Reveal

MATH®

Reveal the Full Potential
in Every Student

Grade 1

Unit 3:
Place Value

Place Value

PACING: 12 days

LESSON	MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE
Unit Opener IGNITE! Seeing Dots Determine, by sight, the number of dots when presented with unstructured and structured patterns.			
3-1 Numbers 11 to 19	Students understand that teen numbers are compose of a ten and some ones.	Students use *and* to describe that the numbers 11 through 19 are represented on ten frames and composed of a ten and some ones.	Students discover and discuss personal interests related to mathematics and share these interests with peers.
Math Probe Show the Value of the Digit: Student Interview Identify the value of a digit in a 2-digit number.			
3-2 Understand Tens	Students understand that ten ones can be grouped as one ten.	Students use *same* to explain that ones can be grouped as one ten.	Students demonstrate self-awareness of personal strengths and areas of challenge in mathematics.
3-3 Represent Tens and Ones	Students represent 2-digit numbers with some tens and some ones.	Students use plurals to define 2-digit numbers with some tens and some ones.	Students set a focused mathematical goal and make a plan for achieving that goal.
3-4 Represent 2-Digit Numbers	Students use place value to show 2-digit numbers.	Students use *can* to explain showing 2-digit numbers with different tools and representations.	Students practice drawing to describe the logic and reasoning used to make a mathematical decision.
3-5 Represent 2-Digit Numbers in Different Ways	Students can represent 2-digit numbers in different ways.	Students use *also* to describe representing 2-digits numbers in different ways.	Students engage in respectful discourse with peers about various perspectives for approaching a mathematical challenge.
3-6 Compare Numbers	Students can compare 2-digit numbers.	Students use comparatives such as *greater than, less than,* and *equal to* to compare 2-digit numbers.	Students collaborate with peers and contribute to group effort to achieve a collective mathematical goal.
3-7 Compare Numbers on a Number Line	Students can use number lines to compare 2-digit numbers.	Students locate 2-digit numbers on a number line and compare them based on their location using comparatives.	Students break down a complex problem into manageable parts in order to solve.
3-8 Use Symbols to Compare Numbers	Students compare numbers using the $>$, $<$, and $=$ symbols.	Students use the simple present tense to state facts to compare 2-digit numbers represented by base-ten blocks and two 2-digit numbers with the symbols $>$, $<$, and $=$.	Students demonstrate thoughtful reflection through identifying the causes of challenges and successes while completing a mathematical task.
Unit Review **Fluency Practice**			
Unit Assessment **Performance Task**			

LESSON	KEY VOCABULARY		MATERIALS TO GATHER	RIGOR FOCUS	STANDARD
	Math Terms	Academic Terms			
3-1	group of ten ones teen number ten-frame	organize pattern	• connecting cubes • counters • *Double Ten-Frames* Teaching Resource • *Number Cards 11–19* Teaching Resource	Conceptual Understanding	1.NBT.B.2 1.NBT.B.2.a 1.NBT.B.2.b
3-2	ones tens	discuss model	• connecting cubes • *Ten-Frames* Teaching Resource	Conceptual Understanding	1.NBT.B.2 1.NBT.B.2.a 1.NBT.B.2.c
3-3	ones tens	begin explain	• building blocks • connecting cubes	Conceptual Understanding Procedural Skill	1.NBT.B.2
3-4	ones tens	explain organize	• connecting cubes • *Place-Value Chart* Teaching Resource	Conceptual Understanding	1.NBT.B.2
3-5	ones tens	discuss explain	• connecting cubes • *Number Cards 0–120* Teaching Resource	Conceptual Understanding	1.NBT.B.2
3-6	compare equal to greater than less than	discuss observe	• base-ten blocks • *Number Cards 0–120* Teaching Resource • *Number Chart 1–100* Teaching Resource	Conceptual Understanding	1.NBT.B.3
3-7	compare equal to greater than less than number line	locate relationship	• *Blank Number Lines 2* Teaching Resource	Conceptual Understanding	1.NBT.B.3
3-8	compare equal to (=) greater than (>) less than (<)	participate symbol	• base-ten blocks • index cards • *Number Cards 0–120* Teaching Resource	Conceptual Understanding	1.NBT.B.3

Focus

Place Value

Understanding Place Value Students are introduced to the idea of place value in this unit. This marks students' first time analyzing and representing numbers as tens and ones. Students learn how to make numbers 11 to 19 and that ten can be thought of as a group of ten 1s. Students also explore different ways to represent the same number using different but equivalent groupings of tens and ones.

Number Representations Students explore different tools and methods to represent 2-digit numbers in this unit. First, connecting cubes are used to organize a large number of ones. Grouping ones makes counting more efficient. Next, groups of ten 1s are grouped together into tens. This helps students visualize the value of a 2-digit number. Finally, connecting cube representations and base-ten shorthand are connected to a place-value chart.

Comparing Numbers In Grade 1, students are formally introduced to comparing numbers using the symbols >, <, and =. Before using these symbols, different comparison tools are used. Students represent numbers using base-ten blocks and compare the number of tens and ones in each number. If the number of tens is different, the larger number of tens will always be the greater number. After that, numbers are found on a number line. The location of the number on the number line shows which number is greater. The number on the left is always less than the number on the right. Once students are comfortable with comparing two 2-digit numbers, the symbols are introduced as a way to represent the comparison.

Coherence

What Students Have Learned

- Students composed and decomposed numbers up to 20 and explored representing 2-digit numbers up to 20. (Grade K)
- Students compared numbers 1 to 5 (Grade K).
- Students recognized patterns when reading and writing numbers. (Unit 2)

What Students Are Learning

- Students represent teen numbers with a ten and ones.
- Students group ones into tens and ones to make it easier to count and name the number.
- Students decompose 2-digit numbers in different ways.
- Students compare 2-digit numbers and then represent comparisons using the symbols >, <, and =.
- Students analyze the characteristics of a number line. Then compare two numbers on a number line.

What Students Will Learn

- Students analyze other math symbols including the equal sign. (Unit 4)
- Students use number lines to subtract. (Unit 5)
- Students use number charts to add. (Unit 9)
- Students represent 3-digit numbers. (Grade 2)
- Students add tens and ones. (Grade 2)
- Students compare 3-digit numbers. (Grade 2)

Rigor

Conceptual Understanding

Students develop conceptual understanding of

- 2-digit numbers by exploring how the numbers 11 through 19 are made of a ten and some ones;
- 2-digit numbers by grouping them into tens and ones before counting and naming them;
- 2-digit numbers by decomposing numbers in different but equivalent ways using groups of tens and ones;
- how symbols > (greater than), = (equal to), and < (less than) are used to compare two 2-digit numbers.

Procedural Skill and Fluency

Students build proficiency with

- counting fluency by grouping large numbers of items into tens and ones to make counting more efficient;
- number sense skills to later add 2-digit numbers;
- skills to later decompose numbers to add more efficiently;
- skills to later compare numbers and find a difference more efficiently;
- skills to develop a deeper understanding of how to use symbols to efficiently represent mathematical ideas.

Application

Students apply their knowledge of

- decomposing 2-digit numbers to real world problem situations;
- comparing 2-digit numbers to real world problem situations.

Application is not a targeted element of rigor for this standard.

ETP Effective Teaching Practices

Use and connect mathematical representations

Making connections between different mathematical representations deepens a student's understanding of the concept and hones their tools for problem solving. Numerous representations are used to introduce and develop a student's foundational knowledge of 2-digit numbers. Base-ten blocks are used to help students visualize the value of a 2-digit number. Connections should be made between the numeral form of a number and the number and type of base-ten blocks used. Different tools are also used to compare numbers. First base-ten blocks are used, then a number chart, then a number line. Each tool helps students compare the numbers in a different way, but all three methods are efficient comparison models and students will be allowed to choose which is best for them.

Use and connect mathematical representations

Finally, comparisons symbols are also introduced as a way to represent comparison sentences. Students should be given opportunities to use each tool, which helps deepen their understanding of 2-digit numbers and comparisons. As you introduce each tools or method, spend time questioning students to further their understanding.

- When introducing a tool, focus questions on the characteristics and patterns students see within the tool.
- Pose questions that allow students to make connections between the different representations and the numerical form of the numbers.
- Provide opportunities for students to ask and answer their own questions based on what are still unclear about regarding 2-digit numbers and comparisons.

MPP Math Practices and Processes

Use appropriate tools strategically

Mathematical tools are very important at this stage to help students visualize different concepts. This unit is the first introduction of base-ten blocks as a tool to represent numbers. At this stage, only 2-digit numbers are represented, but base-ten blocks will be used throughout the next few grades to build understanding of larger numbers. Base-ten blocks are a vital tool as they allow students to visualize the value of a number as opposed to just seeing the digits. Within this unit, number charts and number lines are also used to help compare numbers. These tools are efficient methods to help students understand why a number is greater or lesser in value than another.

Some suggestions for building student's strategic use of tools include:

- Students choosing which tool best fits their needs and abilities to solve a problem.
- Students discuss the similarities and differences of different tools such as a number chart and number line.
- Students describe how base-ten blocks can be used to represent a certain 2-digit number.

SEL Social and Emotional Learning

What Skills Will We Develop?

- **Self-Awareness – Accurate Self-Perception** (Lesson 1): Having accurate self-perception allows students to determine areas of strength as well well as areas in which they need to focus and practice.
- **Self-Awareness – Accurate Self-Perception** (Lesson 2): Having accurate self-perception allows students to determine areas of strength as well well as areas in which they need to focus and practice.
- **Self-Regulation – Goal-Setting** (Lesson 3): Setting goals can help motivate students to take initiative and stay focused.
- **Self-Regulation – Working Memory** (Lesson 7): Students use their working memory to follow directions, recall information, and do mental math. Working memory helps students stay engaged and focused.

- **Social Awareness – Develop Perspective** (Lesson 5): Developing perspective can help students understand different ways of thinking.
- **Relationship Skills – Teamwork** (Lesson 6): When students work effectively as a team, they establish a stronger learning community.
- **Responsible Decision-Making – Logic and Reasoning** (Lesson 4): When students think logically and apply reasoning, they can make informed decisions to help them find solutions.
- **Responsible Decision-Making – Reflection** (Lesson 8): When students reflect, they can make connections between effort and achievement.

🔲 LOM **Language of Math**

Mathematical Words and Phrases

Students will be using these key terms in this unit:

- **Group of ten*** (Lesson 3–1) This is a new term. Students begin to think of a group of ten as they develop their thinking about 2-digit numbers.
- **Teen number*** (Lesson 3–1) This is a new term. Students begin to think of teen numbers as 11, 12, 13, 14, 15, 16, 17, 18, and 19.
- **Ten-frame*** (Lesson 3–1) This is also a new term. Students begin to think about representing numbers using a ten-frame.
- **Compare*** (Lesson 3–6) Students were introduced to the term in the context of counting objects. Students begin to think about the value of 2-digit numbers and whether a number is greater or less than another using different comparison methods and tools.

*This is a new term.

- **Equal to (=)*** (Lesson 3–6) This is a new term. Students begin to think about the value of 2-digit numbers and whether they are equal to another when comparing two 2-digit numbers. It is important for students to understand how to "read" the equal sign.
- **Greater than (>)*** (Lesson 3–6) This is a new term. Students begin to think about the value of 2-digit numbers and whether they are greater than another when comparing two 2-digit numbers. It is important for students to understand the difference between the greater than and less than symbols as well as how to "read" the symbols.
- **Less than (<)*** (Lesson 3–6) This is also a new term. Students begin to think about the value of 2-digit numbers and whether they are less than another when comparing two 2-digit numbers.

🔲 MLD **Math Language Development**

A Focus on Speaking

When speaking about mathematical concepts, such as comparisons, specificity and clarity are very important. Speaking in math requires a specific vocabulary dependent on the topic being discussed. Talking about math differs from talking about other subject areas in these ways:

- Math has a specific vocabulary which often uses familiar words but with different meanings.
- Mathematical ideas often need to be described simply and clearly, so proper word choices are crucial.
- Math vocabulary often includes words as well as symbols and numbers.

Because of these differences, it is important that we help students develop speaking strategies to explain their thinking in a clear and precise manner.

Before speaking

- model specific vocabulary words when describing why a number is greater or lesser than another;
- provide students with words that they can choose from when discussing their comparisons;
- have students analyze 2-digit numbers and discuss comparisons with a partner before sharing their thoughts with the class.

After speaking

- allow classmates to ask questions about anything that is still unclear to them and provide the speaker with the opportunity to further clarify their thinking;
- Pose purposeful questions to focus student attention on what needs to be further clarified within their answers.

🔲 EL **English Language Learner**

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. Because many of the words and phrases used in this section are likely unknown, ELs are supported in understanding and using these words.

- Lesson 3-1 – some ones
- Lesson 3-2 – the same as
- Lesson 3-3 – how many
- Lesson 3-4 – different ways
- Lesson 3-5 – show a number
- Lesson 3-6 – more
- Lesson 3-7 – what else
- Lesson 3-8 – kind

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.

Find the Pattern, Make a Pattern

Purpose: Build efficiency with recognizing and building patterns.

Overview: Students determine the rule(s) for a given pattern, then use the rule(s) to create a new pattern. The teacher records students' new patterns and facilitates a discussion to validate the pattern and its rules. What Did You See?

Purpose: Build visual discrimination, quantitative reasoning, and mathematical discourse.

Overview: Students view an image for up to 5 seconds, then describe and discuss what they saw (or what they think they saw). Students see the image a second time, this time with no time constraint. They compare what they think they saw with the actual image.

Let's Count

Purpose: Build proficiency with skip counting.

Overview: Given a starting number and a counting interval, students count forward or backward. Before beginning the counting sequence, students predict numbers that will be included in the counting sequence.

Sense-Making Routines

- **Notice & Wonder** (Lessons 3-1 through 3-4) Students analyze groups of ten. In Lesson 3-1, students notice and wonder about an image with 10 cars on a car carrier and 2 cars on the road. In Lesson 3-2, students notice and wonder about an image with unbundled and bundled balloons. In Lesson 3-3, students notice groups of beads and strings. In Lesson 3-4, students notice that each mailbox has a number and that the numbers contain two digits.
- **Notice & Wonder: How Are They the Same? How Are They Different?** (Lesson 3-5) Students notice and wonder about an image with the apples in a bag and apples arranged on a tray.

- **Notice & Wonder** (Lessons 3-6 through 3-8) In Lesson 3-6, students notice that there are 10 single connecting cubes and also a train of 10 connecting cubes. In Lesson 3-7, students notice that one game piece is farther along than the other game piece on the number path of a game board. In Lesson 3-8, students notice and wonder how to compare two pictures of fish.

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 3-1: To optimize output, students participate in MLR8: Discussion Supports.
- Lesson 3-2: To cultivate conversation, students participate in MLR4: Information Gap.

- Lesson 3-3: To support sense-making, students participate in MLR2: Collect and Display.
- Lesson 3-4: To optimize output, students participate in MLR4: Information Gap.
- Lesson 3-5: To cultivate conversation, students participate in MLR8: Discussion Supports.
- Lesson 3-6: To maximize linguistic and cognitive meta-awareness, students will participate in MLR7: Compare and Connect.
- Lesson 3-7: To support sense-making, students will participate in MLR2: Collect and Display.
- Lesson 3-8: To cultivate conversation, students will participate in MLR5: Co-Craft Questions.

Unit 3
How Ready Am I?

Name_____

1. Which picture shows more?

(A)   B.

2. What is the missing number?

10, 20, 30, 40, _____, 60

A. 30   B. 41   (C) 50   D. 70

3. Which picture shows less?

A.   (B)

4. Complete the sentence: 10 and _____ more is 16.

(A) 6   B. 10   C. 16   D. 17

5. Which number is less?

A. 8   (B) 7

6. Complete the sentence: _____ and 2 more is 12.
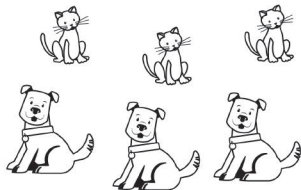
A. 1   B. 2   (C) 10   D. 13

Assessment Resource Book   31

7. Complete the sentence: 10 and _____ more is 13.

(A) 3   B. 4   C. 12   D. 13

8. Which number is greater than 3?

A. 1   (B) 6

9. Are the numbers of cats and dogs equal?

(A) Yes   B. No

10. There are 10 frogs in each row.
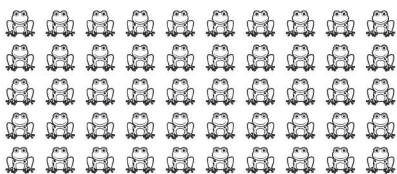
How many frogs are there in all?

A. 5   B. 6   (C) 50   D. 60

32   Assessment Resource Book

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	2	Compare groups of objects	Count to Compare	K.CC.C.6
2	1	Count by 10s	Count to 50 by Tens	K.CC.A.1
3	2	Compare groups of objects	Count to Compare	K.CC.C.6
4	1	Understand 2-digit numbers to 19	Decompose Tens and Ones from 16 to 19	K.NBT.A.1
5	2	Compare 1-digit numbers	Count to Compare	K.CC.C.7
6	1	Understand 2-digit numbers to 19	Decompose Tens and Ones from 11 to 15	K.NBT.A.1
7	1	Understand 2-digit numbers to 19	Decompose Tens and Ones from 11 to 15	K.NBT.A.1
8	2	Compare 1-digit numbers	Count to Compare	K.CC.C.7
9	3	Compare groups of objects	Count to Compare	K.CC.C.6
10	2	Count groups of 10	Count to 50 by Tens	K.CC.A.1

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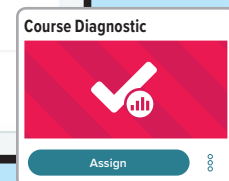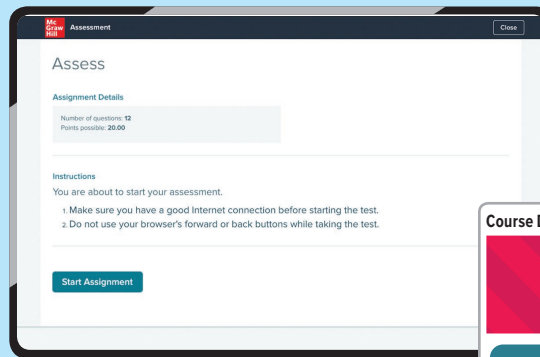
Focus Question

Introduce the Focus Question: *How can I use place value to represent and compare numbers?*

Ask students to think about what they know about 2-digit numbers and comparing numbers.

- What do you already know about 2-digit numbers? How can you identify a 2-digit number?
- How can you compare two 2-digit 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: Paleontologist Jin and his aspirations to be a paleontologist.

Jin Counts Dinosaur Teeth Jin uses place value to determine the total number of dinosaur teeth.

⚙ STEM Project Card

Students can complete the STEM project during their workstation time.

⚙ Websketch Exploration

Students can complete the STEM adventure during their workstation time.

Unit **3**

Place Value

Focus Question

How can I use place value to represent and compare numbers?

Hi, I'm Jin.

I want to be a paleontologist. I collect dinosaur teeth. I have 2 boxes. Each box has 10 teeth. I have 3 extra teeth. That is 2 tens and 3 more. I have 23 dinosaur teeth! Grouping tens and ones helps me count.

STEM video | GO ONLINE

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STEM Career: Paleontologist

GO ONLINE

Jin Counts Dinosaur Teeth

GO ONLINE
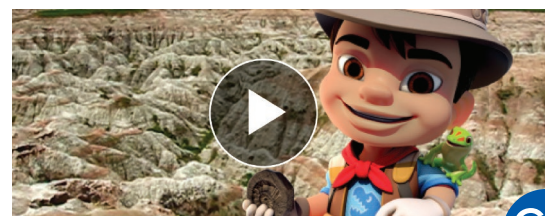
IGNITE!

Name _____

Seeing Dots

Listen to your teacher. Describe what you see.
Explanations may vary.

A.

B.

C.

D.

E.

F.

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Ignite!

Seeing Dots

Students determine, by sight rather than by counting, the number of dots when presented with unstructured and structured patterns. This work sets the stage for an introduction to place value.

1. Direct attention to the student page.
   • What do you see on the page?

   Advise students that they are going to determine how many dots are in each box by simply looking at the dots—without actually counting them one by one. They will have just a few seconds per box.

2. Have students cover each dot arrangement with an individual self-stick note. Ensure that the letter remains uncovered. Advise them that when you say, "Go," they will uncover Box A and determine the number of dots by just looking at them. They should not try to count each individual dot. After a few seconds, you will say, "Stop." They must then cover the dot arrangement with the self-stick note and look up. Have students do the activity for Box A.
   • How many dots are in Box A? Explain.

3. Have students do the activity for Box B.
   • How many dots are in Box B? Explain.

4. Have students do the activity for Box C. Use discretion as to how long you give students to determine the number of dots.
   • How many dots are in Box C? Explain.

5. Repeat the activity for Box D.
   • How many dots do you see? Explain.
   • Uncover Boxes C and D. In which box was it easier to see how many dots there are? Why?

6. Repeat the activity for Box E.
   • How many dots do you see? Explain.

Extend

7. Have students repeat the activity for Box F, perhaps allowing more time for this box.
   • How many dots do you see?
   • What are your thoughts about determining the number of dots in this box without counting?
   • Uncover Boxes C and D. In which box was it easier to see how many dots there are? Why?

8. Mention that when objects are organized in a pattern, such as a pattern of 10 and some more, it makes working with numbers much easier.

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 explore place value of two-digit numbers. • **Ten and Some Ones Task Cards** • **Tens Race** • **Tens and Ones Task Cards** • **Show Numbers** • **Tens and Ones Concentration** • **Compare Numbers Sort** • **Number Line Showdown** • **Tens and Ones Showdown**	3-1 3-2 3-3 3-4 3-5 3-6 3-7 3-8
Digital Station	Digital Game	**Jungle Crossing** Students practice adding numbers from 1 to 9.	3-1
Application Station	**Have students complete at least one of the Use It! activities for this unit.**		
	STEM Project Card	**Comparing Temperatures** Students write a weather report script based on temperatures collected for a week.	3-8
	Connection Card	**Counting Notes** Students count the number of notes in music.	3-1
	Real World Card	**Money Exchange** One student acts as a store owner while the other acts as a customer. The customer chooses items to buy and the store owner checks the amount of money given.	3-3

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.

group of ten
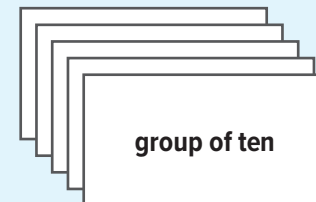
Foldables

Use the unit foldables wtih Lessons 3-3, 3-4, and 3-7.
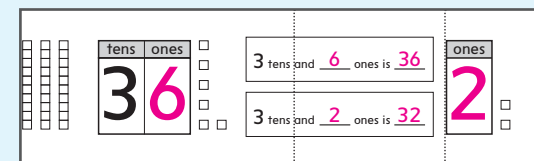
Spiral Review

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

Lesson	Standard
3-1	K.CC.A
3-2	K.CC.B
3-3	K.CC.C
3-4	K.OA.A
3-5	K.NBT.A
3-6	K.OA.A
3-7	K.NBT.A
3-8	K.OA.A

Numbers 11 to 19

Learning Targets

- I can make numbers 11 to 19 using a ten and some ones.
- I can explain that teen numbers are made of one ten and some ones.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **1.NBT.B.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

a 10 can be thought of as a bundle of ten ones — called a "ten."

b The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

Math Practices and Processes

- MP7 Look for and make use of structure.

Vocabulary

Math Terms	Academic Terms
group of ten	organize
ones	pattern
teen number	
ten-frame	

Materials

The materials may be for any part of the lesson.

- connecting cubes
- counters
- *Double Ten-Frames* Teaching Resource
- *Number Cards 1–9* Teaching Resource
- *Number Cards 11–19* Teaching Resource

Focus

Content Objective	Language Objectives	SEL Objective
• Students understand that teen numbers are composed of a ten and some ones.	• Students use and to describe that the numbers 11 through 19 are represented on ten frames and composed of a ten and some ones. • To optimize output, ELs participate in MLR8 Discussion Supports.	• Students discover and discuss personal interests related to mathematics and share these interestes with peers.

