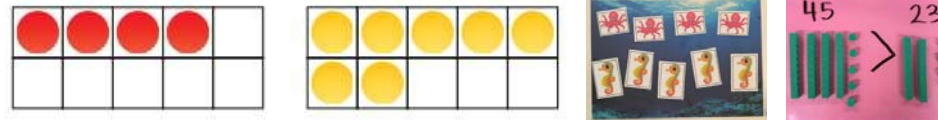


BIG IDEA: Understanding and using language such as *is greater than*, *is less than*, and *is equal to* is crucial for students as they learn to relate, compare, and order numbers. The mathematical phrases may be paired with related common phrases such as more than, less than, and the same as. Ten frames provide a visual representation of numbers. Students can compare numbers with a quick look to see which ten frame has more or fewer counters.

Other visual representations include hundred charts, base-ten blocks, storyboards, and quick pictures.



When teaching this concept, teachers will: 1) provide students with a variety of concrete materials and place value charts for representing two 2-digit numbers for making comparisons. Present the numbers orally as well as using written numerals; and 2) Pose questions such as “Which is greater?” “Which has more?” “Which is less?” or “Which has fewer?” to familiarize students with appropriate vocabulary. In these lessons students will: 1) use concrete materials such as objects on place value charts, ten frames, hundreds charts, and number lines to compare two 2-digit numbers; 2) describe the comparison using terms including *greater than*, *more than*, *less than*, *fewer than*, *equal to*, and *same as*; 3) compare two 2-digit numbers written as numerals; and 4) use the mathematical symbols $<$, $>$, and $=$ to represent comparisons symbolically.

Adapted from Go Math: Teaching for Depth, pg. 285C.

Professional Development Videos:

- [Equalities and Inequalities](#)
- [Make Sense of Problems to Compare Numbers](#)

Quarter 3 Fluency Resources:

- [Fluency Resources in Go Math](#)
- [Building Fluency Through Word Problems](#)
- [Building Fluency Through Number Talks: Rekenreks](#)
- [Building Fluency Through Number Talks: Double Ten-Frames](#)
- [Building Fluency Through Number Talks: Number Sentences](#)

ESSENTIAL QUESTION: How do you use place value to compare numbers?

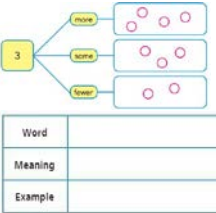
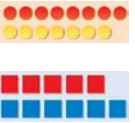
STANDARDS: 1.NBT.3, 1.NBT.5

ELD STANDARDS:

- ELD.PI.1.1-Exchanging information/ideas via oral communication and conversations.
- ELD.PI.1.3-Offering opinions and negotiating with/persuading others.
- ELD.PI.1.5-Listening actively and asking/answering questions about what was heard.

- ELD.PI.1.9- Expressing information and ideas in oral presentations.
- ELD.PI.1.11- Supporting opinions or justifying arguments and evaluating others’ opinions or arguments.
- ELD.PI.1.12-Selecting and applying varied and precise vocabulary.

Lesson	Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools Go Math! Teacher Resources G1	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal
7.1 Hands On: Algebra • Greater Than	1.NBT.3 MP 5 MP 7 Companion Pg. 88	How can you compare two numbers to find which is greater?	When the whole numbers have a different number of digits, the number with more digits is greater. When two whole numbers have the same number of digits, compare the digits in the greatest place first.	Base-Ten blocks, Ten frames Place Value Mat Mini-Ten frames	Display two numbers: 31 and 36. Have students draw a quick picture to represent the numbers. Which number is greater? How do you know? Continue with other number combinations: 14 and 19, 24 and 26.	Is greater than (>)	ELD Standards <ul style="list-style-type: none"> ELD Standards ELA/ELD Framework ELPD Framework ELL Math Instruction Framework Integrating the ELD standards into Math 	Write a number that is greater than 29. Draw quick pictures to explain how you know it’s greater.

