

Math: Grade 1, Lesson 19, Compare Numbers

Lesson Focus: Use the strategy *make a model* to compare numbers.

Practice Focus: Students will focus on making a model to compare numbers to solve contextual problems.

Objective: Students will solve problems using the strategy *make a model*.

Key Vocabulary: less than, greater than

TN Standards: 1.NBT.B.3

Teacher Materials:

- Printed Copy of the Task Cards (Appendix)
- 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>Hello! Welcome to Tennessee’s At Home Learning Series for math! Today’s lesson is for all our 1st graders out there, though all children are welcome to tune in. This lesson is the nineteenth in our series.</p> <p>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!</p> <p>If you didn’t see our previous lesson, you can find it on the TN Department of Education’s website at www.tn.gov/education. 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.</p> <p>Today we will be learning about how to use a model to compare numbers and solve problems in mathematics! Before we get started, to participate fully in our lesson today, you will need:</p> <ul style="list-style-type: none">● Paper● Pencil● The student packet for Math, Grade 1, Lesson 19 which can be found at www.tn.gov/education	<p>Students get materials ready for the lesson.</p>

<p>Ok, let's begin!</p>	
<p><u>Intro</u> (3 min.)</p> <p>[Teacher will post TASK CARD A as written and read aloud.]</p> <p>TASK CARD A</p> <p>Cassidy has the number cards shown below. She gives away the cards with numbers less than 49 or greater than 53. Which number cards does Cassidy have now?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">47</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">48</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">51</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">52</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">54</div> </div> <p>Cassidy has number cards _____.</p> <p>What do we know about our problem? [Pause] Yes. We know Cassidy has 5 number cards. We know she gives away some of the number cards. The number cards Cassidy gives away number cards that are less than 49 or greater than 53.</p> <p>What do we need to find? [Pause] We need to find which number cards Cassidy has now. How can we solve the problem? [Pause] I know. I can find the number cards less than 49 and cross them out. When I cross a number card, that means a number card Cassidy gave away. [Teacher models crossing out number cards 47 and 48.] Next, I can find number cards greater than 53 and cross those out too. [Teacher models crossing out number card 54.] Why are there 2 number cards that are not crossed out? [Pause] Yes. Those number cards are NOT <i>less than 49 or greater than 53</i>. Those are the number cards Cassidy has left and the answer to the problem. Let's fill in the sentence. [Teacher reads and writes Cassidy has number cards <u>51</u>, <u>52</u>.]</p>	<p>Student observes.</p>

<p>Cassidy has number cards <u>51, 52</u>.</p> <p>Thank you for helping me compare number cards.</p>	
<p><u>Teacher Model</u> (10 mins.)</p> <p>Objective 1: Teacher will solve a contextual problem. Teacher will use the provided model to compare numbers less than or greater than. Teacher will model taking away numbers in the model.</p> <p>[Teacher post TASK CARD B and reads the problem aloud.]</p> <p><small>TASK CARD B</small></p> <p>Tony has these <u>number cards</u>. He gives away the cards with numbers less than 16 or greater than 19. Cross those out. Which number cards does Tony have now?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 5px;">15</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">17</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">18</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">20</div> <div style="border: 1px solid black; padding: 5px; margin: 5px;">22</div> </div> <p>Tony has number cards _____.</p> <p>What do we know about our problem? [Pause]</p> <p>Yes. We know Tony has 5 number cards. We know he gives away some of the number cards. The number cards Tony gives away are the number cards that are less than 16 or greater than 19.</p> <p>What do we need to find? [Pause]</p> <p>We need to find which number cards Tony has now.</p> <p>How can we solve the problem? [Pause]</p> <p>I know. We can find the number cards less than 16 and cross them out. When I cross out a number card that means it is a number card Tony gave away. [Teacher models crossing out number card 15.]</p> <p>Next, I can find number cards greater than 19 and cross those out too. [Teacher models crossing out number cards 20 and 22.]</p> <p>Why are there 2 number cards that are not crossed out? [Pause]</p>	<p>Objective #1: Students will be observing how solve a contextual problem, use a provided model, compare numbers less than or greater than, and modify a model by crossing out/taking away numbers in the model.</p>

Yes. Those number cards are NOT *less than 16 or greater than 19*. Those are the number cards Tony has left and the answer to the problem.

