

**Math: Grade 1, Lesson 18, Use Symbols to Compare**

**Lesson Focus:** Use symbols for *is less than* “<”, *is greater than* “>”, and *is equal to* in order to compare numbers.

**Practice Focus:** Students will focus on practicing comparing 2-digits numbers by using symbols for *is less than* “<”, *is greater than* “>”, and *is equal to*.

**Objective:** Students will use symbols to show how numbers compare.

**Key Vocabulary:** *is less than* “<”, *is greater than* “>”, *is equal to*, tens place, ones place

**TN Standards:** 1.NBT.B.3

**Teacher Materials:**

- Snap Cubes
- Base 10 Blocks
- Place Value Chart
- Document Camera or Interactive Board
- Markers
- Student Practice Packet

**Student Materials:**

- Paper
- Pencil

Teacher Do	Student Do
<p><u>Opening</u> (1 min)</p> <p><b>Hello! Welcome to Tennessee’s At Home Learning Series for math! Today’s lesson is for all our 1<sup>st</sup> graders out there, though all children are welcome to tune in. This lesson is the eighteenth in our series.</b></p> <p><b>My name is ____ and I’m a ____ grade teacher in Tennessee schools! I’m so excited to be your teacher for this lesson! Welcome to my virtual classroom!</b></p> <p><b>If you didn’t see our previous lesson, you can find it on the TN Department of Education’s website at <a href="http://www.tn.gov/education">www.tn.gov/education</a>. You can still tune in to today’s lesson if you haven’t seen any of our others. But, it might be more fun if you first go back and watch our other lessons since we’ll be talking about things we learned previously.</b></p> <p><b>Today we will be learning about how to use symbols to compare numbers in mathematics! Before we get started, to participate fully in our lesson today, you will need:</b></p> <ul style="list-style-type: none"><li>● Paper</li><li>● Pencil</li><li>● The student packet for Math, Grade 1, Lesson 18 which can be found at <a href="http://www.tn.gov/education">www.tn.gov/education</a></li></ul>	<p>Students get materials ready for the lesson.</p>

<p><b>Ok, let's begin!</b></p>	
<p><u>Intro</u> (3 min.)</p> <p>[Teacher will post problem as written and read aloud Amy has 6 counters. Tim has 2 counters. Who has more counters?] <b>Amy has 6 counters. Tim has 2 counters. Who has more counters?</b></p> <p><b>I will use counters to solve the problem.</b> <b>I will let (red) counters be the number of counters Amy has.</b> <b>I will lay out 6 (red) counters because Amy has 6 counters.</b></p> <p><b>Next, I will let (yellow) counters be the number of counters Tim has. I will lay out 2 (yellow) counters because Tim has 2 counters.</b> [Teacher lays out 6 red and 2 yellow counters.] <b>How can we use our model to find who has more counters?</b> [Pause] <b>Yes. We can make matches.</b> [Teacher models making matches by moving one red and one yellow counter together to make a pair. There will be 4 red counters without a match.] <b>There are 4 (red) counters left without a match. That means there are more (red) counters than (yellow) counters. So, Amy has more counters.</b></p> <p><b>Thank you for helping me compare numbers.</b></p>	<p>Student observes.</p>
<p><u>Teacher Model</u> (10 mins.)</p> <p>Objective 1: Teacher will model with base 10 blocks and use symbols to compare two 2-digit numbers.</p> <p>[Teacher post problem as written.</p> <p>Show a number that <i>is equal to</i> 36. Show a number that <i>is less than</i> 36. Show a number that <i>is greater than</i> 36.] <b>Show a number that <i>is equal to</i> 36.</b> <b>Show a number that <i>is less than</i> 36.</b> <b>Show a number that <i>is greater than</i> 36.</b></p>	<p>Objective #1: Students will be observing how to use base 10 blocks to compare two 2-digit numbers. Students will be prompted to activate prior knowledge of the terms and symbols <i>is equal to</i> (=), <i>is less than</i> (&lt;), and <i>is greater than</i> (&gt;).</p>

It looks like I will need to make three models. One for the number 36, one for a number that is less than 36, and one for a number that is greater than 36.