7.2	Hands On: Algebra • Less Than	1.NBT.3 MP 5 MP 7 Companion Pg. 88	How can you compare two numbers to find which is less?	In this lesson, children learn to compare numbers and identify the symbol for <i>is less than</i> . It is important that children distinguish between the symbols, but they also need to understand that either symbol can be used to express the same inequality. Switching the symbols and the position of the number that is greater and the number that is less provides the same information in different ways. In either form, the inequality symbol always points to the number that is less.	Base-Ten blocks, Ten frames Place Value Mat Mini-Ten frames	Write pairs of two-digit numbers from 50 to 99 on the board for students to compare. Or have the students roll 2 dice to create their own numbers. Partners work together to decide which number is greater. Partners write greater than sentences with words and symbols for the numbers they model. Encourage students to use base-ten blocks to check their work.	Is less than (<)	<p>Access Strategies</p> <ul style="list-style-type: none"> Organizing Learning for Student Access to Challenging Content Student Engagement Strategies Problem Solving Steps and Approaches 	Write a number that is less than 41. Draw quick pictures to explain how you know.									
7.3	Hands On: Algebra • Use Symbols to Compare	1.NBT.3 MP 1 MP 4 MP 8 Companion Pg. 88	How can you use symbols to show how numbers compare?	Some children may ask how they can remember which way the greater than or less than symbol goes. There are several ways that can help children remember the correct direction. Not all children will find the same way useful. Some children may come up with their own ways.	Base-Ten blocks, Ten frames Comparing Numbers *Challenge students in this activity to create their own story problems to match 1 or more of their number sentences. Place Value Mat	Have partners mix up the Numeral Cards (Go Math Resource Document TR26) for 50-100 and place them face down in a pile. Each student picks a card and turns it face up. Partners work together to write two different number sentences using > and < to compare the numbers. Students use base-ten models to check that their number sentences are correct.	Is greater than (>), Is less than (<), Is equal to (=)	<p>Equitable Talk</p> <ul style="list-style-type: none"> Accountable Talk Simply Stated Equitable Talk Conversation Prompts Accountable Talk Posters Five Talk Moves Bookmark Effective Math Talks <p>Cooperative Learning</p> <ul style="list-style-type: none"> Cooperative Learning Role Cards Collaborative Learning Table Mats Seating Chart Suggestions 	Using the number 55, write a number sentence that shows a number less than 55. Then write a number sentence that shows a number greater than 55.									
7.4	Problem Solving • Compare Numbers	1.NBT.3 MP 2 MP 4 MP 6 Companion Pg. 88	How can making a model help you compare numbers?	Modeling is a foundation of mathematical problem solving. Modeling represents the mathematics of a situation with drawings, physical objects, equations, or other means to make the situation easier to understand and to solve the problem. Practice with modeling can help children become life-long problem solvers. In this lesson, children model the conditions given in a problem by adding to a diagram that has been made for them.	Base-Ten blocks Comparing Numbers Place Value Mat Mini-Ten frames	Prepare index cards with several correct and incorrect comparisons, such as $75 > 76$, $48 > 42$, $89 > 91$, $59 < 67$, and $34 = 33$. Give partners a set of index cards. Have students look at the cards one by one. Partners decide if the comparison is true or false. If it is false, they state how to make it correct.	Is greater than (>), Is less than (<), Is equal to (=)	<p>Vocabulary Strategy</p>  <table border="1" data-bbox="2056 1071 2271 1169"> <tr> <td>Word</td> <td></td> <td></td> </tr> <tr> <td>Meaning</td> <td></td> <td></td> </tr> <tr> <td>Example</td> <td></td> <td></td> </tr> </table>	Word			Meaning			Example			Choose a number. Write two clues using the phrases “is greater than” and “is less than”. Then write what numbers might be the answer. Example: My number is greater than 12. My number is less than 20. My numbers can be 13, 14, 15, 16, 17, 18, or 19.
Word																		
Meaning																		
Example																		
7.5	Hands On • 10 Less, 10 More	1.NBT.5 MP 1 MP 3 MP 6 Companion Pg. 92	How can you identify numbers that are 10 less or 10 more than a number?	After identifying numbers that are 10 more and 10 less, children may notice certain regularities in the numbers. Guide children into focusing on similarities and differences, generalize from these examples, and create shortcuts.	Base-Ten blocks, Ten frames Place Value Mat Hundred Chart Hundred Chart How To Poster	Have pairs of students each roll two dice to generate a two-digit number. Have them determine which number is greater by building them with base ten blocks using a place value mat.	Is greater than (>), Is less than (<), Is equal to (=)	<p>Model and Discuss</p> 	Choose a number from 10 to 90, ex.68. Ask students to draw and write to show the numbers that are 10 less and 10 more than your number.									