Coherence

Previous	Now	Next
• Students composed and decomposed teen numbers through 19 (Grade K). • Students recognized patterns when reading and writing numbers. (Unit 2).	• Students represent teen numbers using one ten and some ones.	• Students decompose 2-digit numbers into tens and ones (Unit 3). • Students understand 100 can be thought of as a bundle of ten tens – called a "hundred" (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop understanding of the structure of 2-digit numbers.	• Students begin to develop proficiency with the structure of 2-digit numbers. *Procedural Skill and Fluency is not a targeted element of rigor for this standard.*	• Students apply their understanding of the structure of 2-digit numbers to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

Number Routine
Find the Pattern, Make a Pattern 🕐 5–7 min

Build Fluency Students build algebraic thinking as they identify the pattern then create their own. Show students the pattern with missing numbers. Discuss rules for this pattern. Reveal the missing numbers after students say them. Have students create a new pattern that follows the same rule.

These prompts encourage students to talk about their reasoning:

- How did you identify the pattern?
- How did you create a new sequence?
- How do you know your sequence shows the same pattern as the original sequence?

Purpose Students think about different ways to group objects to make them easier to count.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip Allow students to notice and wonder without asking them questions at first. You may want to make a list of the ideas students share. Then the class can reflect on their ideas throughout the class discussion.

ETP **Pose Purposeful Questions**

The questions that follow can be asked in any order. They are meant to help advance students' understanding of the structure of numbers greater than ten and are based on potential comments and questions that students may make during the share out.

- What did you notice about the number of cars on top of the car carrier?
- What did you notice about how the cars are arranged on the car carrier?
- What can you tell about the the other cars on the road?
- How can you know how many cars there are altogether? What number of cars would that be?

Math is... **Mindset**

- What do you like about math?

SEL **Self-Awareness: Identity and Belonging**

Give students opportunities to share about themselves to reinforce their sense of identity and belonging. As students work collaboratively to complete the Notice & Wonder, invite them to share a personal skill or interest that can help them with grouping different ways to make counting easier.

Transition to Explore & Develop

Ask questions that get students thinking about the structure of teen numbers. If students make note of the structure of teen numbers, that is that they have 2 digits in them, bring that into the discussion, but the concept does not need to be discussed during this part of the lesson. Rather, students will be reminded of it in the Explore & Develop.

ETP **Establish Goals to Focus Learning**

- Let's think about how we write numbers such as 11, 12, 13 and so on.
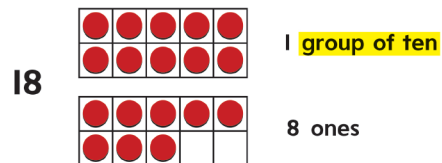
Learn

How can you determine the number of counters?

You can fill **ten-frames**.

The top ten-frame shows I group of ten. The bottom ten-frame shows 8 ones.

18

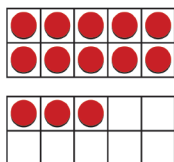I **group of ten**

8 ones

Math is... Patterns
What patterns do you notice in teen numbers?

Numbers II, I2, I3, I4, I5, I6, I7, I8, and I9 are **teen numbers**. They have I group of ten and some ones.

🗨 Work Together

How many counters?

  __1__ group of ten and

  __3__ ones is __13__ .

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64 **Lesson I** • Numbers II to I9

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❶ Pose the Problem

MLR **Discussion Supports**
As students discuss the two questions, prompt students to add more detail in their explanations. Revoice students' ideas by restating a statement as a question in order to clarify. Think aloud by talking through thinking about filling ten frames while solving a related problem. Model detailing steps, describing and justifying reasoning and questioning strategies.

ETP **Pose Purposeful Questions**
- How can a ten-frame help you determine the number of counters?
- What can we do with the counters that are not in the ten-frame?

❷ Develop the Math

Choose the option that best meets your instructional goals.

MLR **Three Reads Routine**

❸ Bring It Together

ETP **Elicit Evidence of Student Thinking**
- How can you determine if a number is a teen number?

Key Takeaways
- Teen numbers are composed of 1 group of ten and some ones.
- Teen numbers have a group of ten and some ones.

Work Together

Encourage students to look for one group of ten and some ones to determine the number of counters.

🚩 **Common Misconception** Students may think that to show a teen number the top ten-frame must be filled with 10 counters and the bottom ten-frame showing some ones. Be sure students understand that either ten-frame can be filled to represent a ten and the accompanying ones can be shown in the other ten-frame.

LOM **Language of Math**
Add the vocabulary cards: *group of ten*, *teen number*, and *ten-frame* to the math word wall. Have half the class hold up 10 fingers. Have the other half hold up 1, 2, 3, 4, 5, 6, 7, 8, or 9 fingers and find a partner with a group of ten. Then have students say their teen number. Repeat as necessary and discuss.

Activity-Based Exploration

Students explore the structure of teen numbers.

Materials: *Number Cards 11–19* Teaching Resource (1 set per student-group), *Double Ten-Frames* Teaching Resource (1 per student-group), crayons and counters or other counting manipulatives, as needed.

Directions: Student-groups choose one number card, then work together to show the number in the ten-frames.

ETP **Support Productive Struggle**

Have students repeat the activity two or three more times with different numbers, noticing patterns as they model the numbers. As students work, ask them to reflect on what they are noticing.

- What are you noticing about all the numbers you are showing in the ten-frames?
- If you filled the top ten-frame completely, how many counters would be on it? How many would be on the bottom ten-frame?

Activity Debrief: Bring students together again to share their work and their insights.
- What do you notice about the way the ten-frames are filled?
- What is the same among all the numbers that you showed? What is different?

Math is... **Patterns**

- What patterns do you notice in the numbers you modeled?

Record students' observations to reflect on during Bring It Together, noting terms such as *group of ten, ones, teen numbers,* and *ten-frame.*

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

How can you determine the number of counters?

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

Guided Exploration

Students think about the structure of teen numbers using ten-frames.

👥 You may want to provide students with counters and the *Double Ten-Frames* Teaching Resource so they can work through the examples in the lesson.

**ETP** **Use and Connect Mathematical Representations**

- How many counters are in each ten-frame?
- Why is it helpful to fill one ten-frame?
- Why can you think of the number 18 as 1 group of ten and 8 ones?
- **Think About It:** Why is it helpful to think of 10 ones as 1 ten?

Math is... **Patterns**

- What patterns do you notice in teen numbers?

Help students make the connection between place value and teen numbers as they work through the examples in the lesson. If students don't notice on their own, draw their attention to the leading 1 in the teen numbers which means 1 ten. Then discuss the ones.

Discuss how some teen numbers (15, 18, and so on) have "teen" in their name, but others (11, 12) do not.
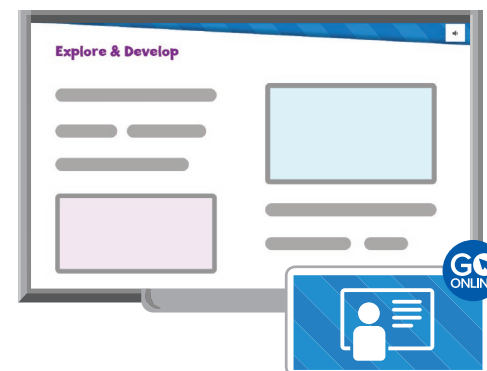
EL **English Learner Scaffolds**

Entering/Emerging Use manipulatives to explain some ones. Write the number 14. Fill a double ten-frame with 14 counters. Point to the group of ten. Say This is 10. Underline the "1" in 14. Then say These are some ones. Underline the "4." Repeat with another number of counters and write the number. Point to the group of 10 and then the ones and ask Are these counters or those counters some ones?

Developing/Expanding Use manipulatives to explain some ones. Write the number 14. Fill a double ten-frame with 14 counters. Point to the group of ten. Say This is 10. Underline the "1" in 14. Then say These are some ones. Underline the "4." Repeat with another number of counters and write the number. Point to the group of 10 and then the ones and ask Which are some ones?
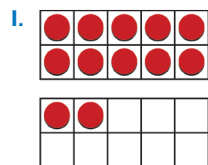
Bridging/Reaching Ask students to present some ones by providing them with more than 10 counters and a double ten-frame. Make sure they use the term some ones.
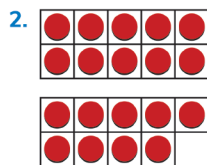
On My Own

MATH REPLAY | GO ONLINE

Name _____

How many counters? Write the numbers.

1.
   __1__ group of ten and
   __2__ ones is __12__ .

2.
   __1__ group of ten and
   __9__ ones is __19__ .

How can you show the number? Draw counters on the ten-frames. Write the numbers.

3. 17
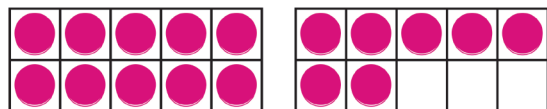
__1__ group of ten and __7__ ones is __17__ .

Unit 3 • Place Value   65

4. **Error Analysis** Ella draws counters on ten-frames to show 14. Draw or cross out counters to help Ella fix her mistake.
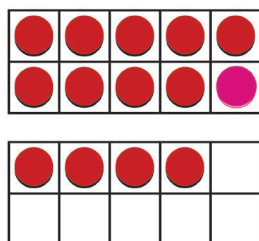
5. **Extend Your Thinking** Circle all the teen numbers. Explain your thinking.
   5   10   ⑬   ⑲

   Sample answer: 13 and 19 are teen numbers because they each have 1 group of ten and some ones. 5 does not have a group of ten, and 10 does not have any ones.

🔵 **Reflect**

How can you make teen numbers?
Answers may vary.

Math is... ◀ **Mindset**
What did you like about math today?

66 **Lesson 1** • Numbers 11 to 19

Practice

ETP **Build Fluency from Understanding**

⚠️ **Common Error: Exercises 3–4** Some students may call the top ten-frame a group of 10 when they have not drawn 10 counters in it.

Practice Item Analysis

Item	DOK	Rigor
1–2	1	Conceptual Understanding
3–4	2	Conceptual Understanding
5	3	Application
6	2	Conceptual Understanding

🔵 Reflect

Students complete the Reflect question.
- How can you make teen numbers?

Ask students to share their reflections with their classmates.

Math is... ◀ **Mindset**
- What did you like about Math today?

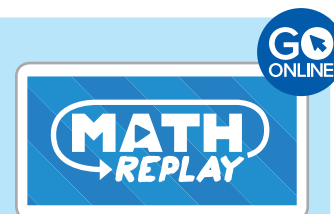**SEL** **Students reflect on how they practiced self-awareness.**

Learning Targets

Ask students to reflect on the Learning Targets of the lesson.
- I can make numbers 11 to 19 using a ten and some ones.
- I can explain that teen numbers are made of one ten and some ones.

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	2	Count tens and ones up to 19	1.NBT.B.2.a, 1.NBT.B.2.b
2	2	Count tens and ones up to 19	1.NBT.B.2.a, 1.NBT.B.2.b
3	3	Understand 2-digit numbers to 19	1.NBT.B.2.a, 1.NBT.B.2.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 3-1

Exit Ticket

Name _____

1. How many? Write the numbers.

___1___ ten and ___4___ ones is ___14___.

2. Abi has 17 berries. Which ten-frames show how many?

A.   B.   C.

3. Iva has 8 stickers. Jay has 10 stickers. They use all the stickers on a poster. How many stickers do they use?

___18___ stickers

Reflect On Your Learning

👎 👍 👍

Assessment Resource Book **33**

R | SMALL GROUP

Reinforce Understanding

Chosen Ones

Work with students in pairs. Provide students with double ten-frames. Students fill the entire first ten-frame to show one group of ten. Choose a number card 1–9. Students fill in the second ten-frame to show how many ones. Students explain the two-digit number they made. If students are counting by ones, explain that teen numbers have one group of ten and some ones. Repeat with all number cards.

B | WORKSTATIONS

Build Proficiency

Practice It! Game Station

Tens and Some Ones Task Cards

Students practice representing numbers from 11 to 19 in ten-frames.

GO ONLINE

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

- Model Tens and Ones (11–19)
- Combine Tens and Ones (11–19)
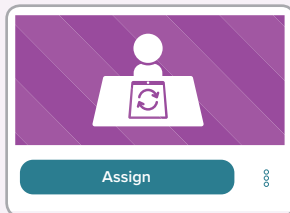
Assign

GO ONLINE

Interactive Additional Practice

Assign the digital version of the Student Practice Book.

Assign

INDEPENDENT WORK
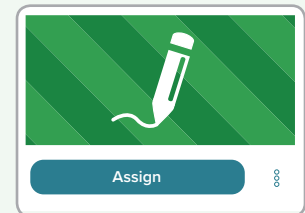
Differentiation Resource Book, p. 11

Lesson 3-1 • Reinforce Understanding
Numbers 11 to 19

Name _____

Review

You can show 10 ones as 1 group of ten.

1 group of ten   3 ones   13
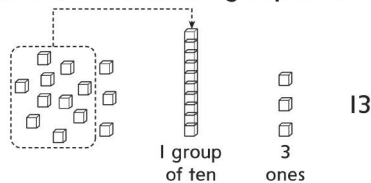
Teen numbers have 1 group of ten and some ones.

How many groups of ten and how many ones? Write the numbers.

1. __1__ group of ten and __6__ ones is __16__.

2. __1__ group of ten and __1__ one is __11__.

3. Draw blocks to show 17. Write the number.
Drawing should show 17 blocks.

__1__ group of ten and __7__ ones is __17__.

Differentiation Resource Book

INDEPENDENT WORK

Student Practice Book, pp. 11–12

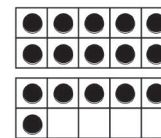Lesson 3-1
Additional Practice

Name _____

Review

You can use ten and some ones to make numbers 11 to 19. Numbers with one ten and some ones are *teen numbers*.
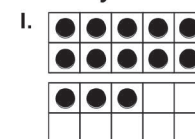
The top ten-frame shows 1 group of ten. The bottom ten-frame shows 6 ones.
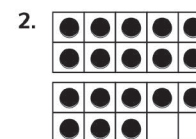
1 group of ten and 6 ones is 16.

How many counters?

1. __1__ group of ten and __3__ ones is __13__.

2. __1__ group of ten and __8__ ones is __18__.

Student Practice Book

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with adding numbers from 1 to 9.

Assign

Use It! Application Station
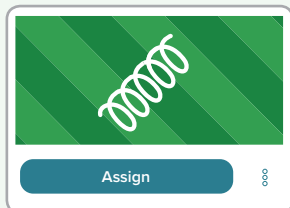
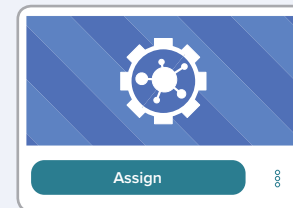Counting Notes Students count the number of notes in music.

Spiral Review

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

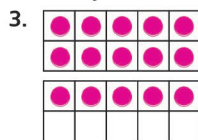Assign

Websketch Exploration

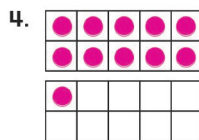Assign a websketch exploration to apply skills and extend thinking.

Assign

Student Practice Book, pp. 11–12

Draw counters on the ten-frames to show how many. Write the number.

3.

1 group of ten and 5 ones is __15__.

4.

1 group of ten and 1 one is __11__.

5. There are 10 flowers. Lee adds more flowers to make a dozen, which is 12. Are there a teen number of flowers? Circle Yes or No.

(Yes)　　No

6. There are 6 dogs at a park. A dog walker brings 3 more dogs. Now there are 9 dogs. Are there a teen number of dogs? Circle Yes or No. Explain your thinking.

Yes　　(No)

Sample answer: Nine is not a teen number because it has no tens. It only has some ones.

Math @ Home Activity

Create a game for the teen numbers. On a set of cards, write the numbers 11–19. Cut the last two sections off each of two egg cartons, or draw two ten-frames on a sheet of paper. Have your child draw a card, and then have him or her show the teen number using dry beans or cereal. Repeat with other teen numbers.

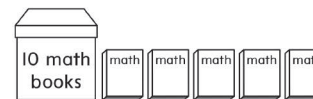Student Practice Book

Differentiation Resource Book, p. 12
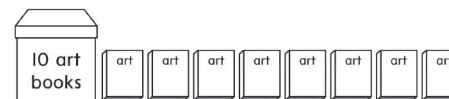
Lesson 3-1 • Extend Thinking

Numbers 11 to 19

Name _____

The tutor keeps sets of 10 books in a box. Fill in the number of his books.

1. __15__ math books

10 math books | math | math | math | math | math

2. __18__ art books

10 art books | art | art | art | art | art | art | art | art

3. __12__ science books

10 science books | science | science

4. The tutor has one more reading book than science books. Does he have more reading books or math books? Explain you thinking.

The tutor has more math books. He has 13 reading books, and 15 math books are more than 13.

Differentiation Resource Book

Math Probe

Unit 3

Show the Value of the Digit: Student Interview
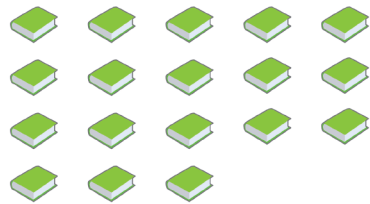
CHERYL TOBEY MATH PROBES

Name

Card 1   Twelve Shoes

12

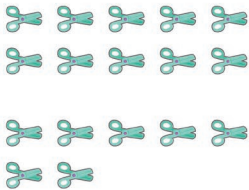Students circle any 2 shoes.

Card 2   Eighteen Books

18

Students circle any 10 books.

Unit 3 • Place Value   67

Card 3   Seventeen Scissors

17

Students circle one group of 7 and one group of 10 scissors.

Reflect On Your Learning

68   Math Probe • Show the Value of the Digit: Student Interview

Analyze The Probe ✓ Formative Assessment

Directions for Card 1
- There are twelve shoes in this picture. Write the number twelve on the line.
- If the student writes a number other than 12, correct it, and explain how to write twelve. Give the child a colored pencil and point to the digit in the ones place.
- What is this digit?
- Continue to point to the digit in the ones place.
- Use your colored pencil to circle shoes to show what this digit in the number means.

Directions for Card 2
- There are eighteen books in this picture. Write the number eighteen on the line.
- If the student writes a number other than 18, correct it, and explain how to write eighteen. Give the child a colored pencil and point to the digit in the tens place.
- What is this digit?
- Record the child's response. Continue to point at the digit in the tens place.
- Use your colored pencil to circle books to show what this digit in the number eighteen means.

Directions for Card 3
- There are seventeen scissors in this picture. Write the number seventeen on the line.
- If the student writes a number other than 17, correct it, and explain how to write seventeen. Give the child a colored pencil and point to the digit in the ones place.
- What is this digit?
- Record the child's response. Continue to point at the digit in the ones place.
- Use your colored pencil to circle scissors to show what this digit in the number seventeen means.
- Give the child a different colored pencil and point to the digit in the tens place.

Targeted Concept   Students identify the value of a digit in a 2-digit number. Use the cards and prompts to interview students. Record their responses.

⚠ **Targeted Misconceptions**   Some students who can count and identify numbers still have difficulty with positional knowledge and digit correspondence. For example, they may think that the digit 1 always has a value of 1—even when it is in the tens place.
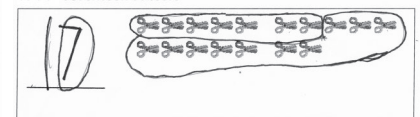
Authentic Student Work
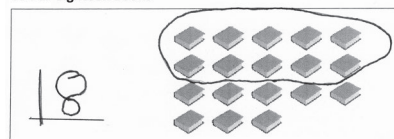Below are examples of correct student work and explanations.

Sample A

Card 1. **Twelve Shoes**

Card 3. **Seventeen Scissors**

Card 2. **Eighteen Books**

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
Incorrectly writes 12, 18, and/or 17 for Cards 1, 2, and 3, respectively	has difficulty writing a 2-digit number when hearing it read aloud.	Card I. **Twelve Shoes**
Circles a number of items other than two for Card 1 and seven for Card 3.	has difficulty connecting a numeric representation of a number less than 10 with a pictorial count of the number, or makes a mistake counting.	Card I. **Twelve Shoes**
For Cards 2 and 3, circles one book or one pair of scissors instead of ten for the tens-place question.	does not understand that the digit 1 has a value of ten when it is located in the tens place.	Card 2. **Eighteen Books**
For Card 3, circles the same scissors in both groups, or leaves some scissors un-circled after responding to the questions.	has difficulty decomposing a 2-digit number into tens and ones; OR has difficulty relating a numeric representation with pictorial representations of the tens and ones; OR makes mistakes counting.	Card 3. **Seventeen Scissors**

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 activities in Lessons 2-2 and 2-3.
- Revisit activities and visual images of ten-frames to help students interpret the value of digits in a number.
- Ask students place value questions that go beyond "which digit is in the ____ place?" For example, ask questions such as these: "How many tens are there in 72?" "What is the value of 5 in the number 54?"
- Use concrete materials such as connecting cubes, ten-frames, and counters to represent 2-digit numbers in different ways and to build skills and strategies for counting.

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.

Understand Tens

Learning Targets

- I can show and count tens.
- I can explain that 10 ones can be grouped as 1 ten.

Standards ◇ **Major** △ **Supporting** ○ **Additional**

Content

◇ **1.NBT.B.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

a 10 can be thought of as a bundle of ten ones — called a "ten."

c The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

Math Practices and Processes

MP4 Model with mathematics.

Vocabulary

Math Terms	Academic Terms
ones	discuss
tens	model

Materials

The materials may be for any part of the lesson.

- connecting cubes
- *Ten-Frames* Teaching Resource

Focus

Content Objective	Language Objectives	SEL Objective
• Students understand that ten ones can be grouped as one ten.	• Students use same to explain that ones can be grouped as one ten. • To cultivate conversation, ELs participate in MLR4: Information Gap.	• Students demonstrate self-awareness of personal strength and areas of challenges in mathematics.

Coherence

Previous	Now	Next
• Students composed and decomposed numbers up to 20 (Grade K). • Students made 2-digit numbers 11 to 19 as one group of ten and some ones (Unit 3).	• Students count groups of 10 and represent them with a 2-digit number. • Students group ones into tens to make them easier to count.	• Students compare 2-digit numbers (Unit 3). • Students identify patterns on hundred charts when skip counting by fives, tens, and hundreds (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding of 2-digit numbers by recognizing that ten ones can be grouped as one ten.	• Students use these number sense skills to count groups of ten and represent them with a 2-digit number. *Procedural Skill and Fluency is not a targeted element of rigor for this standard.*	• Students apply these skills to real-world problem situations. *Application is not a targeted element of rigor for this standard.*

GO ONLINE

Number Routine
Find the Pattern, Make a Pattern ⏱ 5–7 min

Build Fluency Students build algebraic thinking as they identify the pattern then create their own. Show students the pattern with missing numbers. Discuss rules for this pattern. Reveal the missing numbers after students say them. Have students create a new pattern that follows the same rule.

These prompts encourage students to talk about their reasoning:

- How did you identify the pattern?
- How did you create a new sequence?
- How do you know your sequence shows the same pattern as the original sequence?

Purpose Students should notice that there are unbundled and bundled balloons.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip You may want to give students a few seconds to think about this independently before having them discuss their thoughts with a partner. Then have volunteers from the class share their thoughts.

ETP **Pose Purposeful Questions**

The questions that follow can be asked in any order. They are meant to help advance students' thinking about groups of ten and are based on possible comments and questions that students may make during the share out.

- Why do you think some balloons are bundled and some are not?
- How might you bundle the ungrouped balloons?
- Why might you bundle only some of the ungrouped balloons together?
- How did you decide how many of the ungrouped balloons to bundle?

Math is... Mindset

- How can you use what you already know?

SEL **Self Awareness: Accurate Self-Perception**
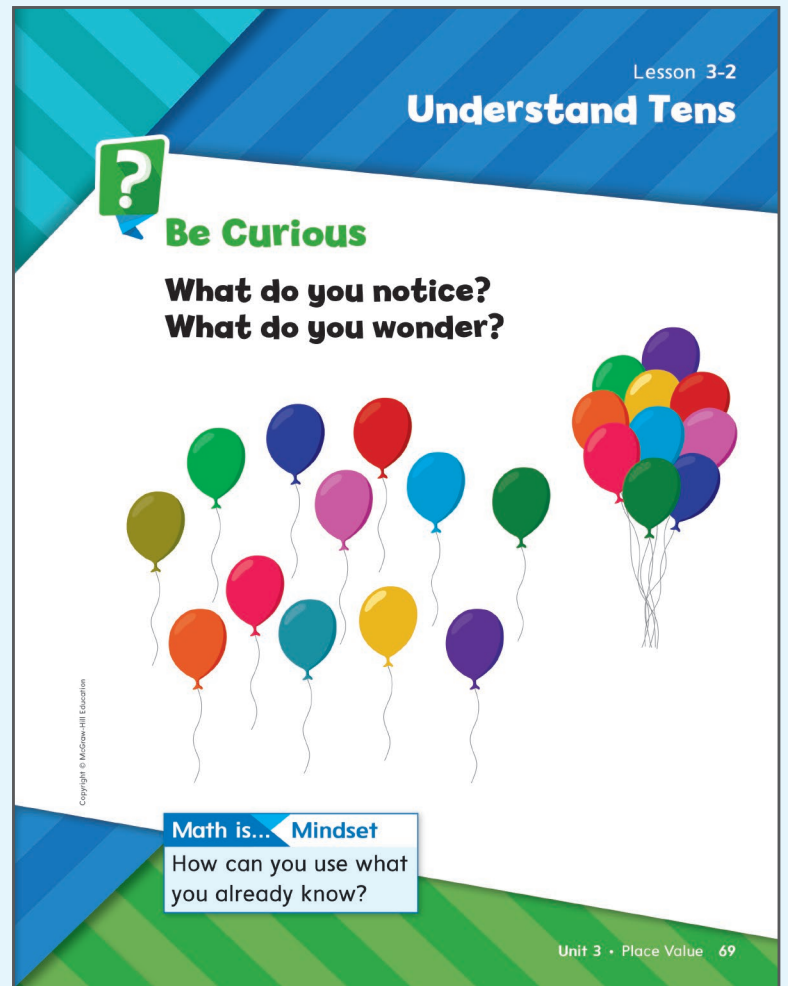
As students begin to think about bundling balloons to create tens in the Notice and Wonder, encourage them to make connections to concepts they are more familiar or comfortable with, such as using ten-frames to show tens and some ones in teen numbers. They can also use more familiar concepts to check their answers. As students continue to bundle ones to make tens, differentiae instruction to provide opportuniiities for students to experience success and gratification as well as to encounter appropriate amounts of productive struggle.

Transition to Explore & Develop

Students are thinking about groups of tens as they relate to the numbers 10, 20, 30, 40, 50, 60, 70, 80, and 90.

ETP **Establish Goals to Focus Learning**

- How can we group objects to determine how many?

Learn

How can you count the connecting cubes?
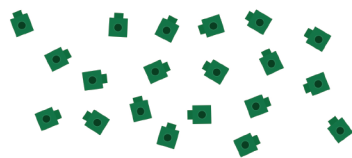
You can make groups of 10 cubes.

Math is... **Modeling**
How can connecting the cubes help you count?

10 ones is the same as 1 ten.

2 tens and 0 ones is 20.

You can put together 10 ones to make 1 ten.

🔵 Work Together

What number has 8 tens and 0 ones?
Use connecting cubes to show the number.

8 tens and 0 ones is __80__.

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❶ Pose the Problem

MLR **Information Gap**

Give pairs counters and numeral cards (23, 24, 25). One partner selects and displays one numeral card and the other partner identifies and groups the correct number of counters (by 10). Partners check groupings to confirm the number of counters matches the numeral card shown.

ETP **Pose Purposeful Questions**
- What strategy can you use to count cubes?
- What can we do with the connecting cubes to help count them?

❷ Develop the Math

Choose the option that best meets your instructional goals.

❸ Bring It Together

ETP **Elicit Evidence of Student Thinking**
- Why are 10 ones the same as one ten?
- How does putting objects in groups of ten help you determine how many?

Key Takeaways
- 10 ones can be represented as 1 group of ten.
- 10 ones can be shown as 1 group of ten.

Work Together

Encourage students to show the problem with connecting cubes to determine what number has 8 tens and 0 ones.

⚠ Common Misconception Students may think they should use the number 10 when writing a numeral to represent a given number of tens. For example, a student may write 810 instead of 80 to represent a group of 8 tens and zero ones. Guide students to understand that the 8 in 80 represents the tens, and the 0 in 80 represents the ones.

LOM **Language of Math**

Have students draw to show tens and ones. Discuss their drawings to help students reinforce the vocabulary.

Activity-Based Exploration

Students count 30 connecting cubes two different ways. They notice that they can group the cubes as tens.

Materials: connecting cubes (30 per student-group), *Ten-Frames* Teaching Resource (1 per student-group)

Directions: Student-groups work to count their connecting cubes two different ways and record what they notice. Students should look for ways to group the cubes to help them count.

ETP **Implement Tasks That Promote Reasoning and Problem Solving**

As students work, check on their thinking.

- How can you show how many?
- How did you count the cubes?
- What do you notice when you use ten-frames?
- Is there a way to connect the cubes to help you count them?

Activity Debrief: Bring the class together and have student-groups explain how they counted and showed how many. Look for students who grouped their cubes by tens, linking them or using the ten-frame.

- How can grouping the cubes help you count?
- Are 10 ones the same as 1 ten? Explain how you know.
- What other numbers could you count by grouping them into tens?

Math is... **Modeling**

- How can connecting the cubes help you count?

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

- How can you count the connecting cubes?

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

Guided Exploration

Students bundle objects in groups of ten to make it more efficient to count the objects.

ETP **Use and Connect Mathematical Representations**

- What are some ways you know to count other than by 1s?
- Why is 1 group of ten called a 10?

Discuss why a group of 10 is called one 10. There are 10 cubes in the group. A ten is made up of 10 ones.

- How can we determine whether or not we can make another group of 10?
- **Think About It:** Why is it helpful to make another group of 10?
- How do we know that 2 tens and 0 ones is 20?
- How does grouping objects as 10s help us count them?

Have students make groups of 10 with connecting cubes and decide how many cubes they have. Encourage students to make one, two, three, four, five, six, seven, eight, and nine groups of 10.

Math is... **Modeling**

- How can connecting the cubes help you count?

Entering/Emerging Support students in understanding the same as by drawing two equal circles on the board. Say This circle is the same as this circle. Then draw two different sized circles and say This circle is not the same as this circle. To confirm comprehension, draw new equal and different sized shapes and ask, Is this _____ the same as this _____?

Developing/Expanding Support students in understanding the same as by drawing two equal sized and two different sized circles. Point to the different circles and say either This circle is the same as this circle. or This circle isn't the same as this circle. Have students do the same and describe their shapes with the frame This [circle] _____ as this one. I know because _____ .

Bridging/Reaching Ask students to use the same as by first drawing and then talking about two shapes of equal size and two that are different sizes. Support with relevant language as needed.
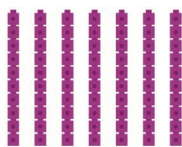
On My Own

MATH REPLAY | GO ONLINE

Name _____

How many groups of 10? Write the numbers.

1.

__3__ tens and

__0__ ones is __30__.

2.

__7__ tens and

__0__ ones is __70__.

How many groups of ten? Use cubes to show the tens. Then write the number of tens and ones.

3. 90

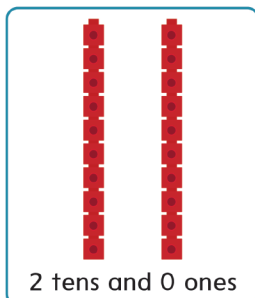__9__ tens and

__0__ ones

4. 40

__4__ tens and

__0__ ones

5. STEM Connection Jin sorts his dinosaur toys into groups of 10. He has 5 groups. How many dinosaur toys does Jin have?

__50__ dinosaur toys

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Unit 3 • Place Value **71**

6. Extend Your Thinking Do these show the same number? Explain your thinking.

| 0 tens and 20 ones | 2 tens and 0 ones |

Yes; Sample answer: I can group the 20 ones into 2 tens, so they both show the number 20.

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🕐 **Reflect**

How can you show and group tens?

Answers may vary.

Math is... Mindset
How can you use what you already know to help you learn more?

72 Lesson 2 • Understand Tens

Practice

ETP Build Fluency from Understanding

❗ **Common Error: Exercise 6** Students may think the answer is no if they think of tens as having 0 ones. Remind students that tens are made up of ones, the 0 ones refer to ones left over, not ones that are part of the tens.

Item Analysis

Item	DOK	Rigor
1–4	1	Conceptual Understanding
5	1	Application
6	2	Conceptual Understanding

🕐 Reflect

Students complete the Reflect question.
- How can you show and group tens?

Ask students to share their reflections with their classmates.

Math is... Mindset
- How have you used what you already know to help you learn more?

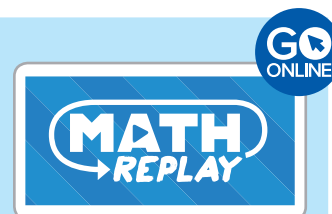**SEL Students reflect on how they practiced self-awareness.**

Learning Targets
Ask students to reflect on the Learning Targets of the lesson.
- I can show and count tens.
- I can explain that 10 ones can be grouped as 1 ten.

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	2	Count groups of 10	1.NBT.B.2.a, 1.NBT.B.2.c
2	3	Count groups of 10	1.NBT.B.2.a, 1.NBT.B.2.c
3	3	Count groups of 10	1.NBT.B.2.c

📊 **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 🅑 or 🅔 activities
2 or 3	*Take Another Look* or any of the 🅑 activities
1 or fewer of 3	Small Group Intervention or any of the 🆁 activities

Key for Differentiation

🆁 Reinforce Understanding
🅑 Build Proficiency
🅔 Extend Thinking

Assessment

Assess

Assignment Details
Number of questions: **12**
Points possible: **20.00**

Instructions
You are about to start your assessment.
1. Make sure you have a good Internet connection before starting the test.
2. Do not use your browser's forward or back buttons while taking the test.

Start Assignment

Assess

Assign

Lesson **3-2**

Exit Ticket

Name _____

I. How many groups of 10? Write the numbers.

___**5**___ tens and ___**0**___ ones is ___**50**___.

2. Mark and Kim use connecting cubes to show a number. Mark shows 40 ones. Kim shows 4 tens. Do Mark and Kim show the same number?

Ⓐ Yes, 4 tens is equal to 40 ones.

B. No, 40 ones is greater than 4 tens.

3. Mr. Richards has 8 boxes of pencils. Each box has 10 pencils. How many pencils does Mr. Richards have?

___**80**___ pencils

Reflect On Your Learning

👎 ✋ 👍

34 Assessment Resource Book

R Reinforce Understanding

Grouping Tens

Work with students in pairs. Provide students with bags of connecting cubes unlinked (20, 30, 40, 50, 60, 70, 80, 90). Students empty the bags and work together to group the blocks into groups of ten. If students are making groups that do not have ten, suggest that they touch and count each block aloud. They then draw their groups and show how many tens they have. Repeat this process until they have completed all bags.

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

• Count to 50 by Tens
• Count to 100 by Tens
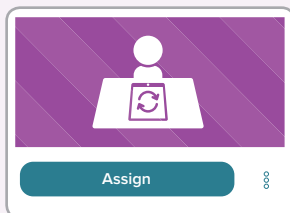
Assign
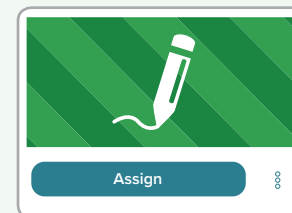
Differentiation Resource Book, p. 13

Lesson **3-2** • Reinforce Understanding
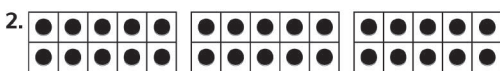#### Understand Tens

Name

Review
10 ones make I ten.
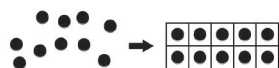
2 tens and 0 ones is 20.
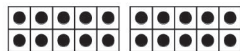
What is the number?
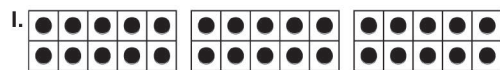
1. __3__ tens and __0__ ones is __30__.

2. __5__ tens and __0__ ones is __50__.

3. 7 tens and 0 ones is __70__.
4. 9 tens and 0 ones is __90__.
5. 4 tens and 0 ones is __40__.

Differentiation Resource Book

B Build Proficiency

Practice It! Game Station
Tens Race
Students practice naming groups of 10.

Interactive Additional Practice

Assign the digital version of the Student Practice Book.

Assign

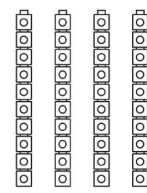**Student Practice Book, pp. 13–14**

Lesson **3-2**
Additional Practice
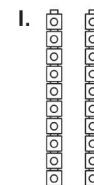
Name

Review
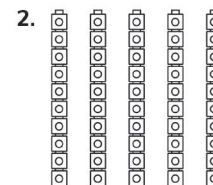**You can make groups of ten.**

4 tens and 0 ones is 40.

10 20 30 40

How many groups of 10? Write the numbers.

1. __2__ tens and
   __0__ ones is
   __20__.

2. __5__ tens and
   __0__ ones is
   __50__.

Student Practice Book

Own It! Digital Station

Assign the digital game to develop fluency with adding numbers from 1 to 9.

Assign

Spiral Review

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

Assign

E Extend Thinking
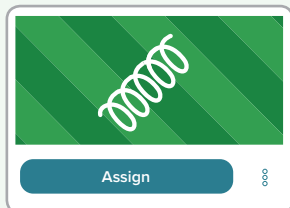
Use It! Application Station

Money Exchange One student acts as a store owner while the other acts as a customer. The customer chooses items to buy and the store owner checks the amount of money given. *The content of this card has concepts covered later in Lesson 3-3. You may want to assign this card to students ready to explorecovered later in this unit.*

Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.
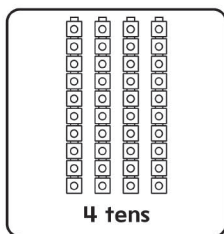
Assign
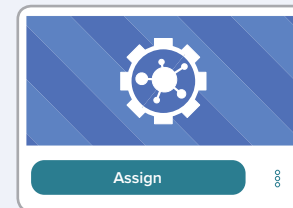
Student Practice Book, pp. 13–14

3. Kira has 3 boxes. She puts 10 books in each box. How many books does she have?

___30___ books

4. A teacher puts students into groups of 10. If there are 7 groups of students, how many students are there?

___70___ students

5. Do these show the same number? Circle *Yes* or *No*. Explain your thinking.

30 ones   **4 tens**
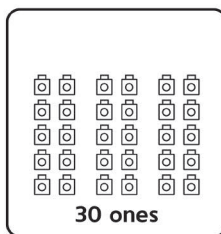
Yes   (No)

Sample answer: The first group has 3 tens and the second group has 4 tens, so they do not show the same number.

Math @ Home Activity
Provide opportunities for your child to identify tens. Using string and beads or macaroni, work with your child to create 9 strands with 10 beads or pieces of macaroni on each strand. Then have him or her place some strands in a row. Ask your child to count the number of tens and write the number they represent. Repeat the activity a few times with different numbers of strands.

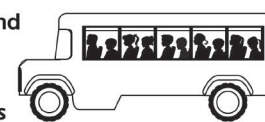Student Practice Book

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Differentiation Resource Book, p. 14

Lesson **3-2** • **Extend Thinking**

Understand Tens

Name _____

Review
This afternoon, the band is playing in the park. Players will ride to the park in buses. Each bus holds 10 students. Mr. Ray, the band director, needs your help to call for the buses.

1. There are 20 clarinet players. How many buses will you call for the clarinet players?

___2 buses___

2. There are 10 flute players. How many buses will you call for the flute players?

___1 bus___

3. There are 30 brass players. How many buses will you call for the brass players?

___3 buses___

4. At the park, Mr. Ray will ask you to help put the players equally on both sides of the stage. How could they sit? Explain your thinking.

Sample answer: I will put the clarinet and flute players, who are 3 groups of 10, on one side. The brass players, who are 3 groups of 10, will be on the other side.

Differentiation Resource Book

Represent Tens and Ones

Learning Targets

- I can show tens and ones.
- I can explain how to show tens and ones.

Standards ◇ **Major** △ **Supporting** ○ **Additional**

Content

◇ **1.NBT.B.2** Understand that the two digits of a two-digit number represent amounts of tens and ones.

Math Practices and Processes

MP7 Look for and make use of structure.

Vocabulary

Math Terms	Academic Terms
ones	begin
tens	explain

Materials

The materials may be for any part of the lesson.

- building blocks
- connecting cubes

Focus

Content Objective	Language Objectives	SEL Objective
• Students represent 2-digit numbers with some tens and some ones.	• Students use plurals to define 2-digit numbers with some tens and some ones. • To support sense-making, ELs participate in MLR2: Collect and Display.	• Students set a focused mathematical goal and make a plan for achieving that goal.

Coherence

Previous	Now	Next
• Students composed and decomposed numbers up to 20 (Grade K). • Students represented multiples of 10 as groups of ten using connecting cubes (Unit 3).	• Students represent the tens and ones of 2-digit numbers using physical manipulatives. • Students count groups of tens and ones and represent them with 2-digit numbers.	• Students compare 2-digit numbers (Unit 3). • Students represent 3-digit numbers (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding of 2-digit numbers being made up of tens and ones.	• Students use these skills to identify the tens and ones in 2-digit numbers.	• Students apply these skills to real-world problem situations. *Application is not a targeted element of rigor for this standard.*

Number Routine
What Did You See?

🕐 5–7 min

Build Fluency Students build number recognition and counting skills as they use their knowledge of ten-frames to find total amounts. Show students a card showing one or more ten-frames for a few seconds. Students then discuss what they think they saw and how they came to the prediction. After sharing ideas, the card is shown again and students compare their guesses with the answer.

These prompts encourage students to talk about their reasoning:

- What did you see on the first image?
- How did you determine the total number you saw?
- How did your prediction compare to the actual image?

Purpose Students should notice that there are beads on the left and strings on the right. They might wonder if the beads would fit on the string or how many beads would fit on each string.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip You may want to have students brainstorm individually before sharing out their ideas. They might draw on the work they have done throughout previous lessons with groups of ten as they notice and wonder about the image.

ETP **Pose Purposeful Questions**

The questions that follow can be asked in any order. They are meant to help advance students' thinking of groups of beads and are based on possible comments and questions that students may make during the share out.

- What are some different ways you could put the beads on the strings?
- How would you decide how many beads to put on each string?
- If you put 10 beads on the first three strings, what can you tell about the beads for the last string?

Math is... **Mindset**

- What is your goal for today?

SEL **Self-Regulation: Goal Setting**

Before students begin the Notice and Wonder, invite them to share or write down one mathematical goal they have for the day. Have students create a plan for how they will work toward achieving their goal. Encourage students to focus their goals around showing tens and ones.

Transition to Explore & Develop

Students are thinking about how to represent a 2-digit number by showing tens and ones.
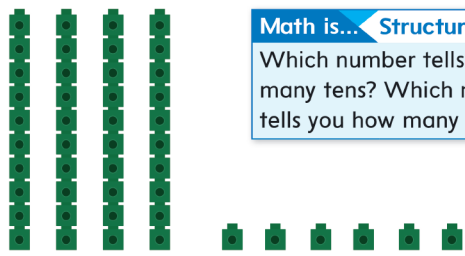
ETP **Establish Goals to Focus Learning**

- How can we show tens and ones?

Lesson 3-3
Represent Tens and Ones

? **Be Curious**

What do you notice?
What do you wonder?

Math is... Mindset
What is your goal for today?

Unit 3 • Place Value   73

? Be Curious
What do you notice?
What do you wonder?

Learn

How can you show how many tens and ones?

46

You can use cubes to show the tens and ones.

Math is... Structure
Which number tells you how many tens? Which number tells you how many ones?

4 tens and 6 ones is 46.

You can show a 2-digit number as tens and ones.

💬 Work Together

How can you show 73? Draw or use cubes. Then write the numbers.

___7___ tens and ___3___ ones is ___73___ .

74   Lesson 3 • Represent Tens and Ones

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❶ Pose the Problem

MLR Collect and Display
As students discuss the two questions, write key words and phrases you hear, such as ones and tens. Display the words and phrases for student reference and use the student generated expressions to help make connections between student language and math vocabulary. Update the collection with new understandings as the lesson progresses.

ETP Pose Purposeful Questions
- How can we determine the tens we need to show? The ones?
- What tools do you think we might use to solve this problem?

❷ Develop the Math

Choose the option that best meets your instructional goals.

❸ Bring It Together

ETP Elicit Evidence of Student Thinking
- How do you show a 2-digit number as tens and ones?
- In 24, what do the 2 and the 4 mean?

Key Takeaways
- A 2-digit number can be represented by groups of tens and some ones.
- You can show a number with groups of tens and some ones.

Work Together

Encourage students to use connecting cubes to show the number 73.

⚠️ **Common Misconception** Students may think that each digit in a 2-digit number is identifying a group of ones. For example, when representing the number 73, students may show a group of 7 and a group of 3. Work with students to understand that the first number in a 2-digit number identifies tens and the second number identifies ones.

LOM Language of Math
Have students use *tens* and *ones* in a sentence. Then have students discuss their sentences to help reinforce the vocabulary words.

Activity-Based Exploration

Students use 10-cube towers and single cubes to represent 2-digit numbers. They notice that 2-digit numbers are made up of groups of tens and some ones.

Materials: Before beginning this lesson, link building blocks or connecting cubes to make several 10-cube "towers." You may also choose to have students make the towers.

Directions: Give each student-group some towers and some single blocks. Write a 2-digit number on the board, and have each group build a city representing that number using towers and single blocks.

ETP Implement Tasks That Promote Reasoning and Problem Solving

Circulate and check on students' thinking.
- How did you show the number?
- How did you know how many towers, or tens, to use?
- How did you know how many single blocks, or ones, to use?

Students then make a new city using different numbers of towers and blocks, and write a number to represent it.

Activity Debrief: Have students share their work.
- How many tens are in your city? How many ones?
- How did you decide what number represents your city?
- Move your towers and blocks around. Do they still show the same number? How do you know?
- Do you think you can always show 2-digit numbers as tens and ones? Explain.

Have students revisit the Pose the Problem question and discuss answers.
- How can you show how many tens and ones?

Math is... Structure
- Which number tells you how many tens? Which number tells you how many ones?

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

Guided Exploration

Students represent a 2-digit number by showing groups of tens and some ones.

You might want to provide students with connecting cubes so they can model the examples in the lesson.

ETP Use and Connect Mathematical Representations
- **Think About It:** What tools can you use to show a number?
- How do you know which number to show with groups of ten?
- How do you know which number to show with ones?

Guide students as they transition from showing the number with connecting cubes to determining the number by looking at an arrangement of connecting cubes.
- How can you determine the number of tens and ones shown by a group of cubes?
- How could you use the same cubes to make a different number?

You might have students show 32 with their connecting cubes, then explore what happens when they add or remove single cubes or groups of cubes. Ask them to share the new numbers they showed with the cubes.

Math is... Structure
- Which number tells you how many tens? Which number tells you how many ones?

EL English Learner Scaffolds

Entering/Emerging Support students in understanding how many. Have some (but not all) students stand up. Ask How many students are standing? Then count out loud and say (Five) students are standing. Repeat with a new number of students. To check comprehension, select a new group and number of students to stand up and ask How many students are standing?

Developing/Expanding Support students in understanding how many. Have some (but not all) students stand up. Ask How many students are standing? Then count and say (Five) students are standing. Repeat with a new number of students. Select a new group and number of students to stand up and ask How many students are standing? Count as a class and prompt Students to answer: ___ students are standing.
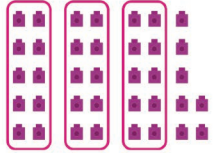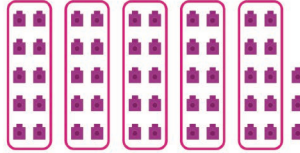
Bridging/Reaching Have all students stand up. Ask How many people are standing? After the students answer, ask one student to sit down. Then have a student who is standing ask How many people are standing? That student sits down after the class answers. Repeat until everyone is seated.
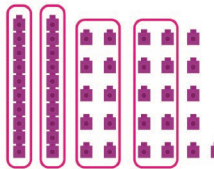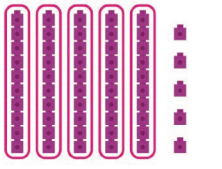
On My Own

Name _____

How many? Circle the tens. Then write numbers to show how many.

1.

___3___ tens and
___7___ ones is ___37___ .

2.

___5___ tens and
___3___ ones is ___53___ .

3.

___4___ tens and
___6___ ones is ___46___ .

4.
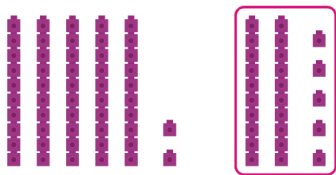
___5___ tens and
___5___ ones is ___55___ .

Unit 3 • Place Value   75

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5. Ida has 75 books. She puts 10 books on each shelf and has some left over. Write the tens and ones.

75 is ___7___ tens and ___5___ ones.

6. **Extend Your Thinking** Which cubes show 25? Circle the cubes. Write how many tens and ones.

25 is ___2___ tens and ___5___ ones.

🔄 Reflect

How can you show tens and ones?
Answers will vary.

Math is... Mindset
How have you worked to reach your goal today?

Practice

ETP **Build Fluency from Understanding**

❗ **Common Error: Exercises 1–3** Students may not circle the unlinked cubes because those do not identify them as tens. Remind students that any group of 10 cubes—linked or unlinked—can be thought of as a ten.

Item Analysis

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

🔄 Reflect

Students complete the Reflect question.
- How can you show tens and ones?

Ask students to share their reflections with their classmates.

Math is... Mindset
- How have you worked to reach your goal today?

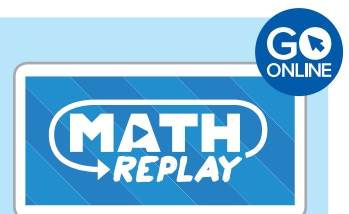**SEL** **Students reflect on how they practiced self-regulation.**

Learning Targets
Ask students to reflect on the Learning Targets of the lesson.
- I can show tens and ones.
- I can explain how to show tens and ones.

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

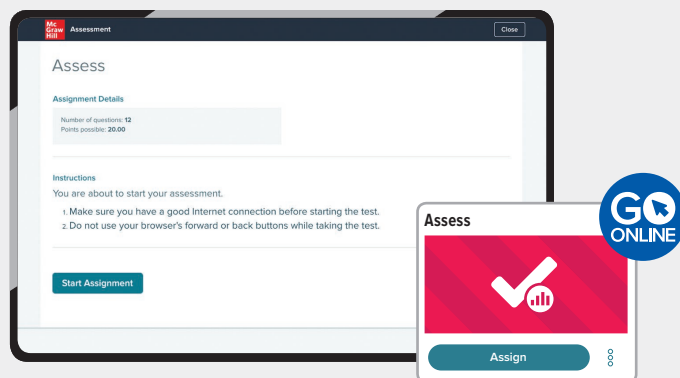| Item	DOK	Skill	Standard
1	2	Count tens and ones in 2-digit numbers	1.NBT.B.2
2	2	Count tens and ones in 2-digit numbers	1.NBT.B.2
3	3	Understand place value in 2-digit numbers	1.NBT.B.2

📊 **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 🅱 or 🄴 activities
2 or 3	*Take Another Look* or any of the 🅱 activities
1 or fewer of 3	Small Group Intervention or any of the 🆁 activities

Key for Differentiation

🆁 Reinforce Understanding
🅱 Build Proficiency
🄴 Extend Thinking

Lesson 3-3

Exit Ticket

Name _____

1. How can you show 26?

   A.   B.   C.   (D.)

2. Draw tens and ones to show the number 42.
   Check student drawings.

3. Look at the bracelets and beads. Each bracelet has 10 beads. Write the number of beads in all.

   __6__ tens and __8__ ones is __68__.

Reflect On Your Learning

👎 👍 👍

R Reinforce Understanding

SMALL GROUP

Break It Down

Work with students in pairs. Provide students with 2-digit number cards and connecting cubes. The first student chooses a card and uses connecting cubes to show the number. If students are only counting the cubes by ones, suggest they connect ten ones to make groups of 10 and some ones. The second student completes the sentence: _____ *tens and* _____ *ones is* _____ . Students compare their answers and switch roles.

B Build Proficiency

WORKSTATIONS

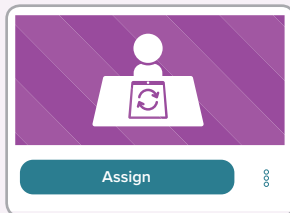### Practice It! Game Station
Tens and Ones Task Cards
Students practice building numbers with base-ten blocks.

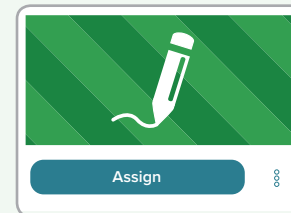**GO ONLINE**

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

• Model Tens and Ones (20–49)
• Model Tens and Ones (50–99)

Assign

Interactive Additional Practice

Assign the digital version of the Student Practice Book.

Assign

INDEPENDENT WORK

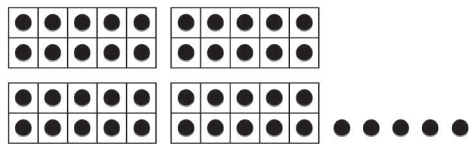**Differentiation Resource Book, p. 15**

Lesson **3-3** • Reinforce Understanding
Represent Tens and Ones

Name_____

Review
45 is 4 tens and 5 ones.

How many? Write the numbers.

1. __2__ tens and __3__ ones is __23__ .

2. __3__ tens and __8__ ones is __38__ .

3. __1__ ten and __6__ ones is __16__ .

Differentiation Resource Book

Student Practice Book, pp. 15–16
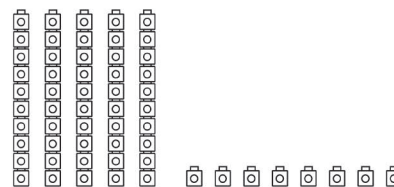
Lesson **3-3**
Additional Practice

Name_____

Review
You can use cubes to show a 2-digit number as tens and ones.

Saul has 58 marbles. He can use cubes to show 58 with tens and ones.

5 tens and 8 ones is 58.

How many? Circle the tens. Then write numbers to show how many.

1. __4__ tens and __4__ ones is __44__ .

Student Practice Book

Own It! Digital Station

Build Fluency Games

Assign the digital game to develop fluency with adding numbers from 1 to 9.

Assign

Spiral Review

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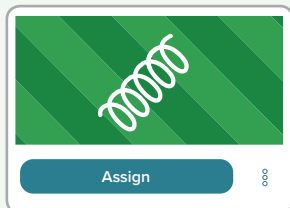
Assign

Use It! Application Station

Money Exchange One student acts as a store owner while the other acts as a customer. The customer chooses items to buy and the store owner checks the amount of money given.
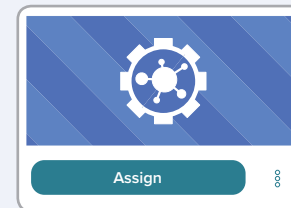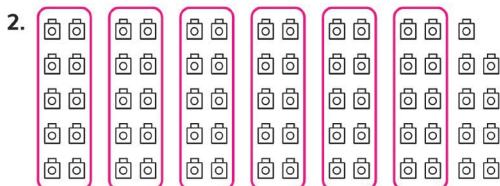
Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

Assign

Student Practice Book, pp. 15–16

How many? Circle the tens. Then write numbers to show how many.

2.

___6___ tens and ___9___ ones is ___69___.

3.
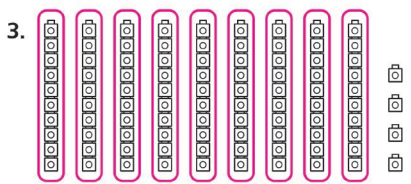
___9___ tens and ___4___ ones is ___94___.

4. A farmer sells bags of 10 apples. He has 8 full bags of apples and 7 apples left over. How can you write his apples as tens and ones?

___87___ apples

Math @ Home Activity

Using blank paper, draw and cut out single squares and strips of ten squares. Arrange a group of these tens and ones to show a number. Have your child point to each ten or one to count the number in the group. Then have your child write the number. Repeat the activity with different numbers.

Student Practice Book

Differentiation Resource Book, p. 16

Lesson **3-3** • **Extend Thinking**

Represent Tens and Ones

Name_____

Jamal and Nicole are making towers of coins. Use the values to find out who has more cents.

I dime = 10 cents   I penny = I cent

1. Jamal makes towers with 26 cents.

His towers with ___2___ dimes and ___6___ pennies have a value of 26 cents.

2. Nicole makes towers with 35 cents.

Her towers with ___3___ dimes and ___5___ pennies have a value of 35 cents.

3. Who has more cents? How could you show more than Jamal or Nicole? Explain your thinking.

Sample answer: Nicole has more cents. She has 3 tens and Jamal only has 2. I could build towers with 7 dimes and 2 pennies to show more. Seven tens is more than 3 tens.

Differentiation Resource Book

Represent 2-Digit Numbers

Learning Targets

- I can show 2-digit numbers with tens and ones.
- I can explain how to show 2-digit numbers with tens and ones.

Standards ◇ **Major** △ **Supporting** ○ **Additional**

Content
◇ **1.NBT.B.2** Understand that the two digits of a two-digit number represent amounts of tens and ones.

Math Practices and Processes
MP4 Model with mathematics.

Vocabulary

Math Terms	Academic Terms
ones	explain
place value	organize
tens	

Materials

The materials may be for any part of the lesson.

- connecting cubes
- *Place-Value Chart* Teaching Resource

Focus

Content Objective	Language Objectives	SEL Objective
• Students use place value to show 2-digit numbers.	• Students use can to explain showing 2-digit numbers with different tools and representations. • To optimize output, ELs participate in MLR4: Information Gap.	• Students practice drawing to describe the logic and reasoning used to make a mathematical decision.

Coherence

Previous	Now	Next
• Students represent a number of objects with a written numeral 0–20 (Grade K). • Students represented 2-digit numbers using base-ten blocks (Unit 3).	• Students represent 2-digit numbers using physical manipulatives.	• Students compare 2-digit numbers on a number line (Unit 3). • Students represent 3–digit numbers (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding of 2-digit numbers with different representations.	• Students use these skills with representing 2-digit numbers using different tools. *Procedural Skill and Fluency is not a targeted element of rigor for this standard.*	• Students apply these skills to real-world problem situations. *Application is not a targeted element of rigor for this standard.*

Number Routine
What Did You See?

GO ONLINE

🕐 5–7 min

Build Fluency Students build number recognition and counting skills as they use their knowledge of ten-frames to find total amounts. Show students a card showing one or more ten-frames for a few seconds. Students then discuss what they think they saw and how they came to the prediction. After sharing ideas, the card is shown again and students compare their guesses with the answer.

These prompts encourage students to talk about their reasoning:

- What did you see on the first image?
- How did you determine the total number you saw?
- How did your guess compare to the actual total?

Purpose Students should notice that each mailbox has a number and that the number contains two digits. Students should also notice that all numbers are from the same decade but the ones are different.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip You may want to invite students to add on to each other's ideas by asking the students to identify what is the same and what is different.

ETP **Pose Purposeful Questions**

The questions that follow can be asked in any order. They are meant to help advance students' understanding of how 2-digit numbers can be shown and are based on possible comments and questions that students may make during the share out.

- What do you notice about each number on the mailboxes?
- What numbers do you recognize?
- If there were more mailboxes below these, what numbers do you think would be on those mailboxes? How did you decide?

Math is... **Mindset**

- How can you show/explain your thinking?

SEL **Responsible Decision-Making: Logic and Reasoning**

As students work through the Notice and Wonder, have them write, draw, or speak to each of the steps of their logic and reasoning. This can help students understand and justify their thought processes as they analyze situations, choose appropriate tools/strategies/representations/methods, and identify solutions.

Transition to Explore & Develop

Ask questions that get students thinking about 2-digit numbers. If students bring up place value organically, bring that into the discussion, but the concept does not need to be discussed during this part of the lesson. Rather, students will be reminded of it in the Explore & Develop.

ETP **Establish Goals to Focus Learning**

- Let's think about tens and ones.
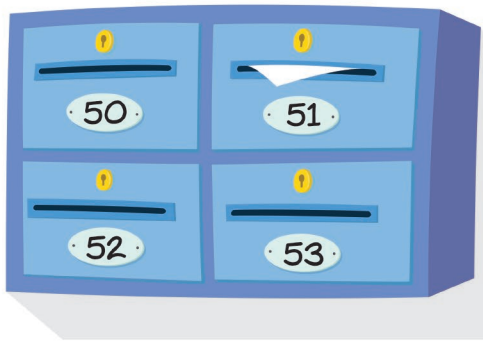
Lesson 3-4

Represent 2-Digit Numbers

❓ **Be Curious**

What do you notice?
What do you wonder?

50 51
52 53

Math is... **Mindset**
How can you show/explain your thinking?

Unit 3 • Place Value 77

❓ Be Curious

What do you notice?
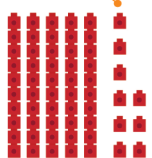**What do you wonder?**

50 51

Learn

How can you show a number with 5 tens and 9 ones?

_59_

You can show **place value** different ways.

| You can use connecting cubes. | You can use a **place-value chart**. | You can draw. |

tens	ones
5	9

5 tens and 9 ones is 59.

You can show the tens and ones of a number in different ways.

Math is... Modeling
How do the connecting cubes show the tens and ones?

🔍 Work Together

How can you use a place-value chart to show how many?
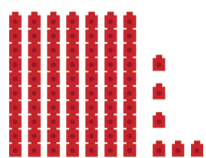
tens	ones
7	6

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❶ Pose the Problem

ETP Pose Purposeful Questions
- **Think About It:** What tools can you use to show numbers?

❷ Develop the Math

Choose the option that best meets your instructional goals.

MLR Information Gap
Give each pair a die and two sets of numeral cards 0–6. Partner A rolls the die once to reveal the ten and second time to reveal the one. Partner B places two cards in the correct place value position. Partners check if the cards are displayed correctly.

❸ Bring It Together

ETP Elicit Evidence of Student Thinking
- What are some ways we can show 2-digit numbers?

Key Takeaways
- In a 2-digit number, the digit in the tens place shows the amount of tens, and the digit in the ones place shows the amount of ones.
- In a number with two digits, the first digit shows the amount of tens. The second digit shows the amount of ones.

Work Together

Encourage students to write in the place-value chart to show the number of tens and ones shown by the connecting cubes.

⚠ Common Misconception Students may think that when recording a given number of tens and ones in a place-value chart, that the number of tens is written as a decade in the tens place. For example, students may record the number _70_ in the tens column, and _the number 6_ in the ones column, when showing 76. Help students understand that the tens column is identifying the number of tens, not the total value of the tens.

LOM Language of Math
Add the vocabulary card _place value_ to the math word wall. Have students draw tens and ones to show a 2-digit number. Discuss students' drawings having students use the words _place value, tens,_ and _ones_ to describe their work.

Activity-Based Exploration

Students explore the structure of 2-digit numbers through counting manipulatives and drawings.

Materials: connecting cubes or base-ten blocks and *Place-Value Chart* Teaching Resource (1 per student-group)

Before students begin their exploration, you may want to briefly discuss the parts of the Place-Value Chart. You may also explain how to use shorthand for base-ten blocks. A line represents a ten and a dot represents a one.

Directions: Display a 2-digit number. Student-groups show how many tens and ones in the number two different ways. They might represent it with connecting cubes, draw, or write the numeral on the place-value chart. Have students think about how to explain how many tens and ones make up the number.

ETP **Implement Tasks That Promote Reasoning and Problem Solving**

Repeat the activity with a new number, and encourage students to show the number different ways (if they used cubes and drawings last time, challenge them to use the place-value chart this time).

Activity Debrief: Have students share out their ideas.
- How did you show how many tens? How many ones?
- How was the way you showed tens different from how you showed ones? If your friend was having trouble describing the tens and ones in a 2-digit number, how would you help?
- Do the tens and ones change when you show them with cubes instead of a drawing? With the place-value chart?

Encourage students to explain why they chose how to represent the numbers certain ways.

Math is... **Modeling**
- How do the connecting cubes show the tens and ones?

Have students revisit the Pose the Problem question and discuss answers.
- How can you show a number with 5 tens and 9 ones?

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

Guided Exploration

Students show the number of tens and ones in a 2-digit number using connecting cubes, a place-value chart, and base-ten shorthand.

Math is... **Modeling**
- How do the connecting cubes show the tens and ones?

ETP **Use and Connect Mathematical Representations**

Students can draw short hand for base-ten blocks. A line represents a ten and a dot represents a one.

This may be the first time students see a place-value chart. A place-value chart is a tool that shows the digits in their place values. Help students make the connection between the place-value chart and numbers in standard form so that they see the value of using this tool.
- **Think About it:** How does the place-value chart help you show numbers?

Have students draw other numbers using base-ten shorthand and writing numbers in a place-value chart.
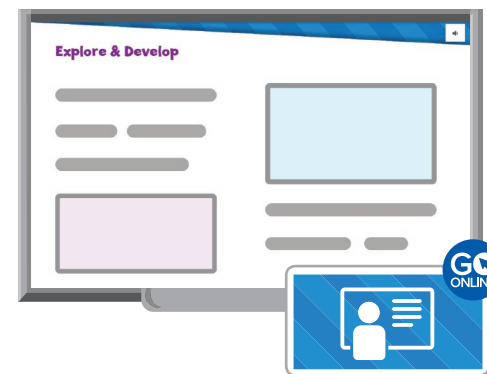
EL **English Learner Scaffolds**

Entering/Emerging Use manipulatives to support students in understanding different way. Stack 8 cubes into one column while saying Here are 8 cubes arranged one way. Then divide it into two columns. Say Here are 8 cubes arranged in a different way. To check comprehension, continue different configurations of the cubes and ask Is there a different way?

Developing/Expanding Use manipulatives to support students in understanding different way. Stack 8 cubes into one column while saying Here are 8 cubes arranged one way. Then divide it into two columns. Say Here are 8 cubes arranged in a different way. Have students do the same with the following sentence frame: Here are ___ cubes. Here are ___ cubes in a different way.

Bridging/Reaching Ask students to explain why it's helpful to show the tens and ones of a number in a different way. Support students with relevant language as needed.

On My Own

MATH REPLAY | GO ONLINE

Name _____

Write the number in the place-value chart.
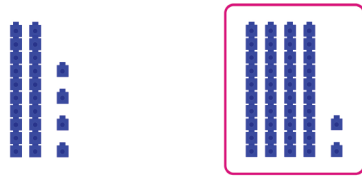
1.

tens	ones
5	7

2.

tens	ones
7	8

3. Which cubes show 42? Circle the cubes.
Write to show the tens and ones.

42 is ___4___ tens and ___2___ ones.

4. How can you show 4 tens and 0 ones? Draw to
show. Write the number in the place-value chart.

tens	ones
4	0

Extend Your Thinking Use the number 68 to answer
the questions.

5. What is the value of the 6?

___6___ tens or ___60___

6. What is the value of the 8?

___8___ ones or ___8___

🕐 **Reflect**

How can you show numbers with tens and ones?

Answers may vary.

Math is... Mindset
How has showing/explaining
your thinking been helpful?

Practice

ETP **Build Fluency from Understanding**

⚠ **Common Error: Exercises 1–2** Students may still miscount groups of
ten cubes as 1, resulting in answers of 12 and 15 for Exercises 1–2. Have
students count the groups of ten cubes first and write the digit in the
place-value chart, then repeat with the single cubes.

Item Analysis

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

🕐 Reflect

Students complete the Reflect question.
- How can you show numbers with tens and ones?

Ask students to share their reflections with their classmates.

Math is... Mindset
- How has showing/explaining your thinking been helpful?

SEL **Students reflect on how they practiced responsible
decision-making.**

Learning Targets
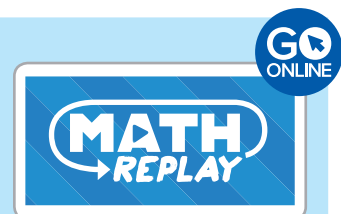Ask students to reflect on the Learning Targets and Focus Question of
the lesson.
- I can show 2-digit numbers with tens and ones.
- I can explain how to show 2-digit numbers with tens and ones.

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.

MATH REPLAY | **GO ONLINE**

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

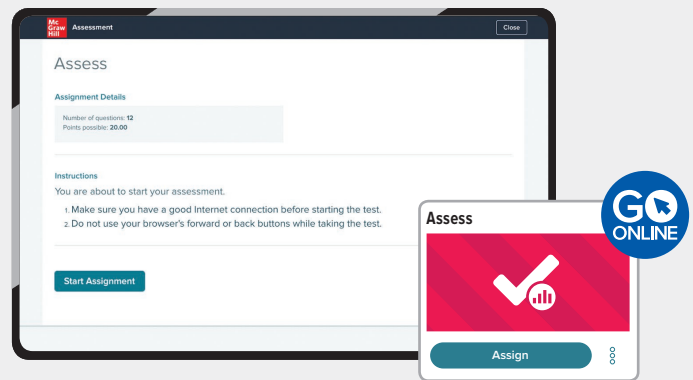| Item	DOK	Skill	Standard
1a	2	Count tens and ones in 2-digit numbers	1.NBT.B.2
1b	2	Understand place value in 2-digit numbers	1.NBT.B.2
2	2	Understand place value in 2-digit numbers	1.NBT.B.2
3	2	Count tens and ones and understand place value in 2-digit numbers	1.NBT.B.2

📊 **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

Assess

Assessment

Assess

Assignment Details
Number of questions: **12**
Points possible: **20.00**

Instructions
You are about to start your assessment.
1. Make sure you have a good Internet connection before starting the test.
2. Do not use your browser's forward or back buttons while taking the test.

Start Assignment

Assess

🔵 GO ONLINE

✓📊

Assign ⠿

Lesson **3-4**

Exit Ticket

Name _____

1a. Draw tens and ones to show 63. **Check student drawings.**

tens	ones
6	3

1b. Write the number 63 in the place-value chart.

2. Complete the sentences about the number 97.
The value of the 9 is ___9___ tens or ___90___.
The value of the 7 is ___7___ ones or ___7___.

3. Look at the connecting cubes.
Write the number in the place-value chart.
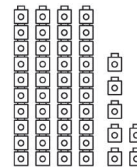
tens	ones
4	7

Reflect On Your Learning

👎 ✋ 👍

36 Assessment Resource Book

R Reinforce Understanding

Represent!

Work with students in pairs. Have one student choose a 2-digit number card. Students work together to represent the number using connecting cubes and then write the number in a place-value chart. If students are counting the cubes by ones, suggest they connect ten ones to make groups of 10 and write how many groups of 10 in the chart under the tens column. Repeat the process with the second student choosing a number.

B Build Proficiency

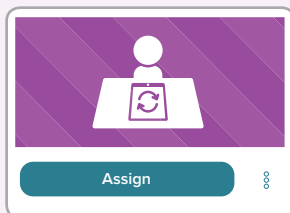### Practice It! Game Station
Show Numbers

Students practice representing numbers by using a place-value chart, base-ten blocks, and a number chart.
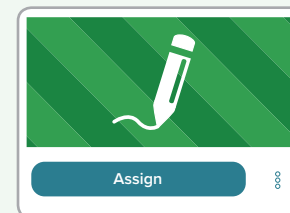
Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

- Group Ones into Tens and Ones (20–49)
- Group Tens and Ones (50–99)

Assign

Interactive Additional Practice

Assign the digital version of the Student Practice Book.

Assign

Differentiation Resource Book, p. 17

Lesson 3-4 • Reinforce Understanding
Represent 2-Digit Numbers

Name

Review

2 tens and 5 ones is 25.

tens	ones
2	5

How many tens? How many ones?

