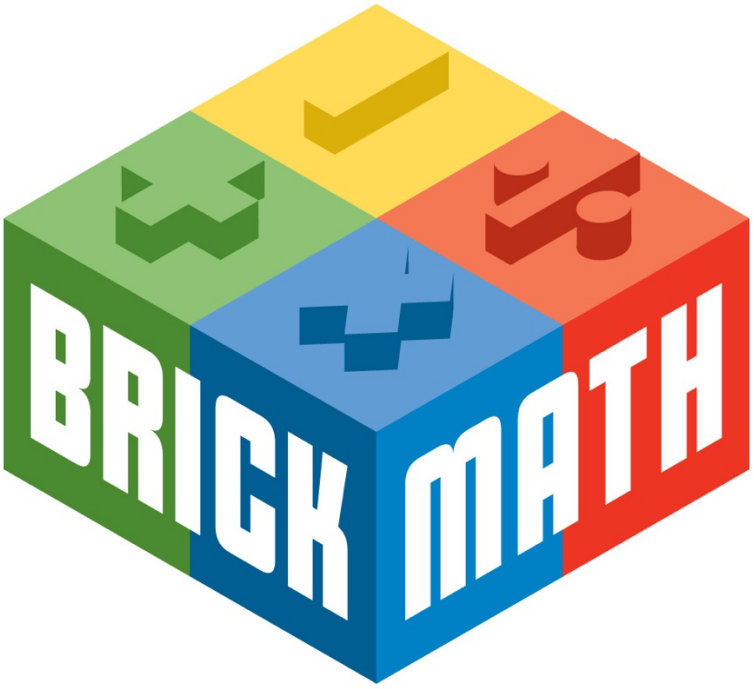

Building Skills with Brick Math

An 8-Day Program to Sharpen Basic Math Skills

Counting and Cardinality

1.5 - 2 hours a day	
Program Overview	
Day 1	**Welcome** **Patterns** • Recognize • Create **Vocabulary** • Pattern
Day 2	**What is a Number?** • Identify a number • Link a number to an object • Count natural numbers 1 to 10 **Vocabulary** • Counting numbers • One-to-one correspondence • Studs (bumps on a brick)
Day 3	**Ten-Frames** • Model numbers in sets of ten • Number bonds **Vocabulary** • Ten-frames • More than • Less than • Ten

Day 4	**Skip Counting** • Skip count by 2s • Skip count by 3s • Skip count by 5s • Skip count by 10s **Vocabulary** • Skip counting • More than • Greater than
Day 5	**Jump Numbers** • Count forward and backward from a given number • Skip-counting and jump numbers • Patterns of even and odd numbers **Vocabulary** • Odd • Even • Skip counting • Jump numbers • More than • Less than
Day 6	**Square Numbers** • Model numbers up to 20 • Know what a square number looks like in a model **Vocabulary** • Modeling • More than • Less than • Same • Square number pattern • Compare

Day 7	**More Than/Less Than** • Know the meaning of more than/less than • Know the link between more than and greater than • Know the link between less than and fewer than **Vocabulary** • More than • Less than • Compare
Day 8	**Review and Assessment** • Modeling a Number • Modeling a Pattern • Different Ways to Model a Number • Skip Counting • Odd and Even • Rectangles and Squares • Assessment • Optional Parent Activity & Materials Check In

Common Core Math Standards Addressed

CCSS.MATH.CONTENT.K.CC.A.1
Count to 100 by ones and by tens.

CCSS.MATH.CONTENT.K.CC.A.2
Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

CCSS.MATH.CONTENT.K.CC.A.3
Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

CCSS.MATH.CONTENT.K.CC.B.4
Understand the relationship between numbers and quantities; connect counting to cardinality.

CCSS.MATH.CONTENT.K.CC.B.4.A
When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

CCSS.MATH.CONTENT.K.CC.B.4.B
Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

CCSS.MATH.CONTENT.K.CC.B.4.C
Understand that each successive number name refers to a quantity that is one larger.

CCSS.MATH.CONTENT.K.CC.B.5
Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

CCSS.MATH.CONTENT.K.CC.C.6
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
CCSS.MATH.CONTENT.1.NBT.B.2.A
10 can be thought of as a bundle of ten ones — called a "ten."

CCSS.MATH.CONTENT.1.NBT.B.2.B
The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

Materials Needed

- Brick Math brick sets – one per student or one per pair of students
- Brick Math Counting and Cardinality Teacher Edition
- Brick Math Counting and Cardinality Student Edition– one per student
- Chart paper
- Markers
- Crayons
- Cardstock
- Yarn
- Paper plate (or large circles cut from tagboard or cardstock)
- Optional: Foam sheets or shelf liner cut into rectangles – approximately 12” x 18” (one sheet per person)

Prior to the students’ arrival for the first day:

1. Read the Introduction and How to Teach with Brick Math on pages 5-9 in Counting and Cardinality Teacher Edition.
2. Label all the student Brick Math sets. Suggest a system such as Set 1, Set 2, or Zebra, Elephant, Tiger, etc.
3. Each student or each set of 2 students will need a set. Assign each student or team of two students one set. They will use this same set every day. This materials’ management step allows the student or the team to be completely responsible for their own pieces.
4. Each student should have one Student Edition of Counting and Cardinality. If you are not using the booklets, then you will need to have copies of specific pages so students can correctly show and explain their work and make the knowledge transfer from manipulatives to paper and verbal explanations.
5. Students will need the following supplies:
   Student Edition: Counting and Cardinality – one per student
   Crayons
   Cardstock

Yarn
Paper plate (or large circles cut from tagboard or cardstock)
Optional: Foam sheets or shelf liner cut into rectangles. (one sheet per student) This helps keep the bricks from sliding off desks and tables.

> **Note:** There are blank baseplate paper templates on page 47 and 48 in the Student Edition of the Counting and Cardinality. You may have students use these at any time during the course or during a teacher-created activity or assessment. These pages may be helpful for the daily (optional) story problem activities. You can make additional copies of blank baseplates as needed.

Day 1 - Patterns

Welcome

Tell the students something similar to the following:

> Welcome! We are going to do a lot of interesting activities this week. We are going to build with bricks, work with a partner, create a team name, exercise with numbers, and more. Are you ready to get started?
>
> First, I want to show you the set. What colors do you see? Each color has a name. Each of you has a name. We need to learn all the names of the people in our class. I would like you to sit in a large circle. Each person will say his or her name. Then, please choose one piece from the set. Tell us which color piece you chose and something about the piece.
>
> I will start.
> My name is Mrs. Smith. I chose a purple brick because purple is my favorite color.

Go around the room. After one person has said his or her name and chosen a brick. Start with yourself and then have the class repeat so all the group is hearing and saying the names repeated. For example, Mrs. Smith, Paula, Alan, Rebecca. Then, if the next child is Ben, you would repeat Mrs. Smith, Paula, Alan, Rebecca, Ben. When all the students have told their names, now have the students who chose a particular color stand with their bricks in their hands.

Tell the students something similar to:

> Everyone who chose a purple brick, please stand. Let's see if we can remember their names. Say the names of the children who are standing. Then, have them sit down. Continue with different colors until all the children have stood and been called by name.

Then, have the students look at the particular shapes of the bricks chosen. Tell the students the shapes also have names.

Explain to students how to name the bricks. Start with your brick. Perhaps you chose a 2x2 brick. Show students your brick. If you prefer, you can pass it around.
Tell the students:

> This brick is called a 2x2 brick because it is a square with 2 studs or bumps on one side (width) and 2 studs or bumps on another side (length). It has a total of 4 studs.

Then, show students a small 1x1 brick.

Ask the students:

> Can you guess what this brick is called? It has 1 stud in width and 1 stud in length – but it has a total of only 1 stud. This brick is called a 1x1 brick.

Show students a 1x6 brick. Continue to go through the bricks until students can do a good job of naming the bricks.
Go around the circle of students and ask each student to name the brick he or she chose. If a student is not sure or names it incorrectly, ask the student to count the width and length in studs, then help with the correct name.

When all the bricks have been named, ask the students to place the bricks into the proper location in the bin. Their pieces should match the compartment or area in the bin so all the brick "families" will be together.

Walking and Counting

Have students stand and make one line. Choose a line leader to walk immediately behind you. The entire class will count together. March with knees high for 10 steps. Then freeze with feet on the floor. Ask if everyone is ready. Then, move right arm in a circle for the count of 10. Freeze with feet on the floor. Now, march with knees high for 10 steps. Then freeze with feet on the floor. Move left arm in a circle for the count of 10. Freeze with feet on the floor. Finally, march with knees high for 10 steps.

Have all students return to their places around the circle.

How Partners Work Together

Ask students their favorite thing about working with a partner. Then, ask them what is the best way to work with a partner. Help students create answers like the following:

- Partners share the work; however, neither person does the other one's work.
- Partners learn together and can help each other learn.
- Partners communicate (talk) kindly with each other.
- Partners care about each other.
- Partners do not give each other the answers, but help the other person understand how to get an answer.

Create a set of Partner Rules and put them on chart paper and display them in the classroom. That way you can refer to them as needed.

Partners and Materials

Choose two students to be partners and assign them a place to sit at desks or tables. Have each set of partners move to the location as you assign them. Give the two students their container of Brick Math materials (either one set for two people or one set per person.) Tell each

group that they always get set #X when it is time to gather materials. Tell the class that each team is responsible for all the bricks being returned to the set every time the set is used. When all the students have their sets, give every student a 20 x 20 dark gray base plate.

Tell students they will work together every day and that being a partner is an important responsibility. They need to help one another and be kind to their partner. Both partners should help to keep all the bricks in the correct location in the bin.

Patterns and Getting the Bricks

Ask students if they know what the word pattern means. Ask them to look around the room and find something that has a pattern. Help students to determine that a pattern has a repeating form or design or even a number representation.

Each student should find the following items:
5 red 1x1 bricks
5 green 1x1 bricks
5 white 1x1 bricks
5 blue 1x1 bricks

Each partner should check his or her partner's bricks. This is the first step in being a good partner.

Next, each student should get the following:
5 1x2 bricks
5 1x3 bricks
5 1x4 bricks
Each partner should check his or her partner's bricks. Continue to be a kind partner.

Finally, each student should get the following:
5 2x2 bricks
5 2x3 bricks
5 2x4 bricks
Each partner should check his or her partner's bricks. Tell your partner "thank you" for making sure you have the correct pieces.

Lesson 1

Show Them How

Color Patterns

Follow the instructions on page 12 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students will complete page 5 Part 1, #1 in the Learning Counting and Cardinality booklet.

Have students create their own color pattern using just 2 colors. The pattern should be at least 5 bricks long. Students should identify the pattern using color words. Ask them what the next three colors in their pattern would be – tell their partner and see if they agree. Spot check around the room to ensure students have correctly identified the continuing pattern.

Show students a color pattern using 3 colors.
Have students create their own color pattern using 3 colors. The pattern should be at least 7 bricks long. Ask them what the next three colors in their pattern would be – tell their partner and see if they agree. Spot check around the room to ensure students have correctly identified the continuing pattern.

Size Patterns

Follow the instructions on page 12 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students will complete page 5 Part 1, #2 in the Learning Counting and Cardinality booklet.

Have students create their own size pattern using 3 sizes. Remember that color does not matter. The pattern should be at least 6 bricks long. Students should identify the pattern using size words. Ask them what the next three sizes in their pattern would be – tell their partner and see if they agree. Spot check around the room to ensure students have correctly identified the continuing pattern.

Show students a new size pattern using 3 sizes.
Have students create their own size pattern using 3 sizes. The pattern should be at least 7 bricks long. Ask them what the next three sizes in their pattern would be – tell their partner and see if they agree. Spot check around the room to ensure students have correctly identified the continuing pattern.

Number Patterns

Follow the instructions on page 12 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students will complete page 6 Part 1, #3 in the Learning Counting and Cardinality booklet.

Have students create their own number pattern using 3 bricks that represent numbers. Remember that color does not matter. The pattern should be at least 6 bricks long. Students should identify the pattern using number words. Ask them what the next three numbers in their pattern would be – tell their partner and see if they agree. Spot check around the room to ensure students have correctly identified the continuing pattern.

Show students a new number pattern using 3 numbers.
Have students create their own number pattern using 3 numbers. The pattern should be at least 7 bricks long. Ask them what the next three numbers in their pattern would be – tell their partner and see if they agree. Spot check around the room to ensure students have correctly identified the continuing pattern.

Number and Color Patterns

Follow the instructions on page 13 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students will complete page 6 Part 1, #4 in the Learning Counting and Cardinality booklet.

Have students create their own number and color pattern. The pattern should be at least 6 bricks long. Students should identify the pattern using number and color words. Ask them what the next three bricks in their pattern would be – tell their partner and see if they agree. Check around the room to ensure students have correctly identified the continuing pattern.

Show students a new number and color pattern.
Have students create their own number and color pattern. The pattern should be at least 7 bricks long. Ask them what the next three bricks in their pattern would be – tell their partner and see if they agree. Spot check around the room to ensure students have correctly identified the continuing pattern.

Move with Music

Have students get up from their places at the tables/desks because it is time for some movement.

You can use any counting song to have the students count and move around. “Chicken Count” with Jack Hartmann can be found on YouTube is one example. This particular song has built in patterns, gets kids being silly and moving. Students should be ready to think again and show what they have learned after they get a brain break.

Show What You Know

Follow the instructions on page 14 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students will complete page 7, Part 2, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 14 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students will complete page 7, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 14 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students will complete page 8, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 14 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students will complete page 8, #4 in the Learning Counting and Cardinality booklet.

Challenge

Follow the instructions on page 14 in the Teaching Counting and Cardinality booklet.
Complete the Challenge.
Students will complete page 9, Challenge, in the Learning Counting and Cardinality booklet.

Content Assessment

Students complete the Assessment #1 on page 9 in the Learning Counting and Cardinality booklet.
Discuss the answers with the class. Help students to improve their answers as needed.

Students complete the Assessment #2 on page 9 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #3 on page 10 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #4 on page 10 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Optional: Story Problems

Tell students a story problem like the following:

> Juan had three red balloons for the birthday party. His friend Tavon brought 2 yellow balloons. Juan and Tavon want to make a pattern with their balloons.
> Can you make a pattern to help Juan and Tavon?

Help students to complete the story problem and create a pattern.

Now, have each pair work together to create a new story problem that uses a pattern.

As time allows, have students share their stories and baseplate with at least one other team.

How Partners Work Together

Remind students about the partners rules they created earlier today. They may have some of the following:

- Partners share the work; however, neither person does the other one's work.
- Partners learn together and can help each other learn.
- Partners communicate (talk) kindly with each other.
- Partners care about each other.
- Partners do not give each other the answers, but help the other person understand how to get an answer.

Self-Assessment

Ask students to use the blank space at the bottom of page 10 in the Learning Counting and Cardinality booklet.

All students write the word "Partner."
Students should draw a specific color brick after the word "Partner" based on the following:

> I need to work on being a better partner. I did not listen to and help my partner like I should have. Draw an orange brick after the word Partner.
>
> I was a good partner today. I helped my partner but sometimes I did their work for them or I let them do my work.
> Draw a green brick after the word Partner.
>
> I was a good partner today. I helped my partner by checking their work and not by doing their work. Draw a blue brick after the word Partner.

Students should write the words “I can create patterns” at the bottom of page 10.
Students should draw a specific color brick after the words “I can create patterns” based on the following:

> I need help creating patterns. Draw an orange brick after the words “I can create patterns.”
>
> I can create patterns. Draw a green brick after the words “I can create patterns.”
>
> I can help others to create patterns. Draw a blue brick after the words “I can create patterns.”

Day 2 – What is a Number?

Welcome Back

Welcome students back to Brick Math summer camp. Start in the circle.
Ask students if they can remember who their partner is. Ask students if they can remember what a pattern is and if they enjoyed making patterns.

Tell students that today we are going to create a team name and draw a pattern.
Have students find their partner and get crayons and each person needs a paper plate.

Show students an example of a team name surrounded by a color pattern.

Students work together to determine a team name and then write the name in the middle of the paper plates. Students should determine a color pattern to be used around the edge. Students color the edge in the pattern they created.

Partner Rules

Remind students of the partner rules created on Day 1. Have students share one good thing they saw a partner do yesterday.

Materials

Have students get the correct Brick Math set(s) and 2 baseplates for their team.
Students need to take out all the 1x1 bricks and sort them into colors. They should have 10 of each color – blue, white, red, green.

What is a Number?

Start by choosing the color blue. Have students make a line of the blue 1x1 bricks.
Have the class count in unison the bricks – 1, 2, 3, and so forth. Tell students they used counting numbers to name the bricks one by one. Ask students what other items in the classroom they could count. Count another set of objects.

Tell students when they are counting objects, they are matching a number to an object. That means they are using one-to-one correspondence.

Have students count the studs or bumps on the bricks. Each brick has studs and that is what is used as the counting unit.

Ask students how many studs a blue brick has. One.
Ask students how many studs a red brick has. One.

Now use the line of blue bricks and count how many studs are in the line of blue bricks. Ten.
Ask students if they are ready to build. YES!

Show Them How

Follow the instructions on page 16 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students complete page 11 Part 1, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 16 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students complete page 11 Part 1, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 17 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 12 Part 1, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 17 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 12 Part 1, #4 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 18 in the Teaching Counting and Cardinality booklet.
Complete #5.
Students use the blank space at the bottom of page 12 in the Learning Counting and Cardinality booklet to write comparative statements.

Move with Music

Have students get up from their places at the tables/desks because it is time for some movement.
Have students use their bodies to make a number. Perhaps they put their arms over their heads and clasp their hands together while standing tall to be a one. Allow students to create their own numbers – but they need to use their entire body, not just their fingers. You can allow students to work together to create a number. Play some instrumental music in the background so when everyone is ready, you can slowly go through the numbers and have everyone count with their bodies.

Students should be ready to Show What They Know after they have completed moving.

Show What You Know

Follow the instructions on page 19 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students complete page 13 Part 2, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 19 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students complete page 13 Part 2, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 19 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 14, #3 in the Learning Counting and Cardinality booklet.

More Problems to Practice

Students complete page 14, #4 in the Learning Counting and Cardinality booklet.

Students complete page 15, #5 in the Learning Counting and Cardinality booklet.

Content Assessment

Students complete the Assessment #1 on page 15 in the Learning Counting and Cardinality booklet.
Discuss the answers with the class. Help students to improve their answers as needed.

Students complete the Assessment #2 on page 16 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #3 on page 16 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Optional: Story Problems

Tell students a story problem like the following:

> Julia took five steps on the path. Her friend Donata asked her to take four additional steps. Can you help Julia and Donata to show the steps on your baseplate and count the total number of steps?

Help students to complete the story problem and count the steps.

Have each pair work together to create a new story problem that they can show on their baseplate and count a total number.

As time allows, have students share their stories and baseplate with at least one other team.

Self-Assessment

Ask students to use the blank space at the bottom of page 16 in the Learning Counting and Cardinality booklet.

All students write the word “Partner” in the blank space at the bottom of page 16.
Students should draw a specific color brick after the word “Partner” based on the following:

> I need to work on being a better partner. I did not listen to and help my partner like I should have. Draw an orange brick after the word Partner.
>
> I was a good partner today. I helped my partner but sometimes I did their work for them or I let them do my work.
> Draw a green brick after the word Partner.
>
> I was a good partner today. I helped my partner by checking their work and not by doing their work. Draw a blue brick after the word Partner.

All students should write the words “I can create numbers using bricks” in the blank space at the bottom of page 16.
Students should draw a specific color brick after the words “I can create numbers using bricks” based on the following:

> I need help creating patterns. Draw an orange brick after the words “I can create numbers using bricks.”
>
> I can create patterns. Draw a green brick after the words “I can create numbers using bricks.”
>
> I can help others to create patterns. Draw a blue brick after the words “I can create numbers using bricks.”

Day 3 – Ten Frames

Welcome to Day 3

Welcome students back to Brick Math summer camp. Start in the circle.
Ask students if they can remember who their partner is. Ask students if they can remember how to make a number with their body. Call out a number and have everyone create the body number.

Tell students today they are going to work with ten-frames.
Show students a model of a ten-frame – 2x5 – there are no bricks that are 2x5, so it must be made from a combination of bricks. Show students how to create a ten-frame.

Ask students if they can see any patterns. Ask students how many studs are in a ten-frame.
Ask students if they are ready to get the materials and work with ten-frames.

Have students find their partners and go to their places at the desks or table.

Partner Rules

Remind students of the partner rules created on Day 1. Have students share one good thing they did as a partner yesterday.

Materials

Have students get the correct Brick Math set(s) and 2 baseplates for their team.
Students need to take out all the 1x1 bricks and sort them into colors.
They should have 10 of each color – blue, white, red, green.
Students also need:
4 1x2 bricks
4 2x4 bricks The 1x2 bricks and the 2x4 bricks need to be the same color. You may wish to choose the colors.

8 1x3 bricks

4 2x2 bricks
4 2x3 bricks The 2x2 bricks and the 2x3 bricks need to be the same color, but a different color from the 1x2 and 2x4 bricks. You may wish to choose the colors.

Show Them How

Follow the instructions on page 21 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students complete page 17 Part 1, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 21 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students complete page 17 Part 1, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 21 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 18, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 22 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 18, #4 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 22 in the Teaching Counting and Cardinality booklet.
Complete #5.
Students complete page 19, #5 in the Learning Counting and Cardinality booklet.

Students use the blank space at the bottom of page 18 in the Learning Counting and Cardinality booklet to write comparative statements using less than or more than.

Move to a Number

Place 10 circles on the floor in a 2x5 pattern, far enough apart that a student can stand on a circle without touching another student.

Create a second set of 10 circles to create a second ten-frame.

Show students the two sets of circles and ask them if they recognize the patterns. They should see two ten frames.

Call on students to sit on the circles in order to make a ten on the first ten-frame.
Then call on five students to sit on circles in the second ten-frame.

Ask students to identify the number represented by the students sitting on the ten-frames.

Ask students how they should move to create a number that is 2 less than the number 15. Before students move, take recommendations from the class. When the class agrees what action should be taken, then allow students to move.

Ask students how they should move to make the number 8. Before students move take recommendations from the class. When the class agrees, then allow students to move.

Ask all the students move out of the ten-frames. This time, choose two students to work together to give instructions to create 19. The two students should direct their classmates on

where to sit in the ten-frames. When the students have moved as directed, then ask the class if they agree with the formation.

If possible, ask students how they could show two more than the number 19. Because you do not have a third ten-frame, allow students to discover a good way to show the number 21.

Have students explain their thinking, then allow them to move.

Have students return to their tables or desks with their partners.

Show What You Know

Follow the instructions on page 22 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #1.
Students complete page 19 Part 2, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 22 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #2.
Students complete page 20, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 23 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 20, #3 in the Learning Counting and Cardinality booklet.

Challenges

Follow the instructions on page 23 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 21, #4 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 23 in the Teaching Counting and Cardinality booklet.
Complete #5.
Students complete page 21, #5 in the Learning Counting and Cardinality booklet.

Content Assessment

Students complete the Assessment #1 on page 22 in the Learning Counting and Cardinality booklet.
Discuss the answers with the class. Help students to improve their answers as needed.

Students complete the Assessment #2 on page 22 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #3 on page 23 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #4 on page 23 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #5 on page 23 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Have students move to the circle area of the room and have a seat.

Optional: Story Problems

Tell students a story problem like the following:

> Cecilia and Erin wanted to show their friends how they can use a ten frame to help them with numbers. They created the ten-frame and wanted to show nine. Can you help Cecilia and Erin?

Help students to complete the story problem and create nine on the ten-frame.

Now, have each pair work together to create a new story problem that uses a ten-frame.

As time allows, have students share their stories and baseplate with at least one other team.

Self-Assessment

Ask students to use the blank space at the bottom of page 23 in the Learning Counting and Cardinality booklet.

All students write the word "Partner" on the bottom of page 23.
Students should draw a specific color brick after the word "Partner" based on the following:

> I need to work on being a better partner. I did not listen to and help my partner like I should have. Draw an orange brick after the word Partner.

I was a good partner today. I helped my partner but sometimes I did their work for them or I let them do my work. Draw a green brick after the word Partner.

I was a good partner today. I helped my partner by checking their work and not by doing their work. Draw a blue brick after the word Partner.

All students should write “I can use ten-frames” at the bottom of page 23.
Students should draw a specific color brick after the words “I can create numbers using ten-frames” based on the following:

I need help with creating numbers using ten-frames. Draw an orange brick after the words “I can create numbers using ten-frames.”

I can create numbers using ten-frames. Draw a green brick after the words “I can create numbers using ten-frames.”

I can help others to create numbers using ten-frames. Draw a blue brick after the words “I can create numbers using ten-frames.”

Day 4 – Skip Counting

Welcome

Students start in their circle area.
Ask students if they have heard this rhyme – 2,4,6,8, who do we appreciate?

Tell students today they will practice skip counting, meaning that they will not say every number, 1,2,3,4,5,6,7,8,9,10. Rather they will skip some numbers and create a pattern.
Listen to the pattern of numbers 2,4,6,8,10. These are even numbers.
Ask students to say them with you – 2,4,6,8,10. Tell students “We just counted by twos. Good job!”

Repeat 2,4,6,8, who do we appreciate? Partners, Partners, Partners!

Have students find their partners and go to their places at the desks or table.

Partner Rules

Remind students of the partner rules created on Day 1. Have students share something they want to improve today about being a partner.

Materials

Have students get the correct Brick Math set(s) and 2 baseplates for their team.
Each team will need:

10	1x1 bricks
10	1x2 bricks
8	1x3 bricks
8	1x4 bricks
8	1x6 bricks
4	1x8 bricks
4	1x10 bricks
4	1x12 bricks
4	2x2 bricks
8	2x4 bricks
2	2x8 bricks

Show Them How

Follow the instructions on page 25 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students complete page 24 Part 1, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 25 in the Teaching Counting and Cardinality booklet.
Complete #2.

Students complete page 24 Part 1, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 25 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 25, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 26 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 25, #4 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 26 in the Teaching Counting and Cardinality booklet.
Complete #5.
Students complete page 25, #5 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 26 in the Teaching Counting and Cardinality booklet.
Complete #6.
Students may use the blank pages in the back of the in the Learning Counting and Cardinality booklet.

Follow the instructions on page 26 in the Teaching Counting and Cardinality booklet.
Complete #7.
Students may use the blank pages in the back of the in the Learning Counting and Cardinality booklet.

Follow the instructions on page 26 in the Teaching Counting and Cardinality booklet.
Complete #8.
Students may use the blank pages in the back of the in the Learning Counting and Cardinality booklet.

Move and Skip Count

There are a variety of skip counting songs that can be used with students. If you need some choices, you can search the internet and find many appropriate songs for skip counting by 2, 3, 5, and ten.

Have students sing along and create motions to help them. Allow students to be creative and enjoy singing and movement.

Have students return to their tables or desks with their partners.

Show What You Know

Follow the instructions on page 27 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #1.

Students complete page 26 Part 2, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 27 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #2.
Students complete page 26, Part 2, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 28 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 27, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 28 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 27, #4 in the Learning Counting and Cardinality booklet.

More Problems for Practice

Students complete page 28, #5 in the Learning Counting and Cardinality booklet.

Content Assessment

Students complete the Assessment #1 on page 28 in the Learning Counting and Cardinality booklet.
Discuss the answers with the class. Help students to improve their answers as needed.

Students complete the Assessment #2 on page 29 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #3 on page 29 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Optional: Story Problems

Tell students a story problem like the following:

> Davie and Howie were playing a game. They spun a wheel and the pointer landed on 2. They had to skip count to 20 in order to move on the board. Can you help Davie and Howie skip count by making a model on your baseplate?

Help students to complete the story problem and skip count.

Now, have each pair work together to create a new story problem that they can show on their baseplate and skip count by 2,3,5, or 10.

As time allows, have students share their stories and baseplate with at least one other team.

Self-Assessment

Ask students to use the blank space at the bottom of page 29 in the Learning Counting and Cardinality booklet.

All students write the word “Partner” on the bottom of page 29.

Students should draw a specific color brick after the word “Partner” based on the following:

> I need to work on being a better partner. I did not listen to and help my partner like I should have. Draw an orange brick after the word Partner.
>
> I was a good partner today. I helped my partner but sometimes I did their work for them or I let them do my work. Draw a green brick after the word Partner.
>
> I was a good partner today. I helped my partner by checking their work and not by doing their work. Draw a blue brick after the word Partner.

All students should write “I can skip count” in the blank space on the bottom of page 29. Students should draw a specific color brick after the words “I can skip count” based on the following:

> I need help with skip counting. Draw an orange brick after the words “I can skip count.”
>
> I can skip count. Draw a green brick after the words “I can skip count.”
>
> I can help others to skip count. Draw a blue brick after the words “I can skip count.”

Day 5 – Jump Numbers

Welcome

Students start in their circle area. Have hopscotch set up on the floor.
Ask students if they have ever played hopscotch. If someone has, have them demonstrate how to jump with both feet and one foot. You may need to demonstrate.

Have all students stand and jump in place – jump with two feet, jump to one foot, jump to two feet.
You will have students do it again but with numbers. Demonstrate for them jumping to two feet and saying two. You skipped one and jumped to two. If you counted up one from two and jumped on one foot, what would you get? Three. So, when you jump from two feet to one foot you say three. Now you are going to jump to two feet again, continuing on the hopscotch. What number is two more than three? Five.

Let several children try to jump from start to five. Have the class jump count 2,3,5 as the students jump.

Have students find their partners and go to their places at the desks or table.

Partner Rules

Remind students of the partner rules created on Day 1. Have students share which rule they think is most important.

Materials

Have students get the correct Brick Math set(s) and 2 baseplates for their team.
Each team will need:

10 1x1 bricks
6 1x2 bricks
2 1x3 bricks
4 2x2 bricks
6 2x3 bricks
8 2x4 bricks
2 2x6 bricks
2 2x8 bricks
2 2x10 bricks

Show Them How

Follow the instructions on page 30-31 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students complete page 31 Part 1, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 31 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students complete page 31 Part 1, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 32 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 32, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 33 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 33, #4 in the Learning Counting and Cardinality booklet.

Move Even and Odd

Have students return to their circle area and take a seat. Tell students you are going to play the even or odd game. When they hear an even number, they should raise two hands high in the air. When they hear an odd number, they should raise one foot high in the air.
Suggested numbers 3, 8, 12, 15

Now have students move a bit more. Have all students stand. You will say a number and everyone will jump on two feet if the number is even or stand on one foot if the number is odd.
Suggested numbers 6, 17, 4, 9

Have students return to their tables or desks with their partners.

Show What You Know

Follow the instructions on page 33 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #1.
Students complete page 33 Part 2, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 33 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #2.
Students complete page 34, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 34 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 34, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 34 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 35, #4 in the Learning Counting and Cardinality booklet.

More Problems for Practice

Students complete page 35, #1 in the Learning Counting and Cardinality booklet.

Content Assessment

Students complete the Assessment #1 on page 36 in the Learning Counting and Cardinality booklet.
Discuss the answers with the class. Help students to improve their answers as needed.

Students complete the Assessment #2 on page 36 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #3 on page 36 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #4 on page 37 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Challenge Assessment

Students complete the Challenge Assessment on page 37-38 in the Learning Counting and Cardinality booklet.

Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Optional: Story Problems

Tell students a story problem like the following:

> Tonica and Gerri were playing hopscotch and trying to count as they jumped. Tonica started on number 6. She jumped with two feet, then one foot, then two feet. How would you show that as a model on your baseplate and then jump count?

Help students to complete the story problem and jump count.

Now, have each pair work together to create a new story problem that they can show on their baseplate and jump count.

As time allows, have students share their stories and baseplate with at least one other team.

Self-Assessment

Ask students to use the blank space at the bottom of page 38 in the Learning Counting and Cardinality booklet.

All students write the word “Partner” on the bottom of page 38.

Students should draw a specific color brick after the word “Partner” based on the following:

> I need to work on being a better partner. I did not listen to and help my partner like I should have. Draw an orange brick after the word Partner.
>
> I was a good partner today. I helped my partner but sometimes I did their work for them or I let them do my work. Draw a green brick after the word Partner.
>
> I was a good partner today. I helped my partner by checking their work and not by doing their work. Draw a blue brick after the word Partner.

All students should write “I can jump count” in the blank space at the bottom of page 38. Students should draw a specific color brick after the words “I can jump count” based on the following:

> I need help with jump counting. Draw an orange brick after the words “I can jump count.”
>
> I can jump count. Draw a green brick after the words “I can jump count.”
>
> I can help others to jump count. Draw a blue brick after the words “I can jump count.”

All students should write “I can tell odd and even numbers” in the blank space at the bottom of page 38.

Students should draw a specific color brick after the words “I can tell odd and even numbers” based on the following:

> I need help with telling odd and even numbers. Draw an orange brick after the words “I can tell odd and even numbers.”
>
> I can tell odd and even numbers. Draw a green brick after the words “I can tell odd and even numbers.”
>
> I can help others to tell odd and even numbers. Draw a blue brick after the words “I can tell odd and even numbers.”

Day 6 – Square Numbers

Welcome

Students start in their circle area. Have students stand in groups of 1. Ask them how they know there is just one person in a group.

Have students stand in groups of two. Show two ways that two students could be in a group of two – side-by-side or facing each other or facing back-to-back. Have all groups practice side-by-side. Then, have all groups change to facing each other. Then all students stand back-to-back. Ask students if they are in an odd or even group. Even!

Have students stand in groups of three. Ask students to find three different ways to be in a group of three. Allow students to demonstrate these ways to the class. How many different ways can the class determine will work for a group of three? Allow students to try different ways, including two people face forward, one person faces backward. Ask students if they are in an odd or even group. Odd!

Have students find their partners and go to their places at the desks or table.

Partner Rules

Remind students of the partner rules created on Day 1. Have students draw a picture of their team and how the two of them work well together.

Materials

Have students get the correct Brick Math set(s) and 2 baseplates for their team.
Each team will need:

20 1x1 bricks
10 1x2 bricks
8 1x3 bricks
8 1x4 bricks
8 2x2 bricks
4 2x3 bricks
2 2x4 bricks

Show Them How

Follow the instructions on page 36 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students complete page 39 Part 1, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 36 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students complete page 39 Part 1, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 36 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 40, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 36 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 40, #4 in the Learning Counting and Cardinality booklet.
Follow the instructions on page 37 in the Teaching Counting and Cardinality booklet.
Complete #5.
Students complete page 41, #5 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 37 in the Teaching Counting and Cardinality booklet.
Complete #6.
Students complete page 41 #6 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 37 in the Teaching Counting and Cardinality booklet.
Complete #7.
Students complete page 42, #7 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 37 in the Teaching Counting and Cardinality booklet.
Complete #8.
Students complete page 42, #8 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 38 in the Teaching Counting and Cardinality booklet.
Complete #9.
Students complete page 43, #9 in the Learning Counting and Cardinality booklet.

Move to a Rectangle or Square

Have students return to their circle area and take a seat. Tell students you are going to play a game to make bricks out of people. Each person will be a 1x1 brick.

All 1x1 bricks stand up. Yes, you all stood up. Very good. Choose the first leader. Have that person choose people to come forward and create a 1x4 brick. When it is correct, have the people in the 1x4 brick sit down. The leader remains standing.

Choose another leader. Have that person choose standing people to come forward and create a 2x3 brick. When it is correct, have the people in the 2x3 brick sit down. The leader remains standing.

Allow people to stand up as needed to create the bricks. No one should be left out!

Choose another leader. Have that person choose standing people to come forward and create a 2x4 brick. When it is correct, have the people in the 2x4 brick sit down. The leader remains standing.

Choose another leader. Have that person choose standing people to come forward and create a 1x8 brick. When it is correct, have the people in the 1x8 brick sit down. The leader remains standing.

Have students return to their tables or desks with their partners.

Show What You Know

Follow the instructions on page 39 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #1.
Students complete page 43 Part 2, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 39 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #2.
Students complete page 44, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 39 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 44, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 39 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 45, #4 in the Learning Counting and Cardinality booklet.

More Problems for Practice

Students complete page 46, #5 in the Learning Counting and Cardinality booklet.

Students complete page 46, #6 in the Learning Counting and Cardinality booklet.

Content Assessment

Students complete the Assessment #1 on page 47 in the Learning Counting and Cardinality booklet.
Discuss the answers with the class. Help students to improve their answers as needed.

Students complete the Assessment #2 on page 47 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #3 on page 47 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Optional: Story Problems

Tell students a story problem like the following:

> Samantha wanted to create a small garden in the shape of a rectangle. She thought it might be just the right size if it was 3x5 feet. Can you make a rectangle on your baseplate to show a model of a 3x5 rectangle?

Help students to complete the story problem and create a 3x5 rectangle.

Have each pair work together to create a new story problem that they can show on their baseplate and create a different sized rectangle.

As time allows, have students share their stories and baseplate with at least one other team.

Self-Assessment

Ask students to use the blank space at the bottom of page 46 in the Learning Counting and Cardinality booklet.

All students write the word "Partner" on the bottom of page 46.

Students should draw a specific color brick after the word "Partner" based on the following:

> I need to work on being a better partner. I did not listen to and help my partner like I should have. Draw an orange brick after the word Partner.
>
> I was a good partner today. I helped my partner but sometimes I did their work for them or I let them do my work. Draw a green brick after the word Partner.
>
> I was a good partner today. I helped my partner by checking their work and not by doing their work. Draw a blue brick after the word Partner.

All the students should write the words “I can create number models” in the blank space at the bottom of page 46.
Students should draw a specific color brick after the words “I can create number models” based on the following:

> I need help creating number models. Draw an orange brick after the words “I can create number models.”
>
> I can create number models. Draw a green brick after the words “I can create number models.”
>
> I can help others create number models. Draw a blue brick after the words “I can create number models.”

Day 7 – More Than/Less Than

Welcome

Students start in their circle area. Create a group of 3 students and a group of 4 students. Have them stand.

Ask the class which group has more than 2 people in it? Both groups do.

Ask the class which group has fewer than 5 people in it? Both groups do.

Ask the class which of the two groups has more than the other group. The group of 4. How many more students does the group of four students have compared to the group of 3? One additional student is in the group of four students.

Ask students what they think they will be learning about today. More than and less than!

Have students find their partners and go to their places at the desks or table.

Partner Rules

Remind students of the partner rules created on Day 1. Have students share something they enjoyed with their partner yesterday.

Materials

Have students get the correct Brick Math set(s) and 2 baseplates for their team.
Each team will need:

20 1x1 bricks
5 1x2 bricks
10 1x3 bricks
5 1x4 bricks
5 2x2 bricks
5 2x4 bricks
2 2x6 bricks

Show Them How

Follow the instructions on page 41 in the Teaching Counting and Cardinality booklet.
Complete #1.
Students complete page 48 Part 1, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 41 in the Teaching Counting and Cardinality booklet.
Complete #2.
Students complete page 49, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 41 in the Teaching Counting and Cardinality booklet.

Complete #3.
Students complete page 49-50, #3 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 42 in the Teaching Counting and Cardinality booklet.
Complete #4.
Students complete page 50, #4 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 42 in the Teaching Counting and Cardinality booklet.
Complete #5.
Students complete page 50, #5 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 42 in the Teaching Counting and Cardinality booklet.
Complete #6.
Students complete page 51 #6 in the Learning Counting and Cardinality booklet.

Move to a Bigger or Smaller Brick

Have students return to their circle area and take a seat.
Choose 6 students to become a 2x3 brick. Have them sit in the 2x3 pattern.
Ask what number a 2x3 brick represents. Six.

Ask the class what would they do to make the number 7. (Add another person)
Which is more, 7 or 6? Seven. Seven is more than six. Have everyone return to their places in the circle.
Ask the class if 7 is even or odd. Odd. Ask the class if 6 is even or odd? Even.

Choose 8 students to become a 1x8 brick. Ask what number a 1x8 brick represents. Eight.
Ask the students what they could do to make the number 5. (Take away 3 people)
Which is less, 8 or 5? Five. Five is less than eight. Have everyone sit down.
Ask the class if 8 is even or odd. Even. Ask the class if 5 is even or odd. Odd.

Choose 14 students to become a shape. Ask what number a the brick shape represents. Fourteen.
Ask the students what they could do to make the number 20. (Add 6 people)
Which is less, 14 or 20? Fourteen. Fourteen is less than twenty. Have everyone sit down.
Ask the class if 14 is even or odd. Even. Ask the class if 20 is even or odd. Even.

Have all students in the class stand. Have them line up in rows of two people. Skip count by twos to determine how many people are in the class today. You may have to jump count at the end.
Ask students to make rows of four people. Skip count by fours to determine how many people are in the class today. You may have to jump count at the end.

Have students line up in rows of three people. Skip count by threes to determine how many people are in the class today. You may have to jump count at the end.

Have students line up in rows of five people. Skip count by fives to determine how many people are in the class today. You may have to jump count at the end.

Have students return to their tables or desks with their partners.

Show What You Know

Follow the instructions on page 43 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #1.
Students complete page 51 Part 2, #1 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 43 in the Teaching Counting and Cardinality booklet.
Complete Part 2, #2.
Students complete page 52, #2 in the Learning Counting and Cardinality booklