

(lesson loosely adapted from First Grade, Go Math 7.1)

Name: _____ Lesson Title: Which is greater?: Comparing 2 digit numbers

Grade Level: First Grade Small Group Date & Time: _____

UDL-Infused Elementary Inclusive Preservice Program Lesson Plan

Pre-Planning: Setting a Learning Goal & Anticipating Multiple Paths to that Goal

<p>Learning Objective(s) What do you want students to know, understand, or be able to do as a result of this lesson?</p> <p><i>To push your thinking:</i></p> <ul style="list-style-type: none">• What should all students learn?• What will some students learn?• What will a few students learn?	<p>Students will be able to compare two 2-digit numbers to determine which number is greater.</p> <p>Students will be able to use base ten blocks to represent the 2 digit numbers to help them determine which number is greater.</p> <p>Students will be able to compare the tens and ones columns of the numbers to determine which number is greater.</p> <p>Some students will be able to understand and use a greater than sign to convey which number is greater.</p>
<p>Rationale Why are you teaching this lesson?</p> <p>Questions to consider: <i>How does it connect to students' interests, strengths, and needs? How does it fit within the curriculum? What connections does it have to standards? In what ways does this lesson represent your commitment to social justice?</i></p>	<p>The students are just completing Go Math chapter 6, where they learned about tens and ones. They learned how to use base ten blocks to represent a number from 1 to 120 using tens and ones. This lesson builds on this knowledge from the previous unit because they are being asked to analyze a number they represent with base ten blocks and consider its relationship to other numbers. The students are going to use their knowledge of tens and ones to understand why 74 is greater than 73. The students love working with base ten blocks and are familiar with using a tens/ones chart to organize their blocks as they represent a number. In this lesson, they will use those same skills to build 2 numbers and compare them. This lesson pushes their mathematical thinking beyond how to represent a number, because they are critically thinking about a number by comparing it to another number. They are learning that greater numbers convey more or a greater amount. This basic number sense is a foundational component of mathematical thinking and will allow them to compare for themselves, in many different contexts in their lives, which amount is greater.</p> <p>Related Standards</p> <p>CCSS.MATH.CONTENT.1.NBT.B.2</p>

	<p>Understand that the two digits of a two-digit number represent amounts of tens and ones.</p> <p>CCSS.MATH.CONTENT.1.NBT.B.3</p> <p>Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.</p>
<p>Prerequisite Knowledge</p> <p>What prior knowledge are you counting on?</p> <p>Questions to consider: <i>What will you do if students demonstrate that they do NOT have such knowledge?</i> <i>What will you do if it becomes clear that students have already mastered your objective?</i></p>	<ul style="list-style-type: none"> ● Knowledge of how to use base ten blocks, ones blocks, and the chart to represent a number <ul style="list-style-type: none"> ○ if not demonstrated, we will start by reviewing how to show a number using the blocks and build from there to comparison ● Knowledge of what the ten blocks and ones blocks represent ● Knowledge of how to write a 2 digit number ● Knowledge of how to count by tens and how to count by ones <ul style="list-style-type: none"> ○ if not demonstrated, we will chant count as a group
<p>Anticipate Evidence of Learning</p> <p>How will you know if students have achieved the learning objective(s)? Consider listing multiple ways that students might demonstrate understanding by the end of the lesson.</p>	<ul style="list-style-type: none"> ● Students are able to represent the numbers using their base ten blocks on their individual chart ● Students are able to verbally explain how they know which number is greater by using their base ten blocks and chart as reference ● Students are able to successfully complete math problems where they determine which number is greater independently in their workbook ● Students are able to use the greater than sign to show which number is greater
<p>Teaching for Diversity</p> <p>UDL invites us to consider our learners' diverse strengths, interests, and needs <i>before</i> planning so that we can "plan for the many." Brainstorm multiple means of representation, expression, and engagement that could be available to <i>all</i> students during this lesson.</p>	<p><i>Multiple Means of Representation</i></p> <p><i>What are some different ways that content could be presented to learners throughout the lesson?</i></p> <p>Visually</p> <ul style="list-style-type: none"> ● through the use of base ten blocks and tens/ones chart ● drawing/writing in my own math workbook that I use to model for the students ● mini whiteboard with different colored markers <p>Orally</p> <ul style="list-style-type: none"> ● teacher speaking to small group <p>Kinesthetically</p> <ul style="list-style-type: none"> ● pointing with fingers at the base ten blocks, touching each as they count ● moving around the base ten blocks to tens/ones columns on the chart

Multiple Means of Expression

What are some different ways that students could “show what they know” throughout the lesson?

- Students representing numbers using base ten blocks on their chart
- Students speaking to teacher in small group or one to one
- Through the independent math work that students complete in their math workbook

Multiple Means of Engagement

What are some different ways that you can help students get “fired up” about their learning during this lesson?

- The students really enjoyed using the base ten blocks and tens/ones chart when we used them in the past. They will hopefully be engaged and excited when they have the opportunity to use them again.
- Using real life anecdotes to help them see how this knowledge can be helpful outside of the classroom. (If I’m at the store and one box has thirty cookies, but another box comes with 35, which box has more cookies and which would I rather buy?)

Accessibility Extensions

Do you anticipate any additional accessibility and participation challenges? How will you address them?

I am teaching this lesson to a small group of math learners who often work slowly and need a lot of coaching or scaffolding for multi-step activities, especially in math. Using the base ten blocks and chart has become chaotic and messy in the past. However, I hope in teaching a small group at one table, it will be easier for me to attend to the students’ needs and make sure that the materials are being used properly. Some of the students are easily distractible and need instructions to be repeated a few times and slowly. If I see that some students get it I might send them to work on the problems independently so that I can work with the ones in the group that need more guidance. This will help make sure that no one is waiting for their peers who take more time, but that everyone is working at a pace that helps them learn.

Planning: Step-by-Step List of Instructional Moves

In each section below, specify the sequence of instructional activities. Bullet points are fine. Providing a “script” for what you plan to say is also fine. Consider how you will coordinate materials, bodies, and time. Use small boxes to indicate time.

Materials List:

- green mini base ten blocks and ones
- tens/ones charts
- pencils
- Go Math chapter 7 student workbooks
- mini-whiteboard and markers

Introduction

How will you invite students into the learning experience?

Consider:

A hook, an immersive experience, a connection to yesterday's lesson, modeling...

Minutes:

5 min. - 7 min.

Boys and girls, thanks for being a part of my math group today. We are starting chapter 7.

I want to start by asking you all a question:

If I have 15 erasers and Ms. H has 20 erasers, who has more? *(take quiet hands)* Yes, Ms. H has more erasers.

How did you figure out who had more erasers? You could count up from 15 to 20. You know that 20 comes after 15 when you count. (You could also look at the hundreds chart and see that 20 comes after 15.)

Today, we are going to look at two (2 digit) numbers and learn how to figure out which number is the **greater** number. *(write word greater on mini-whiteboard)*

Can everyone say the word greater?

The greater number means the number that is bigger or more.

Can somebody tell me a number greater than 15? *(take quiet hands)* A number greater than 76?

We are going to be using base ten blocks and charts to show our numbers. You are each going to get a chart and a bag with tens and ones. Put your chart in front of you and your bag next to it. *(pass out materials)*

Remember, when I ask you to show a number, you put the tens blocks in the tens column and the ones in the ones column.

Let's start by getting our math brains warmed up. Show me the number 13 with your blocks! *(write 13 on whiteboard and check to make sure boards are correct)* If you are done, turn to help a friend.

Okay, everyone's looks good, now clear your board. Let's try one more, everyone show me 42. *(write 42 on whiteboard and check to make sure boards are correct)*

That was a great warm up!