I.
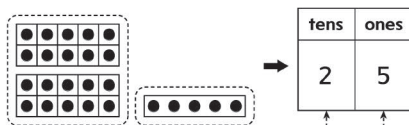
tens	ones
3	4

2. 97

tens	ones
9	7

3. 52

tens	ones
5	2

Differentiation Resource Book

Student Practice Book, pp. 17–18

Lesson 3-4
Additional Practice

Name

Review

You can show 2-digit numbers with tens and ones.

tens	ones
6	4
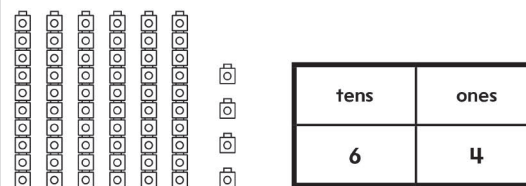
6 tens and 4 ones is 64.

I. Circle the cubes that show 33.
How many tens? How many ones?
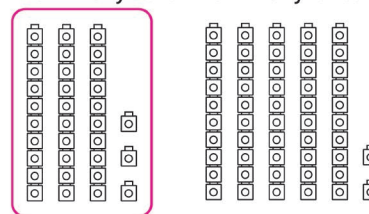
33 is ___3___ tens and ___3___ ones.

Student Practice Book

Own It! Digital Station

Build Fluency Games

Assign the digital game to develop fluency with adding numbers from 1 to 9.

Assign

Use It! Application Station

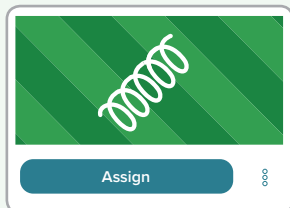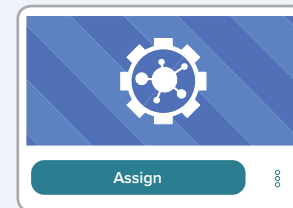**Counting Notes** Students count the number of notes in music.

Spiral Review

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

Assign

Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

Assign

Student Practice Book, pp. 17–18

Use the number 86 to answer the questions.

2. What is the value of the 8?

   __8__ tens or __80__

3. What is the value of the 6?

   __6__ ones or __6__

4. Is 86 a 2-digit number? Circle Yes or No.

   (Yes)   No

5. Ron uses cubes to show a number. How can you write his number in the place-value chart?

tens	ones
9	7

Math @ Home Activity
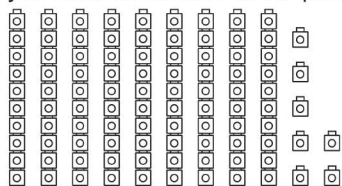
Work with your child to help him or her explain how to show 2-digit numbers with tens and ones. Write a 2-digit number at the top of a sheet of paper. Have your child draw cubes to show the number and complete this sentence: _____ is _____ tens and _____ ones.

Student Practice Book

Differentiation Resource Book, p. 18

Lesson **3-4** • Extend Thinking

Represent 2-Digit Numbers

Name_____

Match the group of letters with a mailbox. Write the 2-digit number missing from 1 mailbox.

= 10 letters   = 1 letter

1.

2.

3.

tens	ones
2	2

tens	ones
2	4

tens	ones
4	2

4. Which mailbox has the fewest letters? Explain.

Sample answer: The top mailbox has the fewest. The value of 2 tens is 20. The value of 2 ones is 2. Twenty-two is fewer than 42. It is also fewer than 24.

Differentiation Resource Book

Represent 2-Digit Numbers in Different Ways

Learning Targets
- I can show a number in different ways.
- I can explain more than one way to show the same number.

Vocabulary

Math Terms	Academic Terms
ones	discuss
tens	explain

Standards   ◇ Major   △ Supporting   ○ Additional

Content

◇ **1.NBT.B.2** Understand that the two digits of a two-digit number represent amounts of tens and ones.

Math Practices and Processes
MP4 Model with mathematics.

Materials

The materials may be for any part of the lesson.

- connecting cubes
- *Number Cards 0–120* Teaching Resource

Focus

Content Objective	Language Objective	SEL Objective
• Students can represent 2-digit numbers in different ways.	• Students use also to describe representing 2-digits numbers in different ways. • To cultivate conversation, ELs participate in MLR8: Discussion Supports.	• Students engage in respectful discourse with peers about various perspectives for approaching a mathematical challenge.

Coherence

Previous	Now	Next
• Students composed and decomposed numbers up to 20 (Grade K). • Students represented 2-digit numbers as tens and ones (Unit 3).	• Students represent 2-digit numbers using physical manipulatives. • Students decompose a 2-digit number in different ways.	• Students break apart addends to solve addition equations (Unit 4). • Students add tens and ones (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding of 2-digit numbers by decomposing them into different but equivalent groups of tens and ones.	• Students will use these skills with addition fluency as students are able to decompose numbers to add more efficiently. *Procedural Skill and Fluency is not a targeted element of rigor for this standard.*	• Students apply these skills to real-world problem situations. *Application is not a targeted element of rigor for this standard.*

Number Routine
What Did You See?

🕐 5–7 min

Build Fluency   Students build number recognition and counting skills as they use their knowledge of ten-frames to find total amounts. Show students a card showing one or more ten-frames for a few seconds. Students then discuss what they think they saw and how they came to the prediction. After sharing ideas, the card is shown again and students compare their guesses with the answer.

These prompts encourage students to talk about their reasoning:

- What did you see on the first image?
- How did you determine the total number you saw?
- How did your guess compare to the actual total?

Purpose Students should notice the same number of objects regardless of the packaging.

Notice & Wonder™

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

Teaching Tip You may want to have students do a Think-Pair-Share before discussing the image as a class. Partners can build off each other's observations and wonderings.

ETP Pose Purposeful Questions

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

- How could you arrange the apples in the tray to look the same as the apples in the bag?
- What is one way you could show the same number of apples in a different way?

Math is... Mindset

- How can you show that you understand your partner's ideas?

SEL Social Awareness: Develop Perspective

Encourage students to think about different ways to consider the Notice and Wonder. With a partner, have them share different tools/strategies/representations/methods they can use to determine how the apples are the same and how they are different. Invite students to consider and build off their partner's ideas.

Transition to Explore & Develop

Students are thinking about different ways to represent the same number.
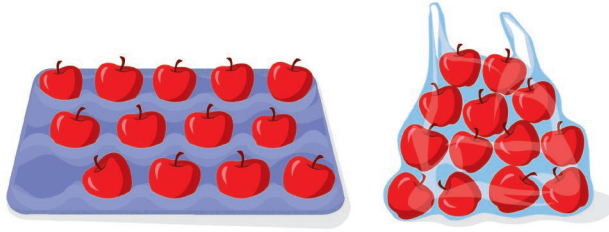
ETP Establish Goals to Focus Learning

- How can we show the same number in different ways?

Lesson 3-5

Represent 2-Digit Numbers in Different Ways

❓ **Be Curious**

**How are they the same?
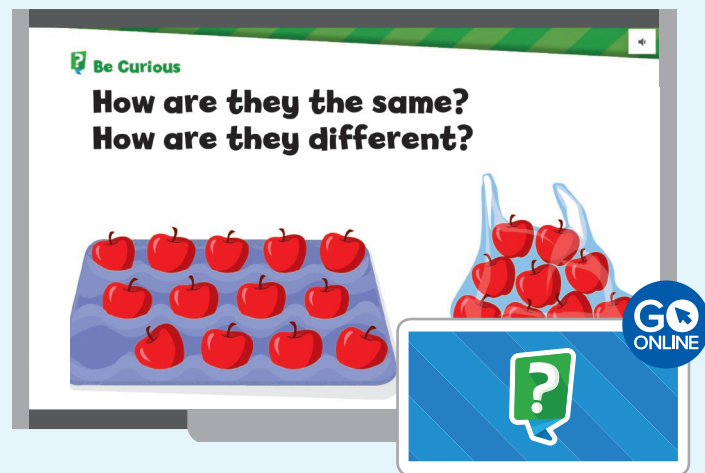How are they different?**

Copyright © McGraw-Hill Education
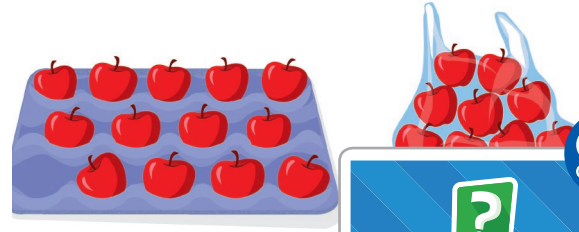
Math is... Mindset
How can you show that you understand your partner's ideas?

Unit 3 • Place Value 81

❓ Be Curious

**How are they the same?
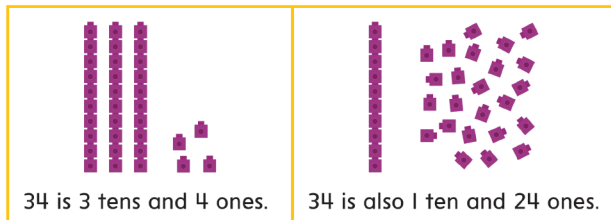How are they different?**

GO ONLINE

Learn

Grant shows a number with 1 ten and 24 ones.
Laila shows a number with 3 tens and 4 ones.

Do they both show the same number?

You can show the tens and ones.

Math is... **Explaining**
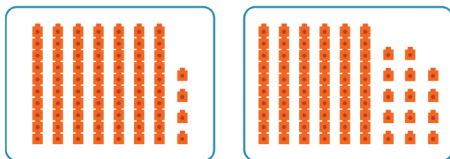How can you show the number?

34 is 3 tens and 4 ones. | 34 is also 1 ten and 24 ones.

You can show a number in different ways.

🔍 Work Together

Does each group show the same number?
How do you know? Write each number.

74   **74**

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❶ Pose the Problem

MLR **Discussion Supports**

As students discuss the three questions, prompt students to add more detail in their explanations. Revoice student ideas by restating a statement as a question in order to clarify.

ETP **Pose Purposeful Questions**
- What do the numbers in this problem mean?
- What is the problem asking us to do?
- What tools can we use to help solve this problem?

❷ Develop the Math

Choose the option that best meets your instructional goals.

❸ Bring It Together

ETP **Elicit Evidence of Student Thinking**
- How do you know you are showing the same number in different ways?
- **Think About It:** How are the cubes the same? How are they different?

Key Takeaways
- A 2-digit number can be represented in different ways, including a form with two digits (standard form) and a decomposed form (expanded form).
- A 2-digit number can be shown in different ways.

Work Together

Encourage students to circle groups of ten. Then determine what number the blocks represent.

⚠ Common Misconception Students may think that the greater the number of single cubes shown, the greater number of cubes in total. Have students count the total of cubes in each group to prove that the amounts are the same, regardless of how the cubes are grouped.

LOM **Language of Math**

Have students draw tens and ones for a 2-digit number in two different ways. Discuss how the same number can be shown with different tens and ones.

Activity-Based Exploration

Students show a 2-digit number using different numbers of tens and ones, and understand that a 2-digit number can be represented in different ways.

Materials: *Number Cards 0–120* Teaching Resource (numbers 31 or greater, 1 per student-group), connecting cubes

Directions: Student-groups work to show their number three different ways, using different numbers of tens and ones. They can draw or use connecting cubes.

ETP Implement Tasks That Promote Reasoning and Problem Solving

Activity Debrief: Student-groups compare their representations and discuss whether they showed the same number. Then have the student-groups share out and explain their representations in a class discussion. Ask:

- How many tens and ones did you show each time?
- Did you show the same number every time? How do you know?
- What is another way to show the tens and ones?

Encourage students to think about how their representations are the same as and different from one another.

Math is... Modeling

- How can you show the number?

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

- Do Grant and Laila show the same number?

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

Guided Exploration

Students represent numbers in different ways by using connecting cubes and drawing shorthand.

ETP Use and Connect Mathematical Representations

- How can you start grouping the 34 cubes to show groups of ten?
- As you make more groups of ten, how does the number of ones change?
- What patterns do you notice in the groups of ten and the ones?
- How do we know when we can't make any more groups of ten?
- Why do we draw tens as sticks and ones as dots?

Math is... Modeling

- How can you show the number?
- What are some other ways we can show 27?

Have students think of another 2-digit number—or display one for them—and have them show it different ways by using connecting cubes or drawing. Have students share out their work and discuss how the different representations show the same number.
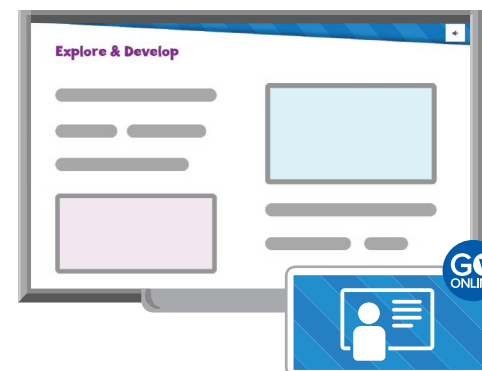
EL English Learner Scaffolds

Entering/Emerging Use manipulatives to support students in understanding show a number. For example, put down 12 counters and say I am showing 12. Reposition the counters so there are ten in one row and two in the other and say I am showing you 12 in a different way. Continue repositioning the counters and ask Can you show me 12 in a different way?

Developing/Expanding Use manipulatives to support students in understanding show a number. For example, put down 12 counters and say I am showing 12. Reposition the counters so there are ten in one row and two in the other and say I am showing you 12 in a different way. Then provide students with their own counters and ask them to show a number with the sentence frame: I am ____ the number ____ .

Bridging/Reaching Show the numbers 12 and 21 with counters and ask students why showing a number can be helpful. Support with relevant language such as ones and tens.
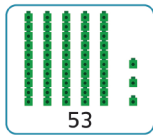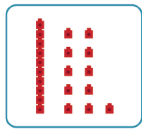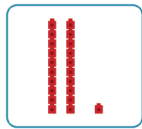
On My Own

MATH REPLAY | **GO ONLINE**

Name _____

Circle the answer to each problem.

1. Which shows a different way to make the number shown?

53

2. Do these show the same number?   (Yes)   No

Write the numbers.

3. STEM Connection Jin has 76 fossils. What are two ways he can show the number? **Sample answers:**

__7__ tens and __6__ ones is __76__ .

__5__ tens and __26__ ones is __76__ .

Unit 3 • Place Value   **83**

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Draw to show your thinking.

4. How can you draw to show the number 29?

See students' drawings.

5. How can you draw to show 29 a different way?

See students' drawings.

6. Extend Your Thinking How can you show 49 in different ways? Use connecting cubes to help. Write the numbers.

0 tens and __49__ ones

I ten and __39__ ones

__2__ tens and 29 ones

3 tens and __19__ ones

__4__ tens and 9 ones

🕐 Reflect

How can you show a number in different ways?
Answers may vary.

Math is... **Mindset**

How have you shown that you understand your partner's ideas?

84   **Lesson 5** • Represent 2-Digit Numbers in Different Ways

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Practice

ETP **Build Procedural Fluency from Conceptual Understanding**

⚠ **Common Error: Exercise 2** Students may think these are not the same number because the representations are different. Have students write the number of tens and ones under each representation to see that in the second representation they can group ten of the ones.

Item Analysis

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

🕐 Reflect

Students complete the Reflect question.
- How can you show a number in different ways?

Ask students to share their reflections with their classmates.

Math is... **Mindset**
- How have you shown that you understand your partner's ideas?

SEL **Students reflect on how they practiced social awareness.**

Learning Targets
Ask students to reflect on the Learning Targets of the lesson.
- I can show a number in different ways.
- I can explain more than one way to show the same number.

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

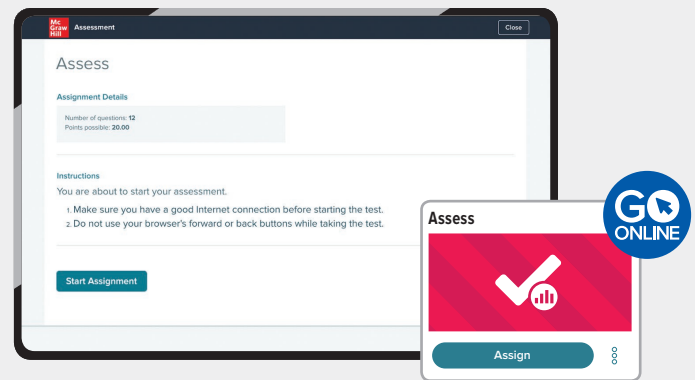| Item	DOK	Skill	Standard
1	3	Count tens and ones in 2-digit numbers	1.NBT.B.2
2	3	Understand place value in 2-digit numbers	1.NBT.B.2
3	3	Understand place value in 2-digit numbers	1.NBT.B.2

📊 **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 **3-5**
Exit Ticket

Name _____

1. Which sets of connecting cubes show 53? Choose all the correct answers.

A.   **B.**   **C.**

Complete the sentences about the number.

2. 4 tens and __**8**__ ones is 48.

3 tens and __**18**__ ones is 48.

3. 3 tens and __**29**__ ones is 59.

5 tens and __**9**__ ones is 59.

Reflect On Your Learning

Assessment Resource Book   **37**

R Reinforce Understanding

Different Reps

Work with students in pairs. Have one partner choose a 2-digit number card. Students work together to show the number using connecting cubes and explain their representation. Have students then use the cubes to show another way to represent the same number and explain their representation. If students are only showing one way to represent the number, explain that they can show a group of 10 as ten ones. Switch roles and repeat.

SMALL GROUP

B Build Proficiency

Practice It! Game Station
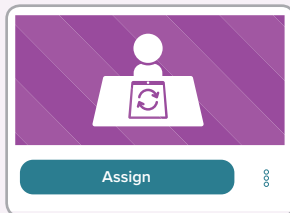**Tens and Ones Concentration**

Students practice finding equivalent representations that use tens and ones.
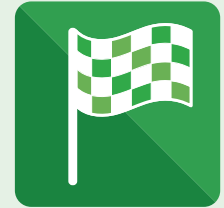
WORKSTATIONS

Take Another Look Lessons

Assign the interactive lessons to reinforce targeted skills.

- Group Tens and Ones (50-99)
- Digits in Numbers 1 to 99

Assign

GO ONLINE

Interactive Additional Practice

Assign the digital version of the Student Practice Book.

Assign

GO ONLINE

INDEPENDENT WORK
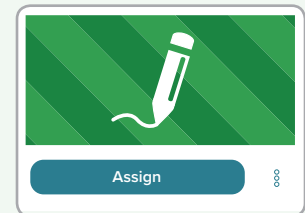
Differentiation Resource Book, p. 19

Lesson **3-5** • Reinforce Understanding
Represent 2-Digit Numbers in Different Ways

Name

Review
You can show the same number in different ways.

23 is 2 tens and 3 ones

23 is also I ten and 13 ones

Circle all the ways to show the number.

1. 41
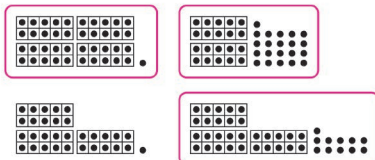
2. 36

Differentiation Resource Book

INDEPENDENT WORK
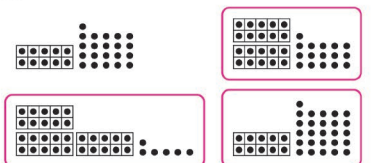
Student Practice Book, pp. 19–20

Lesson **3-5**
Additional Practice

Name

Review
You can show the tens and ones in a number, such as 42, in different ways.
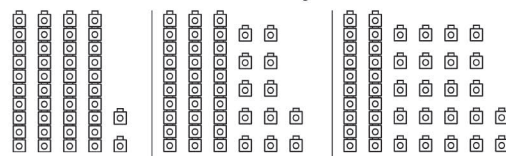
$42 = 4$ tens and 2 ones

$42 = 3$ tens and 12 ones

$42 = 2$ tens and 22 ones

1. How can you write numbers to show 57 in different ways? Use connecting cubes to help.

0 ten and ___**57**___ ones

I ten and ___**47**___ ones

2 tens and ___**37**___ ones

3 tens and ___**27**___ ones

4 tens and ___**17**___ ones

5 tens and ___**7**___ ones

Student Practice Book

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with adding numbers from 1 to 9.

Assign

Use It! Application Station

Money Exchange One student acts as a store owner while the other acts as a customer. The customer chooses items to buy and the store owner checks the amount of money given.

Spiral Review

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

Assign

Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

Assign

Student Practice Book, pp. 19–20

2. Do these show the same number? Circle Yes or No.
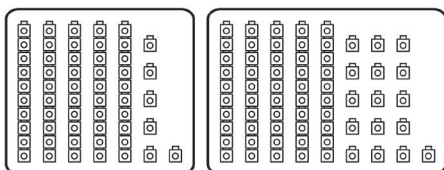
Yes   No

3. Circle a different way to show 34.
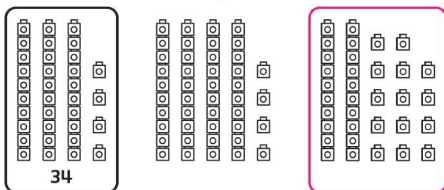
34

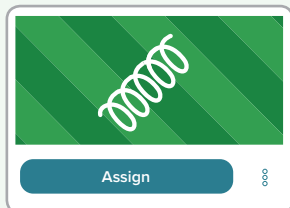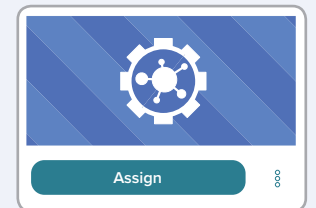**4.** A gym has 68 students playing in it. What are two different ways you can show the number of students in the gym?

Sample answer shown.

___6___ tens and ___8___ ones is ___68___.

___5___ tens and ___18___ ones is ___68___.

Math @Home Activity

With your child, draw and cut out single cubes and strips of ten cubes from paper. Display a group of tens and some ones. Ask your child to identify the number shown. Then encourage him or her to represent the same number using different tens and ones.

Student Practice Book

Differentiaton Resource Book, p. 20

Lesson **3-5** • Extend Thinking

Represent 2-Digit Numbers in Different Ways

Name_____

Last week, Alex ripped his backpack. He needs a new one for school. The backpack he wants costs $32.

1. Choose all the ways Alex can pay exactly $32 for the backpack.

(A.)

B.

(C.)

2. How did you decide the ways Alex can pay exactly $32 for the backpack?

Sample answer: I counted the tens and the ones in each group. For every 10 ones, I traded for a ten. The group with 3 tens and 2 ones and the group with 1 ten and 22 ones show the ways Alex can pay exactly $32 for the backpack.

Differentiation Resource Book

Compare Numbers

Learning Targets

- I can tell which of two numbers is greater.
- I can explain how to tell which of two numbers is greater.

Standards   ◇ **Major**   △ **Supporting**   ○ **Additional**

Content

◇ **1.NBT.B.3** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

Math Practices and Processes

MP6 Attend to precision.

Vocabulary

Math Terms	Academic Terms
compare	discuss
equal to	observe
greater than	
less than	

Materials

The materials may be for any part of the lesson.

- base-ten blocks
- *Number Cards 0–120* Teaching Resource

Focus

Content Objective	Language Objectives	SEL Objective
• Students can compare 2-digit numbers.	• Students use comparatives such as greater than, less than, and equal to to compare 2-digit numbers. • To maximize linguistic and cognitive meta-awareness, ELs participate in MLR7: Compare and Connect.	• Students collaborate with peers and contribute to group effort to achieve a collective mathematical goal.

Coherence

Previous	Now	Next
• Students compared numbers 1 to 5 (Grade K). • Students represented the tens and ones in 2-digit numbers (Unit 3).	• Students represent 2-digit numbers using base-ten blocks. • Students compare the tens and ones in 2-digit numbers to determine which number is greater.	• Students compare numbers on a number line (Unit 3). • Students compare 3-digit numbers (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding of 2-digit numbers by using place value to compare them.	• Students use these skills to compare numbers. *Procedural Skill and Fluency is not a targeted element of rigor for this standard.*	• Students apply these skills to real-world problem situations. *Application is not a targeted element of rigor for this standard.*

Number Routine
What Did You See?

GO ONLINE

🕐 5–7 min

Build Fluency Students build number recognition and counting skills as they use their knowledge of ten-frames to find total amounts. Show students a card showing one or more ten-frames for a few seconds. Students then discuss what they think they saw and how they came to the prediction. After sharing ideas, the card is shown again and students compare their guesses with the answer.

These prompts encourage students to talk about their reasoning:

- What did you see on the first image?
- How did you determine the total number you saw?
- How did your guess compare to the actual total?

