- Measure Length with Inches
- Measure Length with Feet and Yards
- Compare Lengths Using Customary Units
- Relate Inches, Feet, and Yards
- Estimate Length Using Customary Units
- Measure Length with Centimeters and Meters
- Compare Lengths Using Metric Units
- Relate Centimeters and Meters
- Estimate Length Using Metric Units
- Solve Problems Involving Length
- Solve More Problems Involving Length

Unit 8: Measurement: Money and Time

- Understand the Values of Coins
- Solve Money Problems Involving Coins
- Solve Money Problems Involving Dollar Bills and Coins
- Tell Time to the Nearest Five Minutes
- Be Precise When Telling Time

Unit 9: Strategies to Add 3-Digit Numbers

- Use Mental Math to Add 10 or 100
- Represent Addition with 3-Digit Numbers
- Represent Addition with 3-Digit Numbers with Regrouping
- Decompose Addends to Add 3-Digit Numbers
- Decompose One Addend to Add 3-Digit Numbers
- Adjust Addends to Add 3-Digit Numbers
- Explain Addition Strategies

Unit 10: Strategies to Subtract 3-Digit Numbers

- Use Mental Math to Subtract 10 and 100
- Represent Subtraction with 3-Digit Numbers
- Decompose One 3-Digit Number to Count Back
- Count On to Subtract 3-Digit Numbers
- Regroup Tens
- Regroup Tens and Hundreds
- Adjust Numbers to Subtract 3-Digit Numbers
- Explain Subtraction Strategies
- Solve Problems Involving Addition and Subtraction

Unit 11: Data Analysis

- Understand Picture Graphs
- Understand Bar Graphs
- Solve Problems Using Bar Graphs
- Collect Measurement Data
- Understand Line Plots
- Show Data On a Line Plot

Unit 12: Geometric Shapes and Equal Shares

- Recognize 2-Dimensional Shapes by Their Attributes
- Draw 2-Dimensional Shapes from Their Attributes
- Recognize and Draw 3-Dimensional Shapes from Their Attributes
- Understand Equal Shares
- Relate Equal Shares
- Partition a Rectangle into Rows and Columns