Let's fill in the sentence.

[Teacher reads and writes Tony has number cards 20, 22.]

Tony has number cards 20, 22.

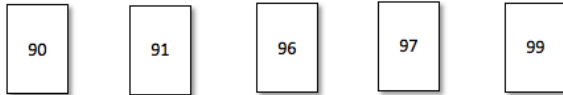
Fantastic! Let's take a look at our next problem.

Objective 2: Teacher will solve a contextual problem. Teacher will use the provided model to compare numbers less than or greater than. Teacher will model keeping numbers in the model.

[Teacher posts TASK CARD C and reads the problem aloud.]

TASK CARD C

Carol has these *number cards*. She keeps the cards with numbers greater than 98 or less than 95. Cross those out. Circle the number cards Carol keeps.



Carol keeps number cards _____.

What do we know about our problem?

[Pause]

Yes. We know Carol has 5 number cards. We know she gives away some of the number cards. The number cards Carol gives away are the number cards that are less than 95 or greater than 98.

What do we need to find?

[Pause]

We need to find which number cards Carol has now.

How can we solve the problem?

[Pause]

I know. I can find the number cards less than 95 and circle them out. When I circle a number card that means a number card Carol keeps.

[Teacher models circling number cards 90 and 91.]

Objective #2:

Students will be observing how solve a contextual problem, use a provided model, compare numbers less than or greater than, and modify a model by circling/keeping numbers in the model.

Next, I can find number cards greater than 98 and circle those out too.

[Teacher models circling number card 99.]

Why are there 2 number cards that are not circled?

[Pause]

Yes. Number cards 96 and 97 are NOT *less than 95 or greater than 98*.

We circled the number cards 90, 91, and 99 because those numbers are less than 95 and greater than 98 and are the answer to our problem.

Let's fill in the sentence.

[Teacher reads and writes Carol has number cards 90, 91, and 99.]

Carol has number cards 90, 91, and 99.

Objective 3: Teacher will solve a contextual problem. Teacher will draw a model to represent the problem. Teacher will use the model to compare numbers less than or greater than. Teacher will model keeping numbers in the model.
[Teacher posts TASK CARD D and reads the problem aloud.]

TASK CARD D

Felipe has number cards 58, 61, 63, 64, and 68. He gives away cards with numbers less than 60 or greater than 65. Which number cards does Felipe have now?

Felipe has number cards _____.

What do we know about our problem?

[Pause]

Yes. We know Felipe has the number cards 58, 61, 63, 64, and 68. We know he gives away some of the number cards. The number cards Felipe gives away are less than 60 or greater than 65.

What do we need to find?

[Pause]

We need to find which number cards Felipe has now.

How can we solve the problem?

[Pause]

Objective 3: Students will be observing how to solve a contextual problem, create a model, compare numbers less than or greater than, and modify a model by either *crossing out/taking away* or *circling/keeping* numbers in the model.

I know. I can draw a model to represent the number cards Felipe has.

Felipe has 5 number cards. I will draw 5 rectangles to represent the number cards.

[Teacher models drawing 5 small rectangles.]

Next, I will write the numbers on my drawing.

Watch as I write the numbers in each rectangle.

[Teacher writes 58, 61, 63, 64, 68 on corresponding rectangles/number cards.]

Now my drawing models the problem. Let's go back and check our work.

[Teacher re-reads sentence 1 of problem, pointing to corresponding card as he/she goes to confirm the model is correct.]

Thank you for your help! Now I am ready to solve the problem.

What should I do next?

[Pause]

Yes. We need to decide if Felipe takes away or keeps number cards.

[Pause]

You are right! Felipe is giving number cards away, so I will cross out cards in my model.