<p><u>Exploration/Concept Development</u></p> <p>Consider: <i>Guided practice, independent practice, a group or partner exploration...</i></p>	<p>Minutes: 15 min.</p>	<p>Now, we are going to make this activity more exciting. I am going to ask you to show me 2 numbers on your board. Here is how we are going to do it.</p> <p>I am going to take my chart and fold it in half. Then I am going to open it and put it on my desk. Everybody copy me.</p> <p>Now I have 2 sections, so I can put one number on the top and one number on the bottom.</p> <p>I have a story to share with you. Yesterday I went to the store to buy a box of cookies. I wanted to buy a lot of cookies. One box came with 40 cookies. The other box came with 35 cookies. Which box has more cookies?</p> <p>I want to know which number is greater, 35 or 40. I am going to use my chart to help me. First I will show the number 35. Can someone tell me how to show this number? (<i>put blocks in first half of chart</i>) Now I will show 40. Can someone tell me how I can show 40? I am going to put this number below the folded line, in the second part of the chart.</p> <p>Which one number is greater? I can look at the tens of both numbers to see who has more. 35 has 3 tens, but 40 has...4 tens! Which is greater/more, 3 tens or 4 tens? 4 tens, so I know that 40 must be the greater number. I don't even need to look at the ones!</p> <p>To write this, I can use a special sign that looks like: > (<i>draw on whiteboard, write 40 > 35/ 40 is greater than 35</i>) This special sign means greater than. So we read this as 40 is greater than 35.</p> <p>Let's try one. Everyone show the number 66 at the top of your chart. Ok, now show the number 72 at the bottom. Let's look at the tens column. Which number has more tens? (<i>take quiet hands</i>) 7 tens is more than 6 tens, so 72 is greater than 66. Which number is greater? (<i>72 > 66 on board</i>)</p> <p>Let's try a challenge one. Which number is greater, 56 or 68? (<i>write numbers on whiteboard</i>)</p> <p>Show 56 at top of your board. Show 58 at the bottom. Give me a thumbs up when you are ready. (<i>check that boards are correct</i>)</p> <p>Great work! Now let's look at the tens. Boys and girls, it looks like each number has 5 tens. What do we do now? We have to look at the ones column to see which number has more ones.</p> <p>Which number has more ones, 56 or 58? (<i>take responses</i>) That's right, 58, because it has 8 ones and 56 only has 6 ones.</p>
---	---	---

	20 min.	<p>So boys and girls, we always start by looking at the tens column to see which number is greater. But if the numbers in the tens column are the same, we check the next column, the ones. Whichever has more ones is the greater number!</p> <p><i>*Try 2 more. [25 and 17] keep 17 on board, change the other number to be 15 [17 and 15] [1 more if time]</i></p> <p>Okay everyone, now let's open our workbooks to pg. 400. Fold book in half and put it next to your chart.</p> <p><i>Fill out top of workbook page together. Show in your own book.</i></p> <p>Now I want everyone to try the problems on this page. If you finish go on to the next page. Use your chart and base ten blocks to help you show the numbers and see which is greater.</p> <p>(Specific directions for the workbook- can model with problem 1. You have to circle if you used tens or ones to decide which number was greater. Did you look at the tens column or the ones column to decide which number was greater?)</p>
--	---------	---

<p><u>Closure</u> How will you bring students to closure with this learning experience and connect it to future learning?</p> <p>Consider: <i>A share, a closing challenge, a sneak peek at tomorrow's goal....</i></p>	<p>Minutes: 3 min.</p>	<p>Nice work boys and girls. Let's review number 5 together. Which number is greater, 94 or 98? <i>(take quiet hands)</i></p> <p>Who can share their math thinking?</p> <p>Right, since both have 9's in the tens column, we check the ones. Since 8 is more than 4, 98 is the greater or bigger number.</p> <p>Remember, we can figure out which number is greater by first looking at the tens and then the ones in each number. Nice work today, boys and girls.</p>
---	-----------------------------------	---

<p>Assessment Plans</p> <p>What understandings will you look for/ listen for, throughout the lesson? In other words, how will you continuously check in to see that students are moving toward the objectives you named above? At the end of the lesson, what data will you analyze/reflect on in order to determine whether or not all children met your objective(s)?</p> <ul style="list-style-type: none"> ● Are students able to determine that 20 erasers is a greater amount than 15? ● Are students able to name a number greater than 15 or 76? ● Are students able to use base ten blocks to show a given number on their chart accurately? ● Are students able to compare 2 numbers side by side on their chart? Can they look at the tens of each to determine which number has a greater amount of tens, or if they have an equal amount? ● Are students able to use the ones column when needed, to determine which number is greater by the number that has the larger amount of ones? Are students able to name the number with the larger amount of ones? ● Do students understand how to interpret the > in their workbook? Can they read it as meaning greater than? 		
---	--	--

- Are students able to work mostly independently on the problems in their math workbook? Are their answers accurate?

Student performance on (at least) problems 2-3 on page 400 in their Go math workbook will be used as a summative assessment.