[Mini-Ten frames](#)



46 > 31
46 is greater than 31.

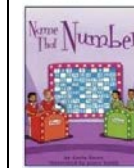
(Students may write the correct words, but they may write the wrong symbol. Having them write the symbol and the phrase “is greater than” or “is less than” will help solidify the use of the symbols.)

Sentence Frames:

- I know that ____ is bigger/smaller because _____.
- Some numbers less than ____ are _____.
- Some numbers greater than ____ are _____.

Literature Connection

Literature



Literature
Strawberries



Read the story and use place value to figure out the number of strawberries.

Assessments:

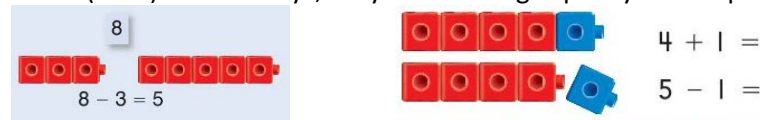
Go Math [Chapter 7 Test](#)

Go Math Chapter 7 Performance Task [Jamal's Marbles](#)

BIG IDEA: Learning to Add: The number system is embedded within the concept of adding. For instance, the basic pattern in counting numbers involves an increase by one from one number to the next. Students explore the concept of adding, building awareness of what it means to add and the effect that adding has on a number. As competency with addition increases, students can transfer their understanding to other contexts such as exploring numbers in a hundred chart.

Learning to Subtract: Once students understand that two numbers added together (then called addends) result in a sum, they are ready to develop the next relationship between the addends and the sum. When working with related facts, students learn that subtracting one of the addends from the sum results in a difference that is the other addend. When students are presented with problem situations, they build their understanding of subtraction concepts. It is important to solve problems that represent a variety of contexts such as take away and compare.

As students learn addition and subtraction, they have an opportunity to use a variety of formal and informal models (e.g., writing equations, using counting chips, developing their own drawings) to represent addition and subtraction situations. When students model with mathematics (MP4) in such ways, they are building capacity for deeper and meaningful understanding.



Adapted from Go Math: Teaching for Depth, Pg. 313E.

Professional Development Videos: [Use Mental Math to 2-digit Numbers](#), [Addition with Regrouping](#), [Subtraction with Regrouping](#)

ESSENTIAL QUESTION: How can you add and subtract two-digit numbers?

STANDARDS: 1.OA.6, 1.NBT.4, 1.NBT.6

ELD STANDARDS:

ELD.PI.1.1-Exchanging information/ideas via oral communication and conversations.

ELD.PI.1.3-Offering opinions and negotiating with/persuading others.

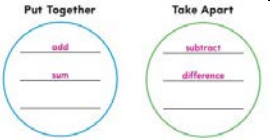

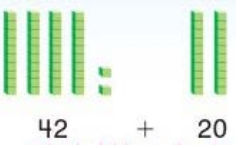
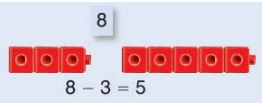
ELD.PI.1.5-Listening actively and asking/answering questions about what was heard.

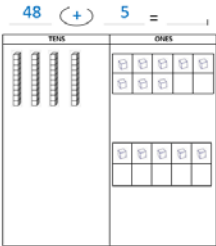
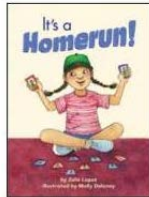


ELD.PI.1.9- Expressing information and ideas in oral presentations.

ELD.PI.1.11- Supporting opinions or justifying arguments and evaluating others' opinions or arguments.

ELD.PI.1.12-Selecting and applying varied and precise vocabulary.