I will find the number cards less than 60 and cross them out.

When I cross out a number card that means a number card Felipe gave away.

[Teacher models crossing out number cards 58.]

Next, I can find number cards greater than 65 and cross those out too.

[Teacher models crossing out number card 68.]

Why are there 3 number cards that are not crossed out?

[Pause]

Yes. Those number cards are NOT *less than 60* or *greater than 65*. Those are the number cards Felipe has left and the answer to the problem.

Let's fill in the sentence.

[Teacher reads and writes Felipe has number cards 61, 63, 64.]

Felipe has number cards 61, 63, 64.

Tying the learning together:

Great job! Thanks for following along with me. So far, we used models to compare numbers and solve problems.

Tying the learning together:

Students will listen to the teacher do a think aloud.

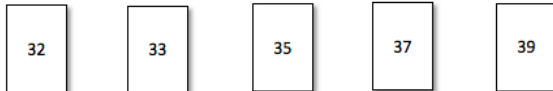
Guided Practice (13 min)

[I Do – A think aloud where the student works alongside the teacher.]

[Teacher posts TASK CARD E and reads the problem aloud.]

TASK CARD E

Ava has these number cards. She gives away cards with numbers less than 34 or greater than 38. Which number cards does Ava have now?



Ava has number cards _____.

What do we know about our problem?

[Pause]

Yes. We know Ava has 5 number cards. We know she gives away some of the number cards. The number cards Ava gives away are the number cards that are less than 34 or greater than 38.

What do we need to find?

[Pause]

We need to find which number cards Ava has now.

How can we solve the problem?

[Pause]

Yes. We can find the number cards less than 34 and cross them out. When I cross out a number card that means it is a number card Ava gave away.

[Teacher models crossing out number cards 32 and 33.]

Next, I can find number cards greater than 38 and cross those out too.

[Teacher models crossing out number card 39.]

Why are there 2 number cards that are not crossed out?

[Pause]

Yes. Those number cards are NOT *less than 34* or *greater than 38*. Those are the number cards Ava has left and the answer to the problem.

Let's fill in the sentence.

[Teacher reads and writes Ava has number cards 35,
37.]

Ava has number cards 35, 37.

Fantastic!

Students will be observing how solve a contextual problem, use a provided model, compare numbers less than or greater than, and modify a model by *crossing out/taking away* numbers in the model.

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

[Teacher will prompt students to get paper and pencil and draw model along with the teacher.]

For our next problem, you will need your paper and pencil to model and solve along with me. I will get my paper and pencil ready too.

[Teacher set up supplies under a document camera.]

[Teacher posts TASK CARD F and reads the problem aloud.]

TASK CARD F

Ron has these **number cards**. He gives keeps the cards with numbers greater than 60 or less than 56. Circle the number cards Ron keeps?



Ron keeps number cards _____.

First, I will get my model ready. You draw along with me.

We know Ron has 5 number cards. I will draw 5 rectangles to represent the number cards. You draw 5 rectangles.

[Teacher models drawing 5 small rectangles.]

Great! Do you have 5 rectangles drawn like mine?

[Pause]

Good job! Next, I will write the numbers on my drawing.

You write your numbers in each rectangle too.

[Teacher writes 54, 57, 58, 59, 61 on corresponding rectangles/number cards verbalizing as he/she goes.]

Now our drawings models the problem. Let's go back and check our work.

[Teacher re-reads sentence 1 of problem, pointing to corresponding card as he/she goes to confirm the model is correct.]

Thank you for your help! Now we are ready to solve the problem.

We know Ron has 5 number cards. What else do we know about our problem?

[Pause]

Students work alongside teacher to draw a model, solve a contextual problem, compare numbers less than or greater than, and modify a model by *circling/keeping* numbers in the model.

Yes. We know he keeps some of the number cards. The number cards Ron keeps are greater than 60 or less than 56. What do we need to find?

[Pause]

We need to find which number cards Ron keeps.

How can we solve the problem?

[Pause]

Yes. We can circle the number cards greater than 60. When I circle a number card that means a number card Ron keeps. Do you see a number card greater than 60?

[Pause]

Yes. 61 is greater than 60.

I will circle the number card 61. You circle the number card 61 in your model too.

[Teacher models circling number cards 61.]

Next, I can find the number card less than 56 and circle those too.

Do you see a number card less than 56?

[Pause]

Yes. 54 is less than 56.

I will circle the number card 54. You circle the number card 54 too.

[Teacher models circling number card 54.]

Why are there 3 number cards that are not circled?

[Pause]

Yes. Those number cards are NOT *greater than 60 or less than 56*. Those are the number cards Ron did NOT keep.

How do we know the number cards Ron keeps?

[Pause]

You are right! The number cards we circled are the number cards Ron keeps and the answer to the problem.

Now we are ready to fill in the sentence.

[Teacher reads and writes Ron keeps number cards 54, 61.]

Ron keeps number cards 54, 61.

Wonderful job using a model to compare numbers and solve a problem.

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

[Teacher will prompt students to independently solve a contextual problem, use a provided model, compare numbers

Students will independently solve a contextual problem, use a provided model, compare numbers less than or greater than, and modify a model by deciding to *circle/keep or cross out/take away* numbers in the model.

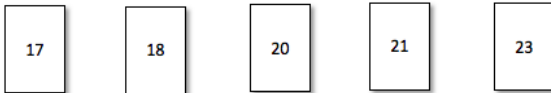
less than or greater than, and modify a model by taking away numbers in the model.]

Now it is your turn. You will use your pencil and paper to draw and solve a problem.

[Teacher posts TASK CARD G and reads the problem aloud.]

TASK CARD G

Emily has these **number cards**. He gives away the cards with numbers less than 19 or greater than 22. Which cards does Emily have now?



Emily has number cards _____.

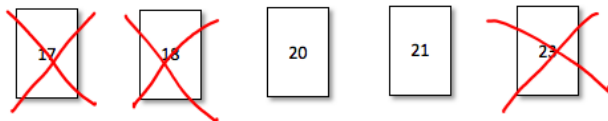
[Teacher pauses to allow students time to work the model problem.]

Alright...let's check your work.

[Teacher posts solution and walks students through solving the problem. Include emphasis on WHY we crossed out rather than circled.]

TASK CARD G

Emily has these **number cards**. He gives away the cards with numbers less than 19 or greater than 22. Which cards does Emily have now?



Emily has number cards _____.

Additional Problems (if needed):

TASK CARD H

Lani has these **number cards**. She keeps the number cards greater than 24 or less than 24. Which cards does Lani have now?

21

22

23

24

27

Lani has number cards _____.

Independent Practice (3 min)

Great work! Today, we practiced using models to compare numbers and solve problems. 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.

[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.

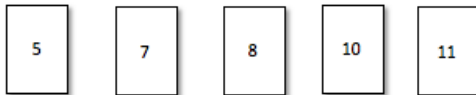
[Teacher posts student work page.]

[Teacher reads directions.]

Grade 1: Lesson 19 Students will use models to compare numbers and solve problems.

1.

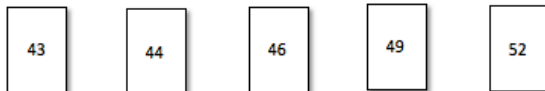
Anthony has the number cards shown below. He gives away the cards with numbers less than 6 or greater than 9. Which number cards does Anthony have now?



Anthony has number cards _____.

2.

Juan has these number cards. He keeps the cards with numbers greater than 50 or less than 45. Which number cards does Juan keep?



Juan keeps number cards _____.

3.

Jami has number cards 86, 88, 89, 90, and 92. She keeps the number cards with numbers greater than 91 or less than 87. Which number cards does Jami keep?

Jami keeps the number cards _____.

Closing (1 min)

I enjoyed learning how to use models to compare numbers and solve problems. 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!

PBS Lesson Series

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TASK CARD A

Cassidy has the **number cards** shown below.

She gives away the cards with numbers less than 49 or greater than 53. Which number cards does Cassidy have now?

47

48

51

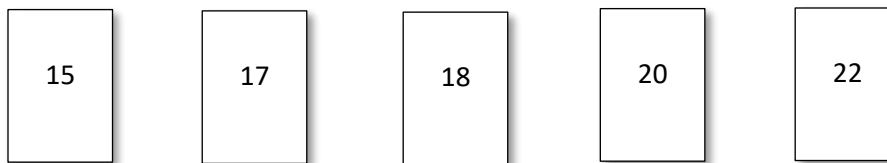
52

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Cassidy has number cards _____.

TASK CARD B

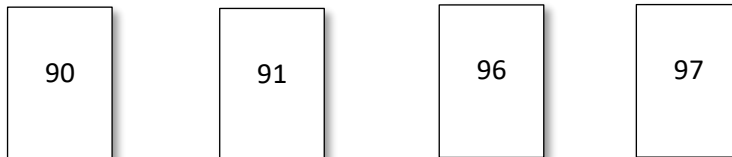
Tony has these **number cards**. He gives away the cards with numbers less than 16 or greater than 19. Cross those out. Which number cards does Tony have now?



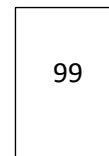
Tony has number cards _____.

TASK CARD C

Carol has these **number cards**. She keeps the cards with numbers greater than 98 or less than 95. Cross those out. Circle the number cards Carol keeps.



Carol keeps number cards _____.



TASK CARD D

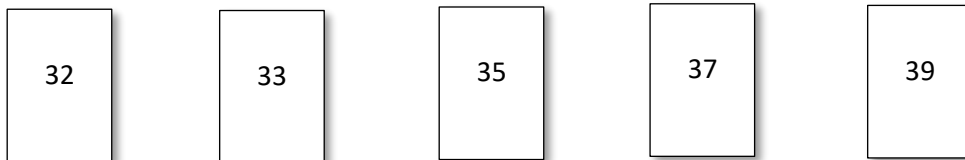
Felipe has **number cards** 58, 61, 63, 64, and 68. He gives away cards with numbers less than 60 or greater than 65. Which number cards does Felipe have now?

Felipe has number cards _____.

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TASK CARD E

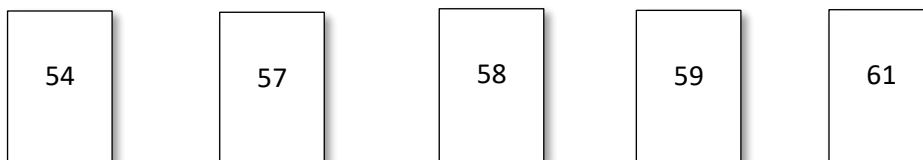
Ava has these **number cards**. She gives away cards with numbers less than 34 or greater than 38. Which number cards does Ava have now?



Ava has number cards _____.

TASK CARD F

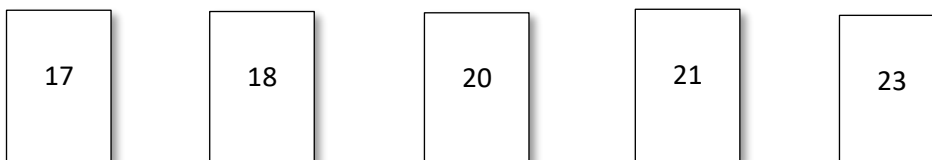
Ron has these **number cards**. He gives keeps the cards with numbers greater than 60 or less than 56. Circle the number cards Ron keeps?



Ron keeps number cards _____.

TASK CARD G

Emily has these **number cards**. He gives away the cards with numbers less than 19 or greater than 22. Which cards does Emily have now?



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Emily has number cards _____.

TASK CARD H

Lani has these **number cards**. She keeps the number cards greater than 24 or less than 24. Which cards does Lani have now?

21

22

23

24

27

Lani has number cards _____.

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