**I think I will make a chart to help organize my work.**

[Teacher models making a chart with three columns. See below.]

<i>is equal to (=)</i>	<i>is less than (&lt;)</i>	<i>is greater than (&gt;)</i>
_____ = 36.	_____ < 36.	_____ > 36.

I will label my first column as *is equal to* because the problem first asks me to model a number that is equal to 36.

[Teacher label column 1 is equal to (=).]

I will label the next column as *is less than* because the problem asks me to find a number that *is less than* 36.

[Teacher labels column 2 *is less than* (<).]

I will label my last column *is greater than* because the problem asks me to find a number that *is greater than* 36.

**I think I will use base 10 blocks to make the number 36.**

[Teacher *models and verbalizes* laying the number 36 in the equal column.]

**Count with me...10-20-30.....1-2-3-4-5-6.**

**Great. We have made a model equal to the number 36.**

**I will write a number sentence to record my work.**

[Teacher will write the number sentence  $\underline{36} = 36$  at the base of column 1.]

Now that I know a 36 is 3 tens and 6 ones. I will model 36 in my next two columns.

[Teacher duplicates the model for the number 36 in the next two columns. Next - you will either add to or take away from the model to show *greater than* or *less than* 36. ]

[Teacher points back to sentence 2 in posted problem.]  
**Sentence 2 asks me to show a number that *is less than* 36?**  
**How would my model change?**

[Pause]

**I know, I could take away 2 ones to show the number 34.**  
**34 *is less than* 36.**

[Teacher models taking away 2 ones.]

**I will write a number sentence to record my work.**

[Teacher will write the number sentence  $34 < 36$  at the base of column 2.]

**Great! Almost there...Sentence three asks me to show a number *greater than* 36. How can I use my model to find which number is less?**

[Teacher points back to sentence 3 in the posted problem.]

**I know. I will add one 10 to 36 to show 46. 46 *is greater than* 36.**

**I will write a number sentence to record my work.**

[Teacher will write the number sentence  $46 > 36$  at the base of column 3.]

**Great job! But I have a question...**

**Could I have used other numbers to correctly complete each comparison?**

[Pause]

**You're right! I could have used other numbers less than 36 and greater than 36, but only 36 is equal to 36.**

[Teacher referencing models as he/she speaks and pointing to symbols in columns to emphasize  $<$ ,  $>$ , and  $=$  symbols.]

**Fantastic! Let's take a look at our next problem.**

Objective 2: Teacher will model using a quick draw to compare two 2-digit numbers.

[Teacher posts and reads the problem aloud.]

Directions: Draw a model to show each number. Write  $<$ ,  $>$ , or  $=$ . Complete the sentence.]

Draw

22

28

Objective #2:

Students will be observing how to use a drawing to compare two 2-digit numbers. Students will be prompted to activate prior knowledge of the terms and symbols *is equal to* ( $=$ ), *is less than* ( $<$ ), and *is greater than* ( $>$ ).

22      ○      28  
22 is \_\_\_\_\_ 28.

[Teacher will need 1 sheet of paper and marker.]

**I will use a quick draw to represent base 10 blocks. I will use a line to represent a group of 10 and a circle to represent a 1s.**

**First I will draw the number 22.** [Teacher models drawing the number 22 speaking aloud as he/she draws; 2 lines and 2 circles in the space provided above the number 22.]

**Now I will model drawing the number 28.**

[Teacher models drawing the number 28 speaking aloud as he/she draws; 2 lines and 8 circles in the space provided above the number 28.]

**How do I know which symbol to use?**

[Pause]

**I use the *is less than* symbol if the first number is less.**

**I use the *is greater than* symbol if the first number is greater.**

**I use the *is equal to* symbol if both numbers are the same.**

[Teacher points to drawing as he/she speaks.]

**The number 22 and 28 are NOT equal because they are not the same. So, I will NOT use the *is equal to* symbol.**

**Let's see how they are different.**

[Teacher points to the drawing components as he/she speaks.]

**The number 22 and 28 both have two 10s. So, I can compare the 1s to see which number *is less than* or *is greater than*.**

[Teacher models counting 2 ones vs. 8 ones.]

**The number 22 has 2 ones. 1-2.**

[Teacher touches the 2 ones as he/she counts.]

**The number 28 has 8 ones 1-2-3-4-5-6-7-8.**

[Teacher models counting 8 ones as he/she counts.]

**The numbers 22 and 28 have the same number of 10s. BUT 22 has fewer ones and is less than 28.**

**Now I can complete my number sentence.**

[Teacher writes and reads aloud 22 < 28]

22 is < 28. ]

**22 is less than 28.**

**Wonderful. We have now compared two 2-digit numbers with base 10 blocks and a quick draw.**

<p>Tying the learning together:</p> <p><b>Great job! Thanks for following along with me. So far, we have learned that we can compare using the symbols <i>is less than</i>, <i>is greater than</i>, and <i>is equal to</i>.</b></p>	<p>Tying the learning together:</p> <p>Students will listen to the teacher do a think aloud.</p>			
<p><u>Guided Practice</u> (13 mins.)</p> <p>[I Do - A think aloud where the student works alongside the teacher.]</p> <p>[Teacher posts and reads the problem aloud. Directions: Draw a model to show each number. Write <math>&lt;</math>, <math>&gt;</math>, or <math>=</math>. Complete the sentence.]</p> <table border="1"><tr><td>Draw</td></tr><tr><td><div>30<div>24</div></div></td></tr><tr><td><div>30   ○   24</div><div>30 is _____ 24.</div></td></tr></table> <p>[Teacher will need 1 sheet of paper and marker.] <b>I will use a base 10 blocks to represent a number.</b></p> <p><b>First I model the number 30. Count with me.</b> [Teacher lays out 3 tens and 0 ones speaking aloud as he/she goes.] <b>10-20-30.....and I have zero 1s. Great!</b></p> <p><b>Now I will model the number 24.</b> [Teacher lays out two 10s and four 1s speaking aloud as he/she goes.] <b>10-20....1-2-3-4. Good job.</b></p> <p><b>I have now modeled the numbers 30 and 24.</b> <b>How do I know which symbol to use?</b> [Pause]</p> <p><b>Remember....</b> <b>I use the <i>is less than</i> symbol if the first number is less.</b> <b>I use the <i>is greater than</i> symbol if the first number is greater.</b> <b>I use the <i>is equal to</i> symbol if both numbers are the same.</b> [Teacher points to drawing as he/she speaks.]</p>	Draw	<div>30<div>24</div></div>	<div>30   ○   24</div> <div>30 is _____ 24.</div>	<p>Students will listen to the teacher do a think aloud to compare two 2-digit numbers from the start of the problem to completing each number sentence.</p>
Draw				
<div>30<div>24</div></div>				
<div>30   ○   24</div> <div>30 is _____ 24.</div>				

The numbers 30 and 24 are NOT equal because they are not the same. So, I will NOT use the *is equal to* symbol.

Let's see how they are different.

[Teacher points to model components as he/she speaks.]

The number 30 has 3 groups of ten....10-20-30. The number 24 has two groups of 10....10-20. Because 30 and 24 do not have the same number of 10s, I can compare using 10s.

The number 30 has more 10s than the number 24. So, 30 *is greater than* 24.

Now I can complete my number sentence. I will use the *is greater than* symbol.

[Teacher writes and reads aloud  $30 > 24$ . 30 is greater than 24.]

**30 is greater than 24.**

**Fantastic!**

[We Do - intentional pauses for student to do work and then receive answers along the way.]

[Teacher will prompt students to model using a quick draw to compare two 2-digit numbers. Teacher will need 1 sheet of paper and marker.]

[Teacher posts and reads the problem aloud.

Directions: Draw a model to show each number. Write  $<$ ,  $>$ , or  $=$ . Complete the sentence.]

Draw

16

16

16 ○ 16

16 is \_\_\_\_\_ 16.

[Teacher will need 1 sheet of paper and marker.]

**For our next problem, I would like for you to draw along with me. Let's use a quick draw to represent base 10 blocks. We will use a line to represent a group of 10 and a circle to represent a 1s.**

Students will follow along and draw a model in order to compare two 2-digit numbers from the start of the problem to completing each number sentence.