Purpose Students notice there are 10 single connecting cubes and a train of 10 cubes. They wonder about the orange blocks and notice 10 single units and 10 connected units. They may wonder whether the orange blocks can be unlinked and linked just as the connecting cubes.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip You may want to provide students with connecting cubes, ones units, and tens rods to explore as they notice and wonder.

ETP Pose Purposeful Questions

The questions that follow can be asked in any order. They are meant to help advance students' thinking about comparing two groups of blocks and are based on possible comments and questions that students may make during the share out.

- What do you notice about how the connecting cubes are grouped?
- What do you notice about how the blocks are grouped?
- What do you notice about how many connecting cubes there are?
- What do you notice about how how many blocks there are?
- What do you wonder about each tool, the connecting cubes and the blocks? How are they they same? How are they different?

Math is... Mindset

- What can you do to work with others to finish a task?

SEL Relationship Skills: Teamwork

Establish a positive classroom culture by providing students opportunities to work together to complete collective tasks. As students Notice & Wonder, encourage them to work together and build off the ideas of their peers. Invite students to participate in different ways so that each student can actively contribute to the team effort.

Transition to Explore & Develop

Students are thinking about compare two tools.

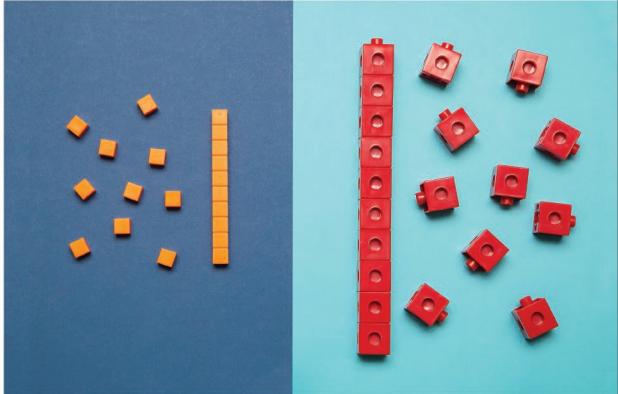**ETP Establish Goals to Focus Learning**

- How can we use tools to compare two groups of objects?

Lesson 3-6
Compare Numbers

? Be Curious

**What do you notice?
What do you wonder?**

Math is... Mindset
What can you do to work with others to finish a task?

Unit 3 • Place Value 85

? Be Curious

**What do you notice?
What do you wonder?**

Learn

Marcy has 39 erasers.
Frank has 82 erasers.

Who has more erasers?

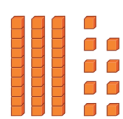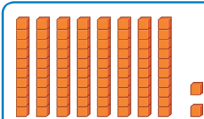Marcy's Erasers   Frank's Erasers

You can **compare** the numbers to show who has more.

Compare the tens. 8 tens is more than 3 tens.
82 is **greater than** 39.

39   82

Math is... Precision
How do you know when you need to compare the ones?

If the tens are the same, you compare the ones next.

A number can be greater than, **less than**, or **equal to** another number.

🔍 Work Together

Which number is greater? Circle the answer.
Explain your thinking.

(74)   70

Sample answer: 70 and 74 both have 7 tens, but 74 has 4 ones and 70 has 0 ones.

86   **Lesson 6** • Compare Numbers

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❶ Pose the Problem

ETP **Pose Purposeful Questions**
- What do we need to know to determine who has more?
- If the piles are the same size, how can we determine whether Marcy or Frank has more erasers?

❷ Develop the Math

Choose the option that best meets your instructional goals

MLR **Compare and Connect**
Give each pair of students a set of 2-digit numeral cards (e.g. 49, 51, 63, 84, 38). Students work together to determine which cards have numbers greater than or less than 49. Then have them explain their findings to another pair of students.

❸ Bring It Together

ETP **Elicit Evidence of Student Thinking**
- When we compare two numbers, why do we compare the tens first?
- How do we determine whether or not to compare the ones?
- How do we know if two numbers are equal?

Key Takeaways
- To compare two 2-digit numbers, one compares the number of tens first. The number with more tens is greater. If the tens are the same, compare the ones. The number with more ones is greater. If the numbers of tens and ones are the same, the numbers are equal.
- To compare two 2-digit numbers, compare the tens first. The number with more tens is greater.
- If the tens are the same, compare the ones. The number with more ones is greater.
- If the tens and ones are the same, the numbers are equal.

Work Together

Encourage students to draw base-ten shorthand to show 74 and 70 to determine which is greater.

🚫 **Common Misconception** Students may think that numbers having the same number of tens are equal. Remind students that when tens are the same, the ones must be compared. As students work compare numbers, remind them to look closely at the number of tens and ones in a number, using drawings to support the comparison.

LOM **Language of Math**
Add the vocabulary cards: *compare, equal to, greater than*, and *less than* to the math word wall. Have students act out the words *equal to, greater than,* and *less than.* Repeat as necessary and discuss.

Activity-Based Exploration

Students compare pairs of 2-digit numbers using base-ten blocks or drawings.

Materials: tens rods, ones units, *Number Cards 0–120* Teaching Resource (1 per student, 2-digit numbers only, include some duplicates)

You may choose to briefly discuss the base-ten blocks, explaining the values of the tens rods and the ones units.

ETP Support Productive Struggle

Directions: Students pair up and compare their numbers to find which number is greater, using the base-ten blocks or drawings to show each number. Students record the numbers and circle the greater number. Students pair up with a new partner and repeat the activity, recording their results. Have students consider their reasoning as they compare numbers.

Activity Debrief: Bring the class back together to share out their ideas. Discuss the vocabulary words: *compare, equal to, greater than*, and *less than*.
  • How did you compare the numbers?
  • How did you decide whether to compare the tens or ones first?

Math is... Precision
  • How do you know when you need to compare the ones?
  • Did anyone find that neither number was greater? Explain.

If no student can share an "equal to" example, you may choose to present one.

Have students revisit the Pose the Problem question and discuss answers.
  • Marcy has 39 erasers. Frank has 82 erasers. Who has more erasers?"

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

Guided Exploration

Students compare two 2-digit numbers using base-ten blocks and base-ten shorthand. Discuss the base-ten blocks used to show each number. Explain that each ones unit shows 1. Point out that each tens rod is made up of ten ones units and represents 10. Students are not expected to use the term *unit* or *rod* at this time and may refer to these as *ones* and *tens*.

ETP Use and Connect Mathematical Representations

You may wish to distribute ones units and tens rods to student pairs to model some of the numbers as the class compares them.

Discuss the base-ten blocks used to show 39 and 82. Then discuss the meaning of the vocabulary term *greater than* in this context.
  • **Think About It:** Why do you compare the tens first?

Ask students whether they should compare the ones after they determine that one of the numbers has more tens. The class should conclude that because they know which number has more tens, they do not need to compare the ones.

Discuss the base-ten blocks used to show 47 and 43.

Math is... Precision
  • How do you know when you need to compare the ones?

Discuss the meaning of *less than* in this context.
  • How can we draw using shorthand to show the numbers?
  • What does it mean when the tens are the same and the ones are the same?

Have students use base-ten shorthand to show 65 and 65. They should show six lines and five dots to show each number.

EL English Learner Scaffolds

Entering/Emerging Support students in understanding more. For example, on the board, draw a puppy with 2 treats and label it Max. Then draw a puppy with 5 treats and label it Bob. Say, Max has 2 treats. Bob has 5 treats. Bob has more treats. Repeat by adding or subtracting treats from the drawings. To check comprehension, ask Which dog has more treats: Bob or Max?

Developing/Expanding Support students in understanding more. For example, on the board, draw a puppy with 2 treats and label it Max. Then draw a puppy with 5 treats and label it Bob. Ask Who has more treats? Prompt students to respond, Bob has more treats. To confirm comprehension, add or subtract treats from the drawings while asking Which dog has more treats?

Bridging/Reaching Ask each student to present more by drawing two dogs with different names and multiple treats of differing amounts. Students introduce their animals and treats to the class using more.

On My Own

Name _____

How can you compare the numbers?
Circle *is greater than, is less than,* or *is equal to.*

1.

73

(is greater than)
is less than
is equal to

37

2.

31

is greater than
is less than
(is equal to)

31

How can you compare the numbers? Draw to show the tens and ones. Circle *is greater than, is less than,* or *is equal to.*   **See students' drawings.**

3.

52

is greater than
(is less than)
is equal to

53

Unit 3 • Place Value   **87**

How can you compare the numbers? Write *is greater than, is less than,* or *is equal to.*

4. 25 ___is less than___ 41   **5.** 68 __is greater than__ 66

6. Error Analysis Harper reads 38 pages. Eli reads 48 pages. Harper says she read more pages. How can you help Harper compare the numbers?
Sample answer: I would tell Harper that 48 has more tens than 38, so 48 is greater than 38. Eli read more pages.

7. Extend Your Thinking What numbers can make the sentence true? **Sample answers:**

___27___ is less than ___35___ .

🔄 Reflect

How can you compare numbers to show which is greater?
Answers may vary.

Math is... Mindset
What did you do to work with others to complete a task?

Practice

ETP Build Fluency from Understanding

⚠️ **Common Error: Exercise 1** Students may think the numbers are equal because the numbers have the same digits. Encourage students to count the base-ten blocks and remind them of the value of the tens rods and ones units. This should help them see that 73 is the greater number.

Item Analysis

Item	DOK	Rigor
1–2	1	Conceptual Understanding
3	2	Conceptual Understanding
4–5	1	Conceptual Understanding
6	3	Application
7	2	Conceptual Understanding

🔄 Reflect

Students complete the Reflect question.
• How can you compare numbers to show which is greater?
Ask students to share their reflections with their classmates.

Math is... Mindset
• What did you do to work with others to complete a task?

SEL Students reflect on how they developed stronger relationship skills.
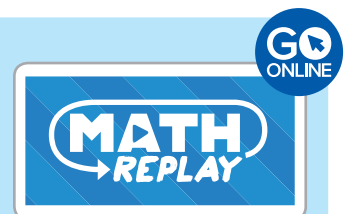
Learning Targets
Ask students to reflect on the Learning Targets of the lesson.
• I can tell which of two numbers is greater.
• I can explain how to tell which of two numbers is greater.

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	2	Compare 2-digit numbers using base-ten blocks	1.NBT.B.3
2	3	Compare 2-digit numbers	1.NBT.B.3
3	2	Compare 2-digit numbers	1.NBT.B.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
3 of 3	Additional Practice or any of the 🅱 or 🅔 activities
2 or 3	*Take Another Look* or any of the 🅱 activities
1 or fewer of 3	Small Group Intervention or any of the 🆁 activities

Key for Differentiation
- 🆁 Reinforce Understanding
- 🅱 Build Proficiency
- 🅔 Extend Thinking

Lesson 3-6

Exit Ticket

Name _____

I. Compare the numbers. Which sentence is correct?

49   52
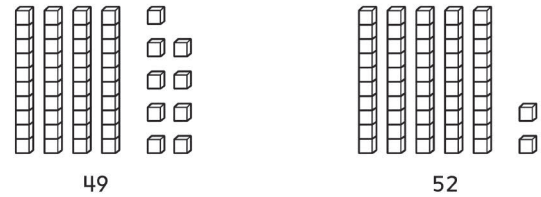
A. 49 is greater than 52.   (B.) 49 is less than 52.

2. Val has 78 beads. Jean has 81 beads. Who has more beads?

A. Val   (B.) Jean

3. Is the comparison true? Choose True or False.

	True	False
23 is equal to 32.		✔
35 is less than 92.	✔	
60 is greater than 67.		✔

Reflect On Your Learning

38 Assessment Resource Book

Differentiate

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

R Reinforce Understanding

More or Less

Work with students in pairs. Each student rolls two 1-6 number cubes then creates and writes a 2-digit number. Students use base-ten blocks to represent their number. They then compare their numbers. If students are struggling to compare, explain that they should look at the tens digit and compare; if the tens digits are the same they should then look at the ones digit and compare. Have students explain how they compared.

B Build Proficiency

Practice It! Game Station
Compare Numbers Sort
Students practice comparing numbers.

Take Another Look Lesson

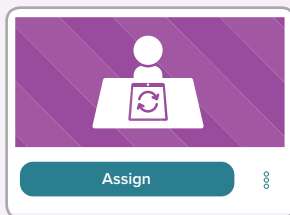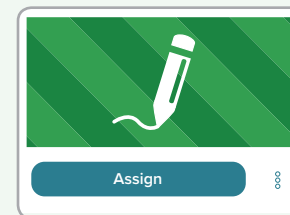Assign the interactive lessons to reinforce targeted skills.

• Compare Numbers 1 to 50

Assign

Interactive Additional Practice

Assign the digital version of the Student Practice Book.

Assign

Differentiation Resource Book, p. 21

Lesson **3-6** • Reinforce Understanding
Compare Numbers

Name_____

Review
You can compare two-digit numbers.

28
2 tens and 8 ones

26
2 tens and 6 ones

Compare the **tens** in **28** and **26**. Both have 2 tens.

Compare the **ones** in **28** and **26**.
8 ones are greater than 6 ones.

So, 28 is greater than 26.   26 is less than 28.

Write *greater than, less than,* or *equal to.*

I. 24 is ___greater than___ 19

2. 81 is ___greater than___ 78

3. 59 is ___greater than___ 58

4. 32 is ___less than___ 36

5. 85 is ___less than___ 87

Differentiation Resource Book

Student Practice Book, pp. 21–22

Lesson **3-6**
Additional Practice

Name_____

Review
You can compare two numbers to determine which is greater.
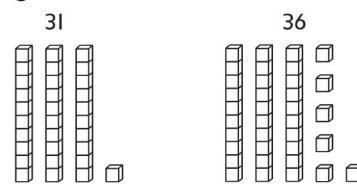
31

36

3 tens and 1 one

3 tens and 6 ones

Both numbers have 3 tens. 6 ones is greater than 1 one. So, 36 is greater than 31.

I. Circle *is greater than, is less than,* or *is equal to.*

is greater than
(is less than)
is equal to

15

24

2. Henyer writes the numbers 76 and 78 on a sheet of paper. Write the number that is less.

___76___

Student Practice Book

Own It! Digital Station

Build Fluency Games

Assign the digital game to develop fluency with adding numbers from 1 to 9.

Assign

Spiral Review

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

Assign

E Extend Thinking

Use It! Application Station

Comparing Temperatures Students write a script for a weather report comparing temperatures. They then either record a video or perform a skit with the script. *The content of this card has concepts covered later in Lesson 3-8. You may want to assign this card to students ready to make sense of content covered later in this unit.*

Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.
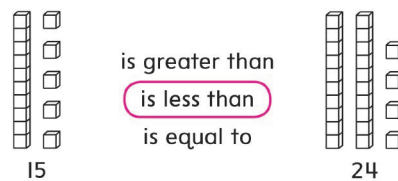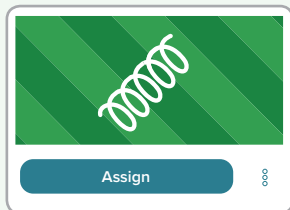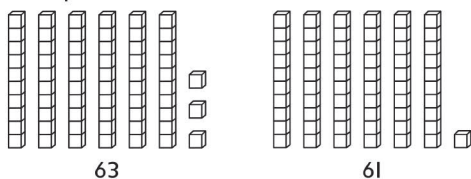
Assign

Student Practice Book, pp. 21–22

3. Circle the phrase to complete the comparison, 63 _____ 61.

63   61

(is greater than)
is less than
is equal to

4. Sam has 59 trading cards. Elena has 61 trading cards. Who has more trading cards?

Sam   (Elena)

Write numbers to make each sentence true.
Sample answers shown.

5. __92__ is greater than __91__.

6. __15__ is less than __19__.

7. __74__ is equal to __74__.

8. __47__ is greater than __38__.

9. __68__ is less than __73__.

Math @Home Activity

Have your child roll a number cube four times to create two 2-digit numbers. Have him or her write the numbers on a sheet of paper and determine the relationship between them using the words *is greater than, is less than,* or *is equal to.* Repeat the activity several times.

Student Practice Book

Differentiation Resource Book, p. 22

Lesson **3-6 • Extend Thinking**

Compare Numbers

Name _____

The first graders are getting ready for an art show. How can you use the information in the table to find out who has more art supplies?

Art Supplies	
John	34 pencils
Liz	29 pencils
Nadia	50 crayons
Oni	43 markers
Sarah	54 crayons
Zack	41 markers

1. John and Liz draw animals. Who has more pencils? How do you know?
Sample answer: John has more pencils because 3 tens are more than 2 tens. 34 is more than 29.

2. Sarah and Nadia color a banner. Who has more crayons? How do you know?
Sample answer: Sarah has more crayons because the tens are the same and 4 ones is more than 0 ones. 54 is more than 50.

3. Zack and Oni make signs. Who has more markers? How do you know?
Sample answer: Oni has more markers because the tens are the same and 3 ones is more than 1 one. 43 is more than 41.

Differentiation Resource Book

Compare Numbers on a Number Line

Learning Targets

- I can use a number line to compare numbers.
- I can explain how to use a number line to compare numbers.

Standards ◇ **Major** △ **Supporting** ○ **Additional**

Content

◇ **1.NBT.B.3** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

Math Practices and Processes

MP7 Look for and make use of structure.

Vocabulary

Math Terms	Academic Terms
compare	locate
equal to	relationship
greater than	
less than	
number line	

Materials

The materials may be for any part of the lesson.

- *Blank Number Lines 2* Teaching Resource

Focus

Content Objective	Language Objectives	SEL Objective
• Students can use number lines to compare 2-digit numbers.	• Students locate 2-digit numbers on a number line and compare them based on their location using comparatives. • To optimize output, ELs participate in MLR2: Collect and Display.	• Students break down a complex problem into manageable parts in order to solve.

Coherence

Previous	Now	Next
• Students compared numbers 1 to 5 (Grade K). • Students compared numbers using base-ten blocks and a number chart (Unit 3).	• Students compare the location of two numbers on a number line to identify the greater number.	• Students represent comparisons using $>$, $<$, and $=$. (Unit 3). • Students compare 3-digit numbers (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding of 2-digit numbers by locating them on a number line and using this visual to compare the numbers.	• Students use these skills with subtraction fluency as students are able to compare numbers and find a difference more efficiently. *Procedural Skill and Fluency is not a targeted element of rigor for this standard.*	• Students apply these skills to real-world problems. *Application is not a targeted element of rigor for this standard.*

Number Routine
Let's Count ⏱ 5–7 min

Build Fluency Students build number recognition and counting skills as they count from a given number. Give students a number to start on and a pattern to count by. Before starting, the teacher asks students to predict some numbers that they think they will say and records them. Students then complete the counting task and listen for the predicted values.

These prompts encourage students to talk about their reasoning:

- How did you make the predictions you did?
- Were your predictions correct?
- What numbers did you NOT say? Explain.

Purpose Students should notice that one game piece is farther along than the other game piece, based on the numbers on the board. They should notice that each number on the board is one greater than the next.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip You may want to have students think of a board game they have played to relate the image with something they have experienced.

ETP **Pose Purposeful Questions**

The questions that follow can be asked in any order. They are meant to help advance students' understanding of comparing two objects on a number path and are based on possible comments and questions that students may make during the share out.

- What do you notice about the numbers on the game board?
- What do you notice about where the pieces are placed?
- How do you know which piece is farther?

Math is... **Mindset**

- How can you picture a problem in your mind to help you find the answer?

SEL **Self Regulation: Working Memory**

Help improve students' working memory by breaking down complex directions or problems into smaller, more manageable steps. Invite students to pause and visualize each piece of information as they begin to work through the Notice & Wonder.

Transition to Explore & Develop

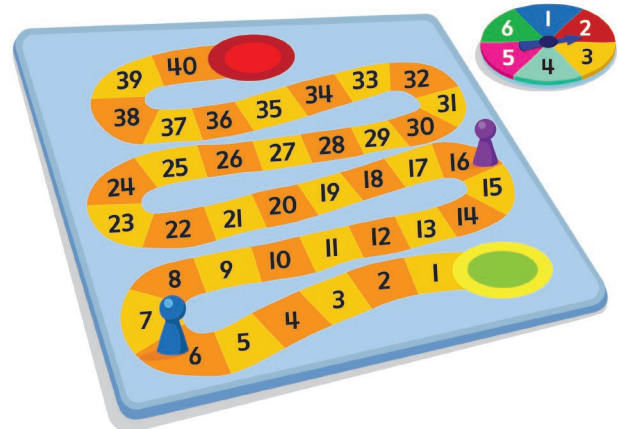Students are thinking about comparing two objects that are on a number line.

ETP **Establish Goals to Focus Learning**

- How can we determine which number is greater?

Learn

Quinn reads for 41 minutes on Monday. She reads for 37 minutes on Tuesday.

On which day does Quinn read for more minutes?

Reading Log	
Day	Time (Minutes)
Monday	41
Tuesday	37

You can compare the numbers on a number line.

35 36 37 38 39 40 41 42 43 44 45

37

41

37 is less than 41.

41 is greater than 37.
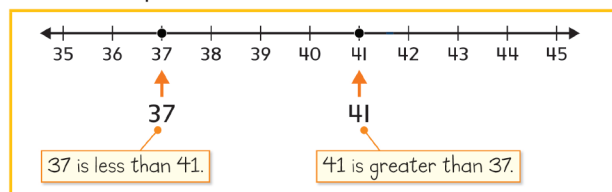
On a number line, the number to the right is greater. The number to the left is less.

Math is... Structure
If you know 41 is greater than 37, what else do you know?

🔍 Work Together

Which number is greater, 59 or 66? Show your thinking on the number line. **Check students' work.**

55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70

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❶ Pose the Problem

MLR **Collect and Display**
As students discuss the two questions, write key words and phrases you hear, such as greater than, less than, and equal to. Display the words and phrases for student re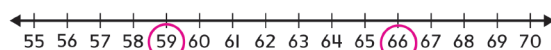ference and use the student generated expressions to help make connections between student language and math vocabulary. Update the collection with new understandings as the lesson progresses.

ETP **Pose Purposeful Questions**
- How can we compare two numbers?
- How can we determine which number is greater?

❷ Develop the Math

Choose the option that best meets your instructional goals.

❸ Bring It Together

ETP **Elicit Evidence of Student Thinking**
- How can we use a number line to compare numbers?
- How can we determine which number is greater on a number line?
- How can we determine which number is less on a number line?

Key Takeaway
- When comparing two numbers on a number line, the number to the right is the greater. The number on the left is less.

Work Together

Encourage students to draw the numbers on a number line to compare 59 and 66.

⚠ **Common Misconception** Students may think that numbers coming before other numbers on a given number line are greater because the number comes first. For young students, "first" often means greater, as in first born siblings being older or greater in age. Work with students to practice counting forward on the number line as they listen to the numbers become greater by ones.

LOM **Language of Math**
Have students use *greater than, less than*, or *equal to* in sentences. Discuss students' sentences and the use of the terms. Lead students to share their sentences again, this time having other students gesture the vocabulary words as the words are spoken. For example, as *greater than* is spoken, students may spread their arms wide. For *less than* students may keep arms close, and for *equal to* students may stretch arms equally forward.

Activity-Based Exploration

Students use number lines to compare numbers, discovering that the number to the right is greater and the number to the left is less.

Materials: Prepare number lines for students by labeling copies of the *Blank Number Lines 2* Teaching Resource with numbers 30 to 50, and cutting them into strips.

Directions: Each student picks a random number and marks it on their number line with a dot. Students compare their number lines to find other numbers that are greater than and less than their own number. They record the number pairs using *is greater than* or *is less than*. (Students may also record *equal to* pairs if they find them.)

ETP **Support Productive Struggle**

Activity Debrief: After students have recorded number pairs, bring the class together to share out their results.
- What do you know about number lines and the numbers on them?
- How did you use the number lines to determine which number was greater?

Math is... **Structure**
- If you know one number is greater than another, what else do you know?

You may choose to chart or display students' number pairs.

Have students revisit the Pose the Problem question and discuss answers.
- On which day does Quinn read for more minutes?

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

Guided Exploration

Students compare two 2-digit numbers using a number line.

ETP **Use and Connect Mathematical Representations**
- **Think About It:** What do you know about the numbers on number lines?

Use guiding questions as needed to help students recall that earlier in the year, they counted on number lines and examined patterns. Students should recall that numbers go up—or become greater—as they go to the right on the number line. So the numbers farther to the right are greater than the numbers to the left.
- How can we use a number line to compare two numbers?

Math is... **Structure**
- If you know 41 is greater than 37, what else do you know?
- If you know 37 is less than 43, what do you know about numbers less than 37? What do you know about numbers greater than 43?

👥 Have students use the *Blank Number Lines 2* Teaching Resource with numbers labeled 35 to 45 to compare the numbers throughout the lesson.

English Learner Scaffolds

Entering/Emerging Support students' understanding of what else by demonstrating with a variety of gathered manipulatives. Point to a manipulative and say Here's a {cube}. Ask What else is there? Point to another object and say Here's a pencil. What else is there? Continue asking What else is there? Accept pointing as an answer.

Developing/Expanding Support students' understanding of what else by demonstrating with a variety of gathered manipulatives. Point to a manipulative and say Here's a {cube}. Ask What else is there? Point to another object and say Here's a pencil. What else is there? Continue asking What else is there? As needed, provide the sentence frame: There's a ____.
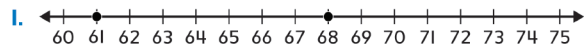
Bridging/Reaching Students use the term what else by identifying objects they are holding or standing near. As the first presenter, introduce the chalkboard by saying There's a chalkboard in the classroom. Ask What else is in the classroom? Choose a student to identify and ask about another classroom object. Have that student choose another, etc. Support with relevant language as needed.
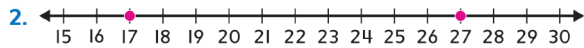
On My Own

MATH REPLAY | GO ONLINE

Name _____

Write *is greater than,* *is less than,* **or** *is equal to.*

1.

60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

61 _____ **is less than** _____ 68

Draw dots to show the numbers on the number line. Write *is greater than,* *is less than,* **or** *is equal to.*

2.

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

27 _____ **is greater than** _____ 17

3.

85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
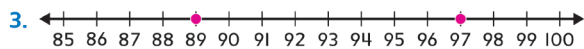
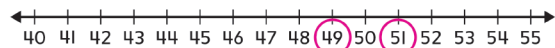89 _____ **is less than** _____ 97

4. STEM Connection Jin digs for fossils. He digs 49 holes in his yard. He digs 51 holes in his garden. Use the number line and words to compare the numbers.
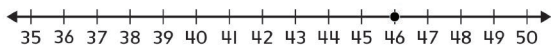
40 41 42 43 44 45 46 47 48 (49) 50 (51) 52 53 54 55

49 _____ **is less than** _____ 51

Unit 3 • Place Value **91**

---

5. Which number completes the sentence? Circle the number. 46 is greater than _____.

35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

50   (39)

6. Extend Your Thinking What number is less than 75? Draw a dot on number line to show your answer. Explain your thinking.

70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85
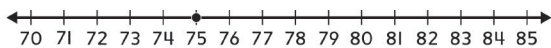
Sample answer: I drew a dot at 72. 72 is to the left of 75 on the number line, so I know it is less than 75.

🔵 Reflect

How can a number line help you compare numbers? **Answers may vary.**

Math is... ◀ Mindset
How did you picture a problem in your mind to help you find the answer?

92 Lesson 7 • Compare Numbers on a Number Line

Practice

ETP **Build Fluency from Understanding**

❗ Common Error: Exercise 6 Students may be challenged by this exercise because there are several correct answers. Have students look back at the Learn page. As long as the number they choose would be to the left of 75 on the number line, their answer is correct.

Item Analysis

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

🔵 Reflect

Students complete the Reflect question.
- How can a number line help you compare numbers?

Ask students to share their reflections with their classmates.

Math is... ◀ Mindset
- How did you picture a problem in your mind to help you find the answer?

SEL **Students reflect on how they practiced self-regulation.**
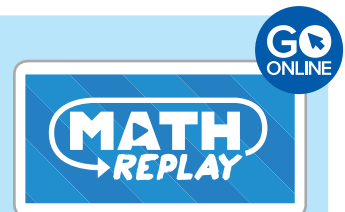
Learning Targets
Ask students to reflect on the Learning Targets of the lesson.
- I can use a number line to compare numbers.
- I can explain how to use a number line to compare numbers.

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.

MATH REPLAY GO ONLINE

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	2	Compare 2-digit numbers using a number line	1.NBT.B.3
2	2	Compare 2-digit numbers using a number line	1.NBT.B.3
3	3	Compare 2-digit numbers using a number line	1.NBT.B.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
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 3-7

Exit Ticket

Name _____

1. Use the number line to compare 14 and 8.

← 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 →

A. 14 is less than 8   B. 14 is greater than 8

Use the number line to answer the questions.

← 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 →

2. Is the comparison true? Choose True or False.

	True	False
90 is less than 88.		✔
89 is greater than 84.	✔	
93 is greater than 89.	✔	

3. Pat says 92 is less than 87. How do you respond?

A. I agree. 2 is before 7 on the number line.
B. I disagree. 92 is to the right of 87 on the number line.

Reflect On Your Learning

👎 ✊ 👍

Assessment Resource Book **39**

R Reinforce Understanding

On the Line

Work with students in pairs. Each student chooses a number card from 0–20. Show the number on a number line. Students compare it to their partner's number. If students are struggling to compare, explain that the number that is further to the right on the number line is greater, and that the number further to the left on the number line is less. Students choose another number card and repeat.
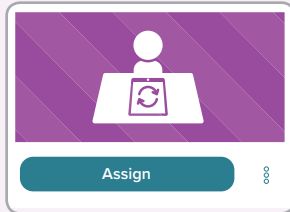
Take Another Look Lesson

Assign the interactive lesson to reinforce targeted skills.

• Compare Numbers 1 to 50

Assign
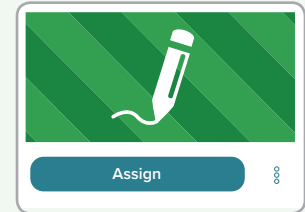
Differentiation Resource Book, p. 23

Lesson **3-7** • Reinforce Understanding
Compare Numbers on a Number Line

Name _____

Review

You can use a number line to compare numbers. Compare 62 and 68.

60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
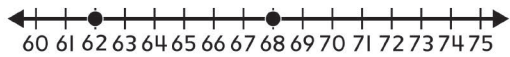
Greater numbers are to the right. The number 68 is to the right of 62. So, 68 is greater than 62.

Lesser numbers are to the left. The number 62 is to the left of 68. So, 62 is less than 68.

Use the number line to compare the numbers. Write *is greater than, is less than,* or *is equal to.*

85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
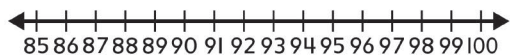
1. 92 ___is greater than___ 87.

2. 86 ___is less than___ 89.

3. 90 ___is greater than___ 88.

B Build Proficiency

Practice It! Game Station
Number Line Showdown

Students practice comparing numbers.

Interactive Additional Practice

Assign the digital version of the Student Practice Book.

Assign

Student Practice Book, pp. 23–24

Lesson **3-7**
Additional Practice

Name _____

Review

You can compare numbers on a number line.

20 21 22 23 24 25 26 27 28 29 30
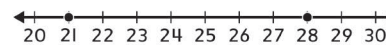
On a number line, the number to the right is greater.

The number to the left is less.

28 is to the right of 21. So, 28 is greater than 21.

Draw dots for the numbers on each number line. Compare each set of numbers. Write *is greater than, is less than,* or *is equal to.*

1. 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

29 ___is less than___ 38.

2. 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70

70 ___is greater than___ 58.

Own It! Digital Station

Build Fluency **Games**

Assign the digital game to develop fluency with adding numbers from 1 to 9.

Assign

Use It! Application Station

Counting Notes Students count the number of notes in music.

Spiral Review

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

Assign

Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

Assign

Student Practice Book, pp. 23–24

Draw dots for the numbers on the number line. Compare the set of numbers. Circle the number that is less.

3.
40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55
54   (49)

4.
75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90
(75)   86

5.
60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
70   (61)
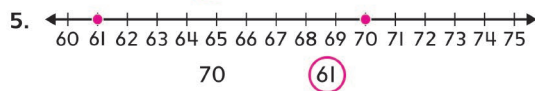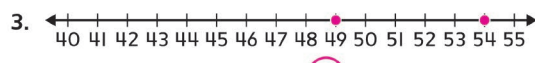
6. Anika has more than 66 trading cards. She has less than 71 trading cards.

Draw a dot on the number line to show how many trading cards Anika might have.

55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70
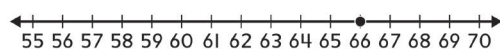
Students may draw a dot on 67, 68, 69, or 70.

Math @ Home Activity

On an erasable surface, create a number line that spans 20 numbers. Place dots on the line over two numbers. Ask your child to identify which number is greater. Repeat the activity, this time with your child placing the dots and you determining the greater number.

Student Practice Book

Differentiation Resource Book, p. 24

Lesson **3-7** • **Extend Thinking**
Compare Numbers on a Number Line

Name

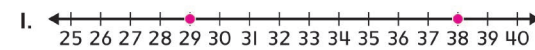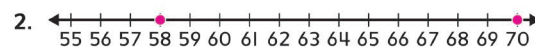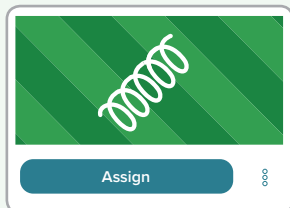**Mr. Abi's students are talking about things they like to collect. How can you draw a number line with dots to show the collections? Compare the collections using *is greater than* and *is less than*.**

I. Jake has 72 baseball cards. Caleb has 78 baseball cards.

Students' number line drawings show dots at 72 and 78. Sample answer: 72 is less than 78. 78 is greater than 72.

2. Darcy has 43 action figures. Rio has 39 action figures.

Students' number line drawings show dots at 39 and 43. Sample answer: 39 is less than 43. 43 is greater than 39.

Differentiation Resource Book

Use Symbols to Compare Numbers

Learning Targets
- I can use these symbols to compare numbers: >, <, and =.
- I can explain how to use symbols to compare numbers.

Standards ◇ Major △ Supporting ◯ Additional

Content

◇ **1.NBT.B.3** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.

Math Practices and Processes

MP2 Reason abstractly and quantitatively.

Vocabulary

Math Terms	Academic Terms
compare	participate
equal to (=)	symbol
greater than (>)	
less than (<)	

Materials

The materials may be for any part of the lesson.

- base-ten blocks
- index cards
- *Number Cards 0–120* Teaching Resource

Focus

Content Objective	Language Objectives	SEL Objective
• Students compare numbers using the > , <, and = symbols.	• Students use the simple present tense to state facts to compare 2-digit numbers represented by base-ten blocks and two 2-digit numbers with the symbols >, <, and = . • To cultivate conversation, ELs participate in MLR5: Co-Craft Questions and Problems.	• Students demonstrate thoughtful reflection through identifying the causes of challenges and successes while completing a mathematical task.

Coherence

Previous	Now	Next
• Students compared numbers 1 to 5 (Grade K). • Students compared numbers using base-ten blocks, number charts, and number lines (Unit 3).	• Students compare 2-digit numbers using base-ten blocks. • Students represent comparisons using the symbols >, <, and =.	• Students analyze other math symbols including the equal sign (Unit 4). • Students compare 3-digit numbers (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding of how symbols are used in mathematics to express ideas by using the symbols > (greater than), < (less than), and = (equal to) to compare two 2-digit numbers.	• Students use these skills to develop a deeper understanding of how to use symbols to efficiently represent mathematical ideas. *Procedural Skill and Fluency is not a targeted element of rigor for this standard.*	• Students apply these skills to real-world problems. *Application is not a targeted element of rigor for this standard.*

Number Routine
Let's Count ⏱ 5–7 min

Build Fluency Students build number recognition and counting skills as they count from a given number. Give students a number to start on and a pattern to count by. Before starting, the teacher asks students to predict some numbers that they think they will say and records them. Students then complete the counting task and listen for the predicted values.

These prompts encourage students to talk about their reasoning:

- Why did you make the predictions you did?
- Were your predictions correct?
- What numbers did you NOT say? Explain.

Purpose Students notice that there are many more fish in one circle than the other and wonder how many fish.

Notice & Wonder™

- What do you notice? What do you wonder?

Teaching Tip You may want to have students do a Think-Pair-Share before discussing the image as a class. Partners can build off each other's observations and wonderings.

ETP Pose Purposeful Questions

The questions that follow can be asked in any order. They are meant to help advance students' thinking as they compare two quantities and are based on possible comments and questions that students may make during the share out.

- What other math problems are you reminded of as you notice these two groups?
- How would you describe these two groups?
- How could we compare the groups of fish?

Math is... Mindset

- What has been hard for you? What have you enjoyed?

SEL Responsible Decision-Making: Reflection
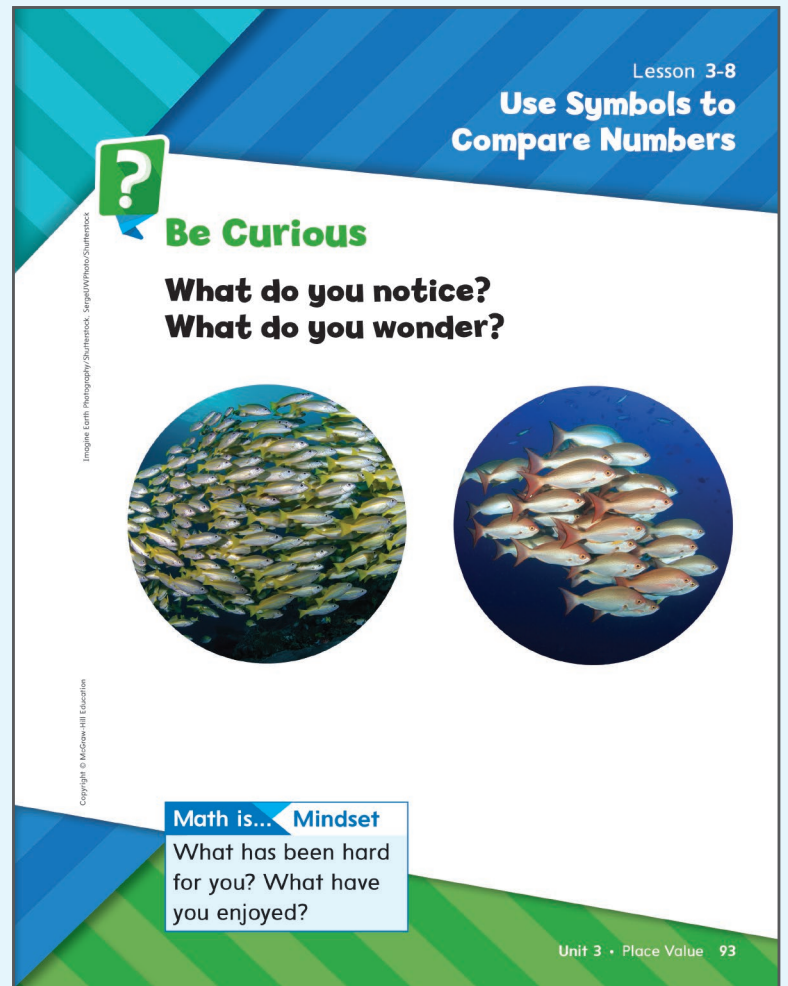
After working through the Notice & Wonder, allow students time to thoughtfully reflect on their work. Invite them to think about what may have been challenging as well as the ways in which they were successful and why. Encourage students to also consider what parts of the Notice and Wonder they enjoyed and why.

Transition to Explore & Develop

Students are thinking about comparing two numbers.

ETP Establish Goals to Focus Learning

- How can we compare two numbers?

Lesson 3-8
Use Symbols to Compare Numbers

? **Be Curious**

What do you notice? What do you wonder?

Math is... Mindset
What has been hard for you? What have you enjoyed?

Unit 3 • Place Value 93

? Be Curious

What do you notice? What do you wonder?

GO ONLINE

Learn

The pet store has 56 clowwnfish and 43 goldfish.

Fish and More! Pet Store
Name Clownfish

Which kind of fish does the pet store have more of?

Fish and More! Pet Store
Name Goldfish

You can compare the numbers.

56   43

56 is greater than 43

56 > 43

You can use > (greater than), < (less than), and = (equal to) to compare numbers.

Math is... Thinking
Why might you want to compare two numbers?

🔍 Work Together

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

31 (>) 13

Sample answer: 31 has 3 tens and 13 has 1 ten, so 31 is greater than 13.

94   Lesson 8 • Use Symbols to Compare Numbers

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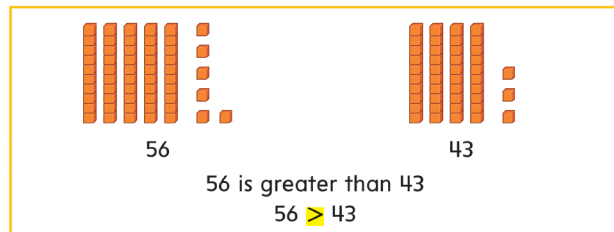
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❶ Pose the Problem

MLR Co-Craft Questions and Problems

Prepare three index cards per student pairs with >, <, and = symbols and a set of random 2-digit number cards. Include duplicates of a few cards so there are "equal to" comparisons. Pairs work together to make as many true expressions as possible. Then they create four false expressions for another pair to correct.

ETP Pose Purposeful Questions
- How can we show these numbers?
- How can we determine which number is greater?

❷ Develop the Math

Choose the option that best meets your instructional goals.

❸ Bring It Together

ETP Elicit Evidence of Student Thinking
- What symbol means "is greater than"?
- What symbol means "is less than"?

Key Takeaway
- When comparing numbers, > means "is greater than," < means "is less than," and = means "is equal to."

Work Together

Encourage students to use base-ten blocks, shorthand, or a number line to determine if 31 is greater than, less than, or equal to 13. Then decide which symbol to use.

⚠ Common Misconception Students may think that the symbol pointing to a number is always pointing to the greater number. Guide students to first read the numbers being compared, before choosing the symbol that shows the comparison.

LOM Language of Math

Add the vocabulary cards: *equal to (=), greater than (>),* and *less than (<)* to the math word wall. Have students draw two groups of objects and a symbol >, <, or = between the groups to show how the groups compare.

Activity-Based Exploration

Students explore how to use the $>$, $<$, and $=$ symbols to compare 2-digit numbers and record expressions.

Materials: index cards to show the comparison symbols and their meanings (3 per student-group), *Number Cards 0–120* Teaching Resouce (2-digit numbers including duplicates distributed randomly, 10 per student-group), base-ten blocks

Directions: Groups shuffle their number cards and place them face down. Students draw two number cards, then work as a group to make a true expression using one of the comparison symbols. They can draw or model with base-ten blocks as needed. Students record the expression using symbols.

ETP **Support Productive Struggle**

Students repeat this activity to make several expressions.

Math is... **Thinking**

- Why might you want to compare two numbers?

Activity Debrief: The class comes together to share their expressions and explain their reasoning.
- What new symbols did you explore today? Explain.
- Have you used $>$, $<$, or $=$ before? If so, how?
- What other signs or symbols do you know? What do they mean?
- Why would we want to use symbols instead of words to compare numbers?

Have students revisit the Pose the Problem question and discuss answers.
- Which kind of fish does the pet store have more of?

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

Guided Exploration

Students compare two 2-digit numbers using the symbols $>$, $<$, $=$. Students are familiar with the terms *greater than, less than*, and *equal to* from previous lessons, but this is their first time using the $>$ and $<$ symbols.

Math is... **Thinking**

- Why might you want to compare two numbers?

ETP **Use and Connect Mathematical Representations**

You may wish to distribute base-ten blocks for students to use for support.
- **Think About It:** What math signs do you know? What do they mean?

👥 Have students practice reading the comparison sentence aloud when a symbol is used throughout the lesson.
- **Think About It:** When have you used $=$ before?

Students should recognize $=$ as the equal sign they have seen in equations. Explain that this sign means both "equals" and "is equal to." In both cases, the $=$ sign shows that the number or the amount on one side is equal to the number or amount on the other side.

Explore & Develop

GO ONLINE

On My Own

MATH REPLAY | **GO ONLINE**

Name _____

Which sign matches the meaning? Circle >, <, or =.

1. less than
> (<) =

2. equal to
> < (=)

3. greater than
(>) < =

How can you compare the numbers? Draw the tens and ones. Write >, <, or =.

4.

63	61

63 (>) 61

5. Error Analysis Benny has 72 trading cards. Jordyn has 76 trading cards. Benny says 72 = 76. How can you show Benny how to compare the numbers?
Sample answer: 72 is less than 76, so Benny should have written 72 < 76. Either he did not know the meaning of = or he only compared the tens and not the ones.

Unit 3 • Place Value   95

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

6. 39 (>) 27

7. 88 (=) 88

8. 48 (<) 49

9. 57 (<) 75

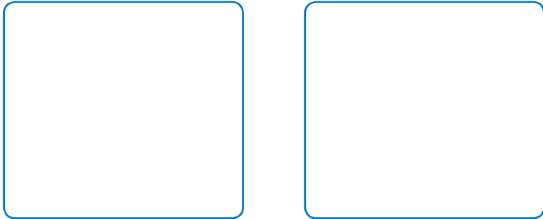**10. Extend Your Thinking** The pet store sells 47 kinds of cat food. It sells 65 kinds of dog food. How can you compare the numbers using >, <, or = ? Explain your thinking.
Sample answer: 65 > 47; I know that 65 is more than 47 because 6 tens is more than 4 tens so I wrote 65 > 47.

🕐 Reflect

How did you work like a mathematician to compare numbers?
Answers may vary.

Math is... Mindset
What have you done well today?

Practice

ETP **Build Fluency from Understanding**

⚠ **Common Error: Exercises 1 and 3** Students may confuse the meanings of the > and < symbols, especially without numbers for context. Have students picture each answer choice with numbers on either side—such as 15 > 14—and think about how they would read the number sentence aloud.

Item Analysis

Item	DOK	Rigor
1–3	1	Conceptual Understanding
4	2	Conceptual Understanding
5	3	Application
6–9	1	Conceptual Understanding
10	2	Application

🕐 Reflect

Students complete the Reflect question.
• How did you work like a mathematician to compare numbers?
Ask students to share their reflections with their classmates.

Math is... Mindset
• What have you done well today?

SEL **Students reflect on how they practiced responsible decision-making.**

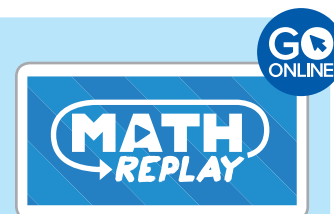**Learning Targets**
Ask students to reflect on the Learning Targets of the lesson.
• I can use these symbols to compare numbers: >, <, and =.
• I can explain how to use symbols to compare numbers.

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.

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 4 with 4 being the highest confidence.

Exit Ticket Skill Tracker

Item	DOK	Skill	Standard
1	1	Recognize mathematical symbols	1.NBT.B.3
2	2	Compare 2-digit numbers	1.NBT.B.3
3	2	Compare 2-digit numbers	1.NBT.B.3
4	2	Compare 2-digit numbers	1.NBT.B.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 🅑 or 🅔 activities
3 or 4	*Take Another Look* or any of the 🅑 activities
2 or fewer of 4	Small Group Intervention or any of the 🅡 activities

Key for Differentiation

🅡 Reinforce Understanding
🅑 Build Proficiency
🅔 Extend Thinking

Lesson **3-8**

Exit Ticket

Name _____

1. Which symbol means *less than*?
   Ⓐ <   B. >   C. =

2. Draw the tens and ones. Then write <, >, or =.

   Check student drawings.

   46   <   62

3. Compare the numbers. Write <, >, or =.

   84 > 48

4. Compare the numbers. Choose <, >, or =.

	>	<	=
39 ◯ 51		✔	
46 ◯ 46			✔
5 ◯ 55		✔	
70 ◯ 68	✔		

Reflect On Your Learning

👎   ✊   👍

40 Assessment Resource Book

R Reinforce Understanding

Choose the Symbols

SMALL GROUP

Work with students in pairs. Each student chooses a number from 1–99. Students compare their numbers and work with their partner to select which symbol to use. If students are not using the correct symbols, then explain the meaning of each symbol. Have students use base ten blocks if needed. Remind students that they do not always have to compare using the greater number first.

Take Another Look Lessons

GO ONLINE

Assign the interactive lessons to reinforce targeted skills.

- Compare Numbers 1 to 50 Using =, >, or <
- Compare Numbers Using a Hundred Chart
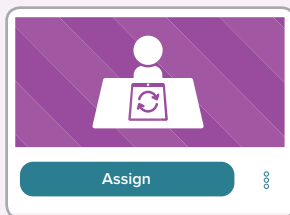
Assign

INDEPENDENT WORK
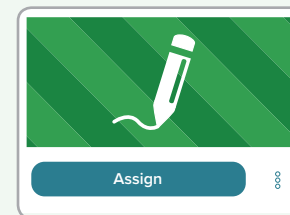
Differentiation Resource Book, p. 25

Lesson **3-8** • Reinforce Understanding
Use Symbols to Compare Numbers

Name _____

Review
You can use symbols to compare numbers.

6 tens is greater than 5 tens.
62 > 5I

tens	ones		tens	ones
6	2		5	1

5 tens is less than 6 tens.
5I < 62

4 tens equals 4 tens.
3 ones equals 3 ones.
43 = 43

tens	ones		tens	ones
4	3		4	3

Compare the numbers. Write >, <, or =.

I.
tens	ones		tens	ones
3	8	<	3	9

2.
tens	ones		tens	ones
9	4	>	9	2

3. 87 < 89

4. 45 = 45

Differentiation Resource Book

B Build Proficiency

Practice It! Game Station
Tens and Ones Showdown
Students practice using comparison symbols.

WORKSTATIONS

Interactive Additional Practice

GO ONLINE

Assign the digital version of the Student Practice Book.

Assign

INDEPENDENT WORK

Student Practice Book, pp. 25–26

Lesson **3–8**
Additional Practice

Name _____

Review
You can use > (is greater than), < (is less than), and = (is equal to) to compare numbers.

28 is less than 4I
28 < 4I

Circle the correct symbol.

I. is equal to   >   <   (=)
2. is greater than (>)   <   =
3. is less than   >   (<)   =

Compare the numbers. Write >, <, or =.

4. 98 (=) 98
5. 26 (>) I9
6. 50 (<) 70
7. II (=) II

Student Practice Book

Own It! Digital Station

Games

Assign the digital game to develop fluency with adding numbers from 1 to 9.
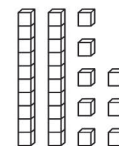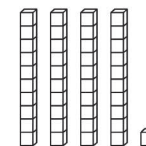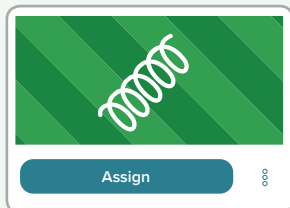
Assign

Extend Thinking

Use It! Application Station

Comparing Temperatures Students write a script for a weather report comparing temperatures. They then either record a video or perform a skit with the script.

Spiral Review

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

Assign

Websketch Exploration

Assign a websketch exploration to apply skills and extend thinking.

Assign

Student Practice Book, pp. 25–26

Compare the numbers. Write >, <, or =.

8. 21 $<$ 39
9. 38 $>$ 31
10. 53 $=$ 53
11. 64 $>$ 54
12. 91 $>$ 77
13. 42 $<$ 43
14. 30 $=$ 30
15. 86 $>$ 76

16. Matt jogs 47 miles. Chen jogs 51 miles. Masha jogs 47 miles. Which two people jog an equal number of miles? Write >, <, or = to compare the numbers.

   (Matt)   Chen   (Masha)

   47 $=$ 47

17. There are 68 red balls and 71 green balls in a gym. Are there more red balls or green balls? Write >, <, or = to compare the numbers.

   (green balls)   red balls

   68 $<$ 71

Math @ Home Activity

Look for situations around your home where your child can practice using the symbols >, <, and =. For example, if you have 10 oranges and 11 apples, ask your child to compare the numbers. Your child can carry around self-sticking notes and a pencil to draw the correct comparison symbols for different situations.

Student Practice Book
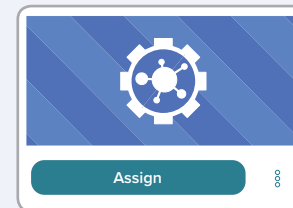
Differentiation Resource Book, p. 26

Lesson **3-8** • Extend Thinking

Use Symbols to Compare Numbers

Name

Taj is entering scoreboard data. How can you use >, <, or = to help him show each statistic?

1. At halftime, Galen has 11 points and Eve has 14 points.

   At halftime, Galen's points $<$ Eve's points.

2. After period 3, Galen has 14 points and Eve still has 14 points.

   After period 3, Galen's points $=$ Eve's points.

3. By the end of the game, the Lions score 30 points with 3-point shots. The Tigers score 36 points with 3-point shots.

   The number of Tiger 3-point shots $>$ the number of Lion 3-point shots.

4. At the end of the game, Taj flashes up the score. Help him enter >, <, or =.

   LIONS 75 $>$ TIGERS 57!

   LIONS WIN! LIONS WIN!

5. Help Taj write another statistic about the game using >, or <.

   Sample answer: TIGERS 57 < LIONS 75

Differentiation Resource Book

Unit Review   Name _____

Vocabulary Review

Use the vocabulary to complete each sentence.

compare	equal to
greater than	group of ten
less than	

1. The = sign means _____**equal to**_____.

2. The < sign means _____**less than**_____.

3. A group of 10 ones is 1 _____**group of ten**_____.

4. To look at numbers and see which is greater is to _____**compare**_____.

5. The > sign means _____**greater than**_____.

Unit 3 • Place Value   **97**

Review

6. Look at the cubes. Complete the sentence.
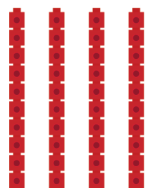
   __4__ tens and 0 ones is __40__.

7. What is another way to show the number 18?
   A. 1 ten and 1 one
   B. 1 ten and 8 ones
   C. 8 tens and 1 one

8. Look at the number.
   75
   Complete the sentence.
   __7__ tens and __5__ ones is __75__.

9. Is the comparison true or false? Mark the correct answer.

	True	False
17 = 17	√	
39 < 93	√	
53 > 81		√

98   Unit 3 • Review

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	3-8
2	3-8
3	3-1
4	3-6
5	3-8

Review

Item Analysis

Item	DOK	Lesson	Standard
6	1	3-2	1.NBT.B.2.c
7	1	3-1	1.NBT.B.2.b
8	1	3-4	1.NBT.B.2
9	1	3-8	1.NBT.B.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
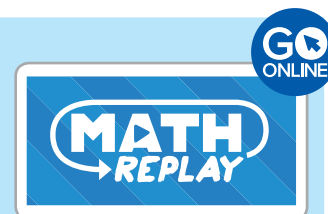
Item Analysis (continued)

Item	DOK	Lesson	Standard
10	2	3-7	1.NBT.B.3
11	1	3-8	1.NBT.B.3
12	1	3-8	1.NBT.B.3
13	1	3-8	1.NBT.B.3

Performance Task

Standard: 1.NBT.B.2, 1.NBT.B.2.a, 1.NBT.B.2.c

Rubric (4 points)

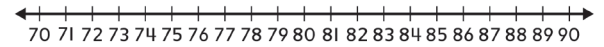| Part A – 2 points	
1 POINT	Student writes the correct number of tens and ones.
1 POINT	Student writes the correct number of total cubes.

Part B – 1 point	
1 POINT	Student writes the correct number of tens and ones in a different way than Part A.

Part C – 1 point	
1 POINT	Student writes the correct number of tens and ones in a different way than Part A and Part B .

🔄 Reflect

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

---

10. Use the number line.

70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90

Is the comparison true or false?
Mark the correct answer.

	True	False
80 is less than 77.		√
78 is greater than 72.	√	
83 is greater than 86.		√

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

26 $<$ 29

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

51 $=$ 51

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

63 $>$ 48

Performance Task

1. Sasha, Lee, and Jordan visit the history museum. They all see the same number of fossils. Each friend shows the number of fossils with connecting cubes.
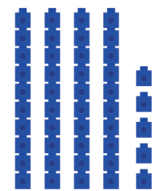
Part A: These are Sasha's cubes. How many groups of ten and how many ones? Write the numbers.

__4__ tens and __5__ ones is __45__ .

Part B: Lee makes fewer groups of ten than Sasha. Write the number of Lee's cubes. **Sample answers:**

__3__ tens and __15__ ones

Part C: Jordan makes different groups of tens than Sasha and Lee. Write the number of Jordan's cubes. **Sample answers:**

__2__ tens and __25__ ones

🔄 Reflect

What are different ways you can use place value to show and compare numbers? **Answers may vary.**

Fluency Practice

Unit **3**

Fluency Practice

Name _____

Fluency Strategy

You can count on to help you add.
4 + 2 = ?

■ ■ ■ ■ + ■ ■
    4   5 6

So, 4 + 2 = 6.

I. How can you draw to show how to add 7 + I?
Write the number.

■ ■ ■ ■ ■ ■ ■ + ■
       7   **8**

7 + I = **8**

Fluency Flash

How can you count on to add? Write the number.

2. ■ ■ ■ + ■ ■
    3   **4 5**

3 + 2 = **5**

3. ■ ■ ■ ■ ■ + ■
       5   **6**

5 + I = **6**

Unit 3 • Place Value   **I0I**

Fluency Check

What number shows a way to put together or break apart? Write the number.

4. 4 + **1** = 5   **6.** 7 + **3** = I0

5. I0 = 3 + **7**   **7.** 5 = 5 + **0**

What is the sum? Count on to add.

8. 6 + I = **7**   **II.** 3 + 2 = **5**

9. 8 + 2 = **10**   **I2.** 2 + I = **3**

I0. 5 + 2 = **7**   **I3.** I + 2 = **3**

Fluency Talk

What are some tools you could use to help you count on to add? Explain.
Explanations may vary.

What are some tools you could use to help you break apart I0?
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 count on to add.

Fluency Progression

Unit	Skill	Standard
1	Compose and Decompose 5	K.OA.A.5
2	Compose and Decompose 10	K.OA.A.5
3	**Count On to Add**	**1.OA.C.6**
4	Count Back to Subtract	1.OA.C.6
5	Count Up to Subtract	1.OA.C.6
6	Use Combinations of 10 (Addition)	1.OA.C.6
7	Use Combinations of 10 (Subtraction)	1.OA.C.6
8	Add or Subtract 0	1.OA.C.6
9	Use Doubles	1.OA.C.6
10	Use Halves	1.OA.C.6
11	Use Near Doubles (Addition)	1.OA.C.6
12	Use Near Doubles (Subtraction)	1.OA.C.6
13	Add and Subtract 10	1.OA.C.6

Fluency Expectations

Grade K
- Add and subtract within 5.

Grade 1
- Add and subtract within 10.

Grade 2
- Add and subtract within 20 by memory.
- Add and subtract within 100.

Number Cube Game

Students draw on their understanding of place value of 2-digit numbers. Use the rubric shown to evaluate students' work.

Standards: 1.NBT.B.2, 1.NBT.B.3
Rubric (9 points)

Part A (DOK 3) – 2 points

2 POINTS	Student's work shows proficiency in modeling a number given its possible digits. Student shows and writes both correct numbers.
1 POINT	Student's work shows developing proficiency in modeling a number given its possible digits. One number is correct.
0 POINTS	Student's work reflects a poor understanding of modeling a number given its possible digits. Neither number is correct.

Part B (DOK 3) – 2 points

2 POINTS	Student's work shows proficiency in comparing two numbers. Student's answer and explanation are correct.
1 POINT	Student's work shows developing proficiency in comparing two numbers. Student identifies the greater number but does not give a correct explanation.
0 POINTS	Student's work reflects a poor understanding of comparing two numbers. The answer and explanation are incorrect.

Part C (DOK 2) – 1 point

1 POINT	Student's work shows proficiency with writing the greatest number given digits. Student identifies the correct number.
0 POINTS	Student's work reflects a poor understanding of writing the greatest number given digits. Student's answer is incorrect.

Part D (DOK 3) – 2 points

2 POINTS	Student's work shows proficiency in comparing numbers on a number line. Student's answer and explanation are correct.
1 POINT	Student's work shows developing proficiency in comparing numbers on a number line. Student's answer is correct, but the explanation is incorrect or missing.
0 POINTS	Student's work reflects a poor understanding of comparing numbers on a number line. Student's answer is incorrect.

Part E (DOK 3) – 2 points

2 POINTS	Student's work shows proficiency in writing a comparison statement. Student's answer and explanation are correct.
1 POINT	Student's work shows developing proficiency in writing a comparison statement. Student's answer is correct but the explanation is incorrect or missing.
0 POINTS	Student's work reflects a poor understanding of writing a comparison statement. Student's answer and explanation are incorrect or missing.

Unit 3
## Performance Task

Name _____

Number Cube Game

Caleb and Asher are playing a game.

- There are two number cubes with numbers 1–6.
- Players roll the number cubes and make a 2-digit number.
- The greater number wins.

Part A

Caleb rolls the numbers 3 and 6. Draw base-ten blocks to show each of the numbers Caleb can make. Write the number the base-ten blocks show below each group of blocks.
Sample drawings shown.

36   **63**
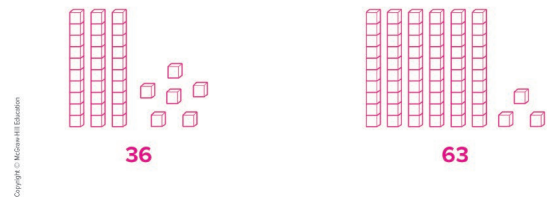
Part B

Caleb wants to choose the greater number to help him win the game. Which number should Caleb choose? Explain why that number is greater.

63; Sample answer: The number 63 has 6 tens and the number 36 has 3 tens, so 63 is greater than 36.
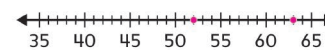
Part C

Asher rolls the numbers 2 and 5. What is the greatest 2-digit number he can make?

52

Part D

Show each number on the number line.

35 40 45 50 55 60 65

Who wins the game? Explain.

Caleb wins; Sample answer: 63 is to the right of 52 on the number line, so 63 is greater.

Part E

Write a statement using <, >, or = to show which number is greater. How can you use base-ten blocks to support this answer?

63 > 52; Sample answer: 63 has 6 tens rods and 3 unit cubes and 52 has 5 tens rods and 2 unit cubes. There are more tens in 63.

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

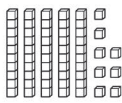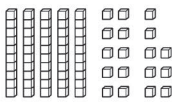| Item	DOK	Lesson	Guided Support Intervention Lesson	Standard
1	2	3-1	Model Tens and Ones (11–19)	1.NBT.B.2.a, 1.NBT.B.2.b
2	2	3-5	Digits in Numbers 1 to 99	1.NBT.B.2
3	2	3-2	Count to 100 by Tens	1.NBT.B.2.a, 1.NBT.B.2.c
4	2	3-6	Compare Numbers 1 to 50	1.NBT.B.3
5	2	3-8	Compare Numbers 1 to 50 Using =, >, or <	1.NBT.B.3
6	3	3-1	Combine Tens and Ones (11–19)	1.NBT.B.2.b
7	3	3-3	Model Tens and Ones (50–99)	1.NBT.B.2
8	2	3-4	Digits in Numbers 1 to 99	1.NBT.B.2
9	3	3-5	Model Tens and Ones (50–99)	1.NBT.B.2
10	2	3-6	Compare Numbers 1 to 50	1.NBT.B.3
11	2	3-8	Compare Numbers 1 to 50 Using =, >, or <	1.NBT.B.2
12	2	3-4	Group Tens and Ones (50–99)	1.NBT.B.2
13	2	3-3	Model Tens and Ones (50–99)	1.NBT.B.3
14	2	3-7	Compare Numbers 1 to 50	1.NBT.B.3

GO ONLINE

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

Unit Assessment Form A
Assign

Unit Assessment Form B
Assign

Unit **3**

Unit Assessment, Form A

Name _____

1. Draw counters in the ten-frames to show how many. Then write the number.

I ten and 4 ones is __14__.

2. What are different ways to show the number 15? Choose all the correct answers.

A. 5 tens and I one   **B.** 0 tens and 15 ones

C. I ten and I one   **D.** I ten and 5 ones

3. How many groups of 10? Write the numbers.

__8__ tens and __0__ ones is __80__.

4. Which words correctly compare the numbers?
56 is _____ 65.

A. equal to   B. greater than   **C.** less than

---

5. Draw the tens and ones. Then write >, <, or =.

Check student drawings.

35   **>**   29

6. Blake has 8 toys. His friend has 10 toys. How many toys do they have in all?

__18__ toys

7. Mrs. Williams has 7 boxes of pencils. There are 10 pencils in each box. She has 3 extra pencils. How many pencils does Mrs. Williams have in all?

__73__ pencils

8. Complete the sentences about the number 86.

The value of the 8 is __8__ tens or __80__.
The value of the 6 is __6__ ones or __6__.
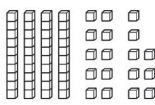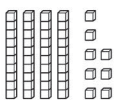
Unit 3
Unit Assessment, Form A (continued)

Name_____

9. Which sets of base-ten blocks show 58?
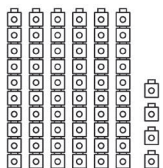Choose all the correct answers.

(A.)   **B.**

(C.)   **D.**

10. Is the comparison true? Choose True or False.

	True	False
48 is greater than 24.	✓	
36 is equal to 36.	✓	
63 is less than 29.		✓

11. How can you compare the numbers?
Choose <, >, or =.
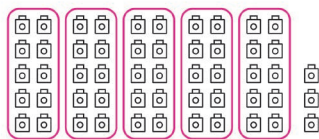
45 ◯ 48

(A.) <   **B.** >   **C.** =

---

12. Write the number of cubes in the place-value chart.

tens	ones
6	4

13. Circle each group of 10. Are there any ones left over?

Write the numbers to show how many.
__5__ tens and __3__ ones is __53__ .

14. Use the number line to compare the numbers.

40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

Is the comparison true? Choose True or False.
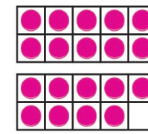
	True	False
41 is greater than 51.		✓
46 is less than 54.	✓	
58 is greater than 49.	✓	

Form B

Unit 3
Unit Assessment, Form B

Name_____

1. Draw counters in the ten-frames to show how many. Then write the number.

1 ten and 9 ones is __19__ .

2. What are different ways to show the number 17? Choose all the correct answers.

(A.) 0 tens and 17 ones   **B.** 1 ten and 1 one
C. 7 tens and 1 one   (D.) 1 ten and 7 ones

3. How many groups of 10? Write the numbers.

__6__ tens and __0__ ones is __60__ .

4. Which words correctly compare the numbers?
87 is _____ 78.
A. equal to   (B.) greater than   **C.** less than

apples are in the bucket?
__13__ apples

7. Hafsa has 3 bags of bagels and 7 extra bagels. There are 10 bagels in each bag. How many bagels does Hafsa have in all?
__37__ bagels

8. Complete the sentences about the number 49.
The value of the 4 is __4__ tens or __40__ .
The value of the 9 is __9__ ones or __9__ .
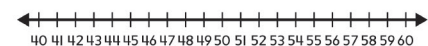
10. Is the comparison true? Choose True or False.

	True	False
45 is greater than 61.		✓
29 is equal to 92.		✓
38 is less than 72.	✓	

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

64 ◯ 61

A. <   (B.) >   **C.** =

Write the numbers to show how many.
__2__ tens and __7__ ones is __27__ .

14. Use the number line to compare the numbers.

40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

Is the comparison true? Choose True or False.

	True	False
51 is greater than 45.	✓	
43 is less than 53.	✓	
49 is greater than 54.		✓

Grade 1

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: Number Patterns
- Counting Patterns to 100
- Patterns on a Number Chart to 120
- Patterns on a Number Line
- Patterns When Reading and Writing Numbers
- Patterns When Representing Objects in a Group

Unit 3: Place Value
- Numbers 11 to 19
- Understand Tens
- Represent Tens and Ones
- Represent 2-Digit Numbers
- Represent 2-Digit Numbers in Different Ways
- Compare Numbers
- Compare Numbers on a Number Line
- Use Symbols to Compare Numbers

Unit 4: Addition within 20: Facts and Strategies
- Relate Counting to Addition
- Count On to Add
- Doubles
- Near Doubles
- Make a 10 to Add
- Choose Strategies to Add
- Use Properties to Add
- Solving Problems
- Add Three Numbers
- Find an Unknown Number in an Addition Equation
- Understand the Equal Sign
- True Addition Equations

Unit 5: Subtraction within 20: Facts and Strategiess
- Relate Counting to Subtraction
- Count Back to Subtract
- Count On to Subtract
- Make a 10 to Subtract
- Use Near Doubles to Subtract
- Use Addition to Subtract
- Showing Problems with Equations
- Use Fact Families to Subtract
- Find an Unknown Number in a Subtraction Equation
- True Subtraction Equations

Unit 6: Shapes and Solids
- Understand Defining Attributes of Shapes
- Understand Non-Defining Attributes
- 2-Dimensional Shape Sort (6pgs)
- Compose Shapes
- Build New Shapes
- Understand Attributes of Solids
- Build New Solids

Unit 7: Meanings of Addition
- Represent and Solve Add To Problems
- Represent and Solve More Add To Problems
- Represent and Solve Put Together Problems
- Represent and Solve More Put Together Problems
- Problems and Equations 1
- Represent and Solve Addition Problems with Three Addends
- Solve Addition Problems

Unit 8: Meanings of Subtraction
- Represent and Solve Take From Problems
- Represent and Solve More Take From Problems
- Represent and Solve Take Apart Problems
- Problems and Equations 2
- Represent and Solve More Take Apart Problems
- Solve Problems Involving Subtraction
- Solve More Problems Involving Subtraction
- Solve Problems Involving Addition and Subtraction
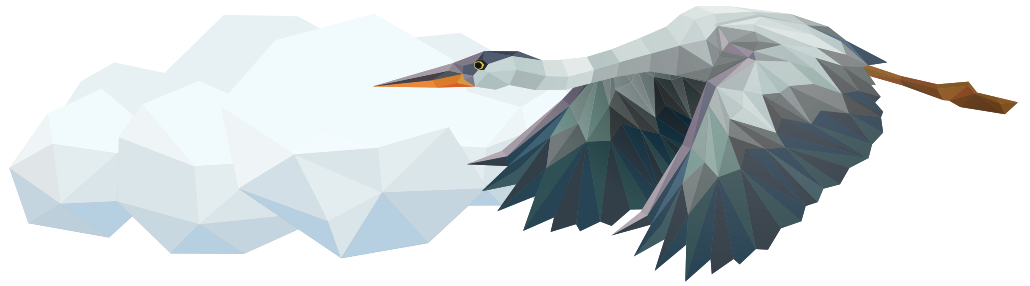
Unit 9: Addition within 100
- Use Mental Math to Find 10 More
- Number Chart Parts
- Represent Adding Tens
- Represent Adding Tens and Ones
- Use Tools to Add within 100
- Decompose Addends to Add
- Regroup to Add
- Explain Addition Strategies
- Add 2-Digit Numbers

Unit 10: Compare Using Addition and Subtraction
- Represent and Solve Compare Problems
- Represent and Solve Compare Problems Using Addition
- Showing Addition and Subtraction
- Represent and Solve More Compare Problems
- Solve Compare Problems Using Addition and Subtraction

Unit 11: Subtraction within 100
- Use Mental Math to Find 10 Less
- Represent Subtracting Tens
- Subtract Tens
- Use Addition to Subtract Tens
- Showing Problems with Tens
- Explain Subtraction Strategies

Unit 12: Measurement and Data
- Compare and Order Lengths
- More Ways to Compare Lengths
- Strategies to Measure Lengths
- More Strategies to Measure Lengths
- Tell Time to the Hour
- Tell Time to the Half Hour
- Organize Data
- Represent Data
- Interpret Data
- Solve Problems Involving Data

Unit 13: Equal Shares
- Understand Equal Shares
- Partition Shapes into Halves
- Partition Shapes Into Fourths
- Partitioning into Fourths
- Describe the Whole
- Describe Halves and Fourths of Shapes