Lesson		Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools Go Math! Teacher Resources G1	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal															
8.1	Add and Subtract within 20	1.OA.6 MP 1 MP 3 MP 6 Companion Pg. 47	What strategies can you use to add and subtract?	Children have learned several strategies for adding and subtracting. These strategies build on the properties of operations or on the inverse relationship of addition and subtraction. Understanding how and why these strategies work is key for children to add and subtract fluently. It is important for children to achieve fluency with facts to be successful in later work with multi-digit addition and subtraction.	Addition Strategies Poster Linking cubes Red/Yellow counters	Write $8 + 3 + 5 = \underline{\quad}$ on the board. Challenge partners to use this number sentence to show the six different ways they can add these numbers in different orders (using the strategies).	Addends, sum, difference	Vocabulary Strategy <table border="1" style="margin-left: 20px;"> <tr> <td style="text-align: center;">K Key Idea</td> <td style="text-align: center;">I Information</td> <td style="text-align: center;">M Memory Clue</td> </tr> <tr> <td style="text-align: center;">ones</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">ten</td> <td></td> <td></td> </tr> </table> <table border="1" style="margin-left: 20px;"> <tr> <td style="text-align: center;">Word</td> <td></td> </tr> <tr> <td style="text-align: center;">Meaning</td> <td></td> </tr> <tr> <td style="text-align: center;">Example</td> <td></td> </tr> </table>	K Key Idea	I Information	M Memory Clue	ones			ten			Word		Meaning		Example		Using $8 + 9 = \underline{\quad}$. Write 2 other related facts for this number sentence.
K Key Idea	I Information	M Memory Clue																						
ones																								
ten																								
Word																								
Meaning																								
Example																								
8.2	Hands On • Add Tens	1.NBT.4 MP 2 MP 7 Companion Pg. 90	How can you add tens?	As children begin adding tens, some may still need to use cubes or base-ten blocks to show the tens before drawing quick pictures. If children have difficulty making a transition to quick pictures, then they can trace the objects to make their drawings. Some children may be able to add tens in their heads using addition strategies. A child with strong	Base-ten blocks Place Value Mat Mini-Ten frames	Have students answer these and talk about the pattern(s) they see. $1 + 1 =$ $10 + 10 =$ $2 + 2 =$ $20 + 20 =$	Addends, sum, difference, tens, ones	<table border="1" style="margin-left: 20px;"> <tr> <td style="text-align: center;">K Key Idea</td> <td style="text-align: center;">I Information</td> <td style="text-align: center;">M Memory Clue</td> </tr> <tr> <td style="text-align: center;">ones</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">ten</td> <td></td> <td></td> </tr> </table> <table border="1" style="margin-left: 20px;"> <tr> <td style="text-align: center;">Word</td> <td></td> </tr> <tr> <td style="text-align: center;">Meaning</td> <td></td> </tr> <tr> <td style="text-align: center;">Example</td> <td></td> </tr> </table>	K Key Idea	I Information	M Memory Clue	ones			ten			Word		Meaning		Example		Write two numbers that have a sum of 80. Sample answers: $10 + 70$, $20 + 60$; $30 + 50$, and/or $40 + 40$. Draw quick pictures to represent the two
K Key Idea	I Information	M Memory Clue																						
ones																								
ten																								
Word																								
Meaning																								
Example																								