**Let's draw our first number.**

[Teacher points to the first number (16) on the problem.]

**I see the number 16. Draw the number 16 along with me.**

[Teacher models drawing the number 16 speaking aloud as he/she draws; 1 lines and 6 circles in the space provided above the number 16 on the left of the problem.]

**I drew one line to represent one group of 10. Then, I drew 6 circles ...1-2-3-4-5-6 to represent six ones. Does your drawing look like mine?**

[Pause]

**Now let's draw our 2nd number. Hmmm... this looks familiar....are you noticing anything about our 2nd number?**

[Pause]

**You're right! The 2nd number is also the number 16. Let's draw the number 16 again.**

[Teacher models drawing the number 16 speaking aloud as he/she draws; 1 lines and 6 circles in the space provided above the number 16.]

**Now do we know which symbol to use?**

[Pause]

**Should I use the *is less than* symbol?**

[Pause]

**Noooooo.....**

**What about the *is greater than* symbol?**

[Pause]

**Noooooo?????**

**What should we use then?**

[Pause]

**You're right! We should use the *is equal to* symbol because the models are the same and the numbers are the same.**

**Both numbers have one ten** [Teacher points to models to show one group of 10 in each.] **and six 1s 1-2-3-4-5-6.**

**Now I can complete my number sentences.**

[Teacher writes and reads aloud  $16 = \bigcirc 16$

$16 \text{ is equal to } 16.$  ]

**16 is equal to 16.**

**Wonderful. We compared two 2-digit numbers with a quick draw to find two numbers that were *equal to* each other.**

[You Do - The student independently working and then the teacher showing their work and answer.]

Students will independently draw a model in order to compare two 2-digit numbers from the start of the problem to completing each number sentence.



[Teacher will prompt students to model using a quick draw to compare two 2-digit numbers. Students will need 1 sheet of paper and marker.]

**Now it is your turn. You will use your pencil and paper to draw a model to compare two numbers. Let's look at your problem together.**

[Teacher posts and reads the problem aloud.

Directions: Draw a model to show each number. Write  $<$ ,  $>$ , or  $=$ . Complete the sentence.]

Draw

51

52

51    $\bigcirc$    52  
51 is \_\_\_\_\_ 52.

[Teacher pauses to allow students time to work the model problem and complete two number sentences.]

**Alright...let's check your work.**

[Teacher posts solution.]

Draw

teacher insert images here

51

52

51    $<$    52  
51 is less than 52.

Additional Problems (if needed):

1.

Draw

46

31

46 ☐ 31  
46 is \_\_\_\_\_ 31.

2.

Draw

28

35

28 ☐ 35  
28 is \_\_\_\_\_ 35.

Independent Practice (3 min.)

**Great work! Today, we practiced comparing two numbers by using the symbols  $<$ ,  $>$ , and  $=$ . You sure did a great job! After the video, you will have some tasks practicing on your own.**

**I will show you the independent practice tasks now, or you can find them in the student practice for this lesson posted on our website, [www.tn.gov/education](http://www.tn.gov/education).**

[Teacher shows student practice page under document camera or camera zooms in on student practice page.]

**Good luck and do your best! To get you started, I will read the problems aloud.**

[Teacher posts student work page.]

[Teacher reads directions.]

**Grade 1: Lesson 18** Students will compare two numbers using *is less than* (<), *is greater than* (>), *is equal to* (=).

[Directions: Draw a model to show each number.

Write the symbol *is less than* (<), *is greater than* (>), *is equal to* (=) to complete the number sentence.]

1.

Draw

56

41

56      ○      41  
56 is \_\_\_\_\_ 41.

2.

Draw

18

18

18      ○      18  
18 is \_\_\_\_\_ 18.

3.

Draw

## PBS Lesson Series

46	41
46 is $\bigcirc$ 41.	
4.	
Draw	
78	75
78 is $\bigcirc$ 75.	
<u>Closing</u> (1 min)	
I enjoyed learning how to compare two numbers by using the symbols $<$ , $>$ , and $=$ with you today. Thank you for inviting me into your home. I look forward to seeing you in our next lesson in Tennessee's At Home Learning Series!	

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