				mental math ability is able to flexibly compose numbers for use in different situations.		$4 + 5 =$ $40 + 50 =$ (Emphasize the difference between how many tens and its value. 1 ten = 10; 2 tens = 20... 6 tens = 60)			different number sentences.
8.3	Hands On • Subtract Tens	1.NBT.6 MP 3 MP 8 Companion Pg. 93	How can you subtract tens?	Skilled problem solvers use many approaches to find an answer after they have worked out what the problem means and what question needs to be answered. One approach often used is to create a similar but simpler problem to help determine a way to find the answer.	Base-ten blocks Place Value Mat	Game: Race to 0 Have students build the number 90 with 10 base ten rods. Label a Spinner (TR65) 10, 20, and 30. Have students take turns using a spinner and subtracting the number of tens indicated on the spinner. The winner is the student that gets to 0 first.	Addends, sum, difference, tens, ones	Sentence Frames _(7)___ tens has a value of _(70)___. To find the sum, first I _____. Then I _____. To find the difference, first I _____. Then I _____. Model and Discuss	Draw a picture to show how to solve 60-40.
8.4	Use a Hundred Chart to Add	1.NBT.4 MP 4 MP 6 Companion Pg. 90	How can you use a hundred chart to count on by ones or tens?	A hundreds chart is another tool that can be used to show children “why addition works.” Exposure to different methods that are efficient and useful with many numbers can help children build their mental math skills.	Hundred Chart Hundred Chart “How To” Poster	Have students explore the numbers on a hundred chart. Throughout their exploration, ask them the following: What do you notice when you move up 1 row? Down 1 row? To the left 1 column? To the right 1 column? Students can come up with the ‘rules’ on their own. Use the How To Poster as an anchor chart AFTER the students have discovered the pattern on their own.	Addends, sum, difference, tens, ones	  $42 + 20$	Use a Hundred chart to add 35 + 8. Describe/explain the direction and how many boxes you moved. Next add 67 + 30. Describe/explain the direction and how many boxes you moved.
8.5	Hands On • Use Models to Add	1.NBT.4 MP 4 MP 6 Companion Pg. 90	How can models help you add ones or tens to a two-digit number?	Quick pictures provide an easy way to model because drawings can be made quickly and simply. It is important to make accurate drawings of the number of tens and the number of ones used, but it is not important that the drawings look exactly like the base-ten blocks. Have children practice drawing lines and dots to represent tens and ones until they can do this easily and efficiently.	Base-ten blocks Mini-Ten frames Place Value Mat You may give students the option to use the base-ten blocks and/or draw a picture to solve problems on the place value mat. If you put the mat in	Game: Race to 40 Have students use base ten blocks and a Place Value Mat . Have them take turns rolling a die and adding the number of blocks indicated on the die. Allow students to exchange for a ten as needed. The winner is the first student to get to 40.	Addends, sum, difference, tens, ones	 $8 - 3 = 5$	Draw a picture to show how to solve 43 + 20.

					a sheet protector, students can use their dry-erase markers.				
8.6	Hands On • Make Ten to Add	1.NBT.4 MP 2 MP 5 Companion Pg. 90	How can making a ten help you add a two-digit number and a one-digit number?	When exploring addition of two-digit numbers, some learners prefer to start with the bigger part of the number and then add the smaller parts. Children may develop a deeper understanding of how numbers compose and decompose when encouraged to explore ways of adding that make sense to them.	Place Value Mat	Choose 2 addends from 11 to 49. Build them using the Place Value Mat and base-ten blocks. Draw them. Add in any order to find the sum.	Addends, sum, difference, tens, ones	 $40 + 13 = 53$	Use words and/or pictures to explain how to solve $44 + 7$.
8.7	Hands On • Use Place Value to Add	1.NBT.4 MP 1 MP 2 MP 7 Companion Pg. 90	How can you model tens and ones to help you add two-digit numbers?	In this lesson, children model the tens and ones in two-digit numbers to add. It is important for children to learn this approach to multi-digit addition so they have a better understanding of the meaning of addition.	Place Value Mat **When adding a two-digit number with a two-digit number, students need to decompose the numbers into their place values, so that they gain the understanding that you add tens with tens and ones with ones. Make reference to lesson 8.2 when they added tens with tens.	Write the following two problems on the board and discuss with students the similarities and differences. $46 + 7 =$ $\begin{array}{r} 46 \\ + 7 \\ \hline \end{array}$ $50 + 3 = 53$ $46 + 7 =$ $\begin{array}{r} 46 \\ + 7 \\ \hline 43\ 3 \end{array}$ $43 + 10 = 53$	Add, Addends, sum, difference, tens, ones	Literature Connection Literature  Have students read the story and add baseball cards. Literature 	How many tens and ones are in 12? How many tens and ones are in 36? Use tens and ones to solve $12 + 36$.
8.8	Problem Solving • Addition Word Problems	1.NBT.4 MP 1 MP 6 MP 8 Companion Pg. 90	How can drawing a picture help you explain how to solve an addition problem?	Problem-solving lessons can be rich opportunities for building critical thinking skills. Be open to different approaches that children may use, but be sure that they can support their ideas with sound reasoning. Work toward developing a problem-solving community within your classroom.	Steps to Solving Word Problems Part-Part-Total Template Word Problem Template	Ask students: How can you show tens and ones for the numbers 25 and 28? How do you find the sum? How do you add $50+12$? Solve the problem.	Addends, sum, difference, tens, ones	 Have students read the story and learn about addition and subtraction with regrouping.	Draw a picture to show how to find $22 + 35$.
8.9	Related Addition and Subtraction	1.NBT.4 MP 2 MP 3 MP 7 Companion Pg. 90	How can you use a hundred chart to show the relationship between addition and subtraction?	In this lesson, children build their understanding of the relationship between addition and subtraction when working with two-digit numbers.	Steps to Solving Word Problems Part-Part-Total Template Word Problem Template	Using a hundreds chart ask students: What direction do you move if you want to add ones? ... to add tens? What direction do you move if you are subtracting ones? ... subtracting tens?	Addends, sum, difference, tens, ones		I have 25 pencils in a cup. I take some out and give them to my friends. There are 12 pencils left in the cup. How many pencils did I give to my friends? Write a subtraction and addition sentence

									that you could use to solve this problem.
8.10	Practice Addition and Subtraction	1.NBT.4 , 1.NBT.6 MP 1 MP 3 MP 8 Companion Pgs. 90, 93	What different ways can you use to add and subtract?	Teachers may think that knowing several ways of doing the same thing confuses children. Rather than confusing children, learning a variety of approaches empowers them. Since children have different modalities, teaching a variety of strategies and showing different models for concepts and operations helps all children find a way that works for them.	Place Value Mat Hundred Chart Addition Strategies Poster Number Line Template	Numeral Cards and Sign Cards Go Math! Teacher Resources G1 (pages TR26-TR32) One partner chooses two numeral cards from the pile. The other partner chooses an operation card, and uses the “is equal to” sign card to form an incomplete number sentence. The two partners solve the number sentence and then share with each other their strategies. Continue this process as time permits or as a center option.	Addends, sum, difference, tens, ones		Show two ways (strategies) you can find $34 + 20$.

Assessments:

Go Math [Chapter 8 Test](#)

Go Math Chapter 8 Performance Task: [Adding Apples](#)

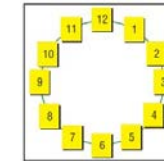
****Common Assignment** Critical Area Performance Task [Lucy's Craft Store](#)

BIG IDEA: Measuring Length- Length is the measurement of distance from one point to another. To explore the attribute of length, students should first use informal or nonstandard tools to represent the attribute of length. These tools include objects such as connecting cubes and paper clips. Some terms that describe the attribute of length are long, short, wide, narrow, high, low, and deep. Students should have opportunities to explore length in a variety of situations. At first, students may not recognize the language of height and depth as being measures of length. As they experience measuring these attributes, they will begin to recognize them as such. “An early understanding of measurement begins when children simply compare one object to another” (Schwartz, 2008, p. 134). After directly comparing objects, students can compare using an informal unit to measure an attribute. For example, first students may compare the lengths of two pencils by placing them next to each other. Then students could compare the lengths of the pencils by comparing each pencil to a cube train (linking cubes). Students should have experiences with ordering objects based on an attribute. Ordering a set of ribbons from shortest to longest is an example. Measuring objects offers students many opportunities to use appropriate tools strategically (MP5). Even when tools represent an informal measure, students learn to use them strategically. For example, given the choice of a connecting cube or a jump rope to measure the width of the classroom, students will realize that the jump rope will be more efficient.

Telling Time: By now students know that telling time is an essential skill in their lives. Telling time allows them to relate the duration of an event in their daily routines to reading a clock. These authentic applications provide a purpose for telling time and monitoring the duration of an event. Students need to know the following key concepts when interpreting the clock: With the short hand, we tell the hour and approximate how close we are to the next one by where it is pointing, and with the long hand, we focus on the distance traveled to tell the duration in minutes since the last hour, and how long until the next hour. **In first grade, students learn to tell and write time in hours and half-hours using analog and digital clocks.** In second grade, students tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. They also know relationships of time (minutes in an hour; days in a month; weeks in a year; etc). In third grade, students tell and write time to the nearest minute and measure time interval in minutes.

Adapted from Go Math: Teaching for Depth. Pg. 369E.

Adapted from The Common Core Math Companion (Gojak & Miles, 2015, pgs. 134-135).



Professional Development Videos: [Explore Length](#)

ESSENTIAL QUESTION: How can you measure length and tell time?




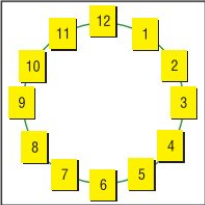

STANDARDS: 1.MD.1, 1.MD.2, 1.MD.3

ELD STANDARDS:

- ELD.PI.1.1-Exchanging information/ideas via oral communication and conversations.
- ELD.PI.1.3-Offering opinions and negotiating with/persuading others.
- ELD.PI.1.5-Listening actively and asking/answering questions about what was heard.

- ELD.PI.1.9- Expressing information and ideas in oral presentations.
- ELD.PI.1.11- Supporting opinions or justifying arguments and evaluating others’ opinions or arguments.
- ELD.PI.1.12-Selecting and applying varied and precise vocabulary.

Lesson		Standards & Math Practices	Essential Question	Math Content and Strategies	Models/Tools Go Math! Teacher Resources G1	Connections (ENGAGE prior knowledge)	Vocabulary	Academic Language Support	Journal
9.1	Hands On • Order Length	1.MD.1 MP 1 MP 3 MP 6 Companion Pg. 132	How do you order objects by length?	Comparing objects by length can be confusing for some children because the language depends on the objects being considered. Encourage children to compare objects and share their findings with others.	Mathboard, Strips of yarn, paper, or straws cut at various lengths	Have students recall their learning from kindergarten in relation to shortest and tallest. Call up 4 students to the front of the room. Have students arrange them from shortest to tallest. Repeat with a new group of students and switch the order, tallest to shortest.	Longest, shortest	Vocabulary Strategy Graphic Organizer 	Draw three different lines in order from shortest to longest. Label the shortest line and the longest line.
9.2	Indirect Measurement	1.MD.1 MP 1 MP 3	How can you compare lengths of three	To indirectly compare lengths of three objects, children reason abstractly about the relationship among the objects. In this lesson, children use the	Mathboard, Strips of yarn, paper, or straws cut at	Give pairs of students seven strips of different colored yarn. Have one partner randomly select three strips	Longest, shortest,		Use different colors to draw 3 lines that are different


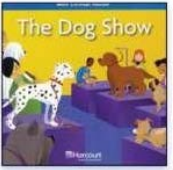



		MP 4 Companion Pg. 132	objects to put them in order?	Transitivity Principle for indirect measurement as they compare the lengths of objects to each other.	various lengths, crayons	of yarn. Have partners order the 3 strips of paper from shortest to longest and longest to shortest. Then grab 3 more pieces of yarn and repeat activity as time permits.	tallest (use students from class)		lengths. Then write 3 sentences comparing their lengths. <u>Sentence Frame:</u> (The marker)_ is longer than _(the key)_. (The key)_ is longer than _(the paperclip)_. So, _(the marker)_ is longer than (the key)_.
9.3	Hands On • Use Nonstandard Units to Measure Length	1.MD.2 MP 2 MP 6 MP 8 Companion Pg. 133	How do you measure length using nonstandard units?	In this lesson, children learn how to use nonstandard or informal units to measure length. Color tiles are an easy manipulative for children to use as the nonstandard unit. Experiences using nonstandard units to measure length help children connect measurement with everyday objects. It prepares them for using standard measurement tools and units.	Color tiles, paper clips, Classroom objects	What tool can we use to measure? (tiles, cubes, paperclips, yarn, pencils, etc.) Which tool would we use to measure a crayon? ... a book? ...a desk? ...the door?	Longest, shortest, about		Use words or pictures to explain how to measure an index card using color tiles. <u>Sentence Frame:</u> First, I _____. Then, I _____. Last, I _____.
9.4	Hands On • Make a Nonstandard Measuring Tool	1.MD.2 MP 2 MP 3 MP 5 Companion Pg. 133	How do you use a nonstandard measuring tool to measure length?	Using a nonstandard measuring tool helps children understand that a tool with completed iterations of a unit allows them to measure length quickly, helping them understand the value of using standard rulers later.	Mathboard, Color tiles, paper strips, paper clips, Classroom objects	Have students choose a nonstandard unit of measurement such as a cube or color tile. Have them measure 3 different classroom objects and record the measurements. (Ex: A staple is about 9 tiles long). Then have them order their 3 objects from longest to shortest.	About _____ paper clips		Draw a pictorial representation of how to accurately measure a square with paperclips.
9.5	Problem Solving • Measure and Compare	1.MD.2 MP 1 MP 3 Companion Pg. 133	How can acting it out help you solve measurement problems?	This lesson gives children practice connecting the measurement of an object with the length of the object. The measurement of an object can be used to compare the measurement of another object only if the same unit of measure is used. Children can use their paper clip measuring tool to measure objects and then compare the measurements of the objects.	Paper clips, Various objects, String/ribbon	Ask your students: What is one way that you can measure length? Why would you get a different answer measuring the same object with two different tools? Why is it important to measure objects correctly and precisely?	About ____ paper clips		Measure and draw to show a blue crayon and measure and draw to show a green crayon that is 1 paper clip longer than the blue crayon.
9.6	Time to the Hour	1.MD.3 MP 5 MP 6 MP 7	How do you tell time to the hour on a clock that has only an hour hand?	In this lesson, children learn that numbers appear around a clock face in order from 1 to 12.	Paper clips, Various objects, String/ribbon	Show students a variety of real world objects that capture time. (watch, iphone, analog clock, sand timer, kitchen timer etc) Choose	Hour hand		On a clock, show where the hour hand will be when it is 5:00.

Model and Discuss

Measuring Real Objects

Comparing Real Objects

Hour Clocks

		Companion Pg. 135				one item that does not capture time. (flashlight, stapler, tape, etc)		Literature Connection	
9.7	Time to the Half Hour	1.MD.3 MP 1 MP 2 MP 8 Companion Pg. 135	How do you tell time to the half hour on a clock that has only an hour hand?	Learning to measure time can be very challenging for young children. Many children find it difficult to understand the concept of time and the relationship of the two moving hands on a clock. The main focus of this lesson is telling time using only the hour hand. Children gain an understanding of the hour hand and its function in telling time to the hour and half hour. Eventually, they are ready to understand how the two hands of a clock work together to measure time even more precisely.	Clock Template Clock Template 2  Hour & Half Hour Clocks	Hour Clock Game Copy and cut the hour clock cards for students. Have students take turns each turning over a card. The student with the card pointing to a higher hour gets both cards. The student with the most cards in the end wins. Hour & Half Hour Clocks	Half past ____	Literature  Have students read the book and measure length with nonstandard units. Literature  Have students read the book and practice reading clocks.	On a clock, show where the hour hand and minute hand will be to show 1:30.
9.8	Tell Time to the Hour and Half Hour	1.MD.3 MP 2 MP 5 MP 6 Companion Pg. 135	How are the minute hand and hour hand different for time to the hour and time to the half hour?	About how long is a minute? About how long is an hour? Children can begin to understand the concept of time and about how long these units are. Discuss activities that might take about a minute and activities that might take about an hour.	Clock Template Clock Template 2  Hour & Half Hour Clocks	Half Hour Clock Game Copy and cut the half hour clocks for students. Have students take turns each turning over a card. The student with the card pointing to a higher hour and a half gets both cards. The player with the most cards in the end wins. Hour & Half Hour Clocks	Half past ____		On a clock, show 1 hour past 7:00. Show half past 6:00.
9.9	Practice Time to the Hour and Half Hour	1.MD.3 MP 1 MP 4 MP 8 Companion Pg. 135	How do you know whether to draw and write time to the hour or half hour?	Understanding how the hands move around an analog clock is important because it helps to show how time passes. The movement of the hands helps to show why an hour is more time than a half hour, and a half hour if more time than a minute. These introductory lessons help to build a foundation for later mastery of the concept of the passage of time.	Clock Template Clock Template 2 	Ask students the following time riddles: The hour hand points between 2 and 3. The minute hand points to 6. What time is it? As the hour hand moves from the 12 to the 1, how much time passes? As the hour hand moves from the 12 to the 6, how much time passes? Which hand moves faster, the hour hand or the minute hand?	Half past, how much time passes		Label a clock with: face, numbers, hour hand, and minute hand.

Assessments:

Go Math [Chapter 9 Test](#)

Go Math Chapter 9 Performance Task [Time and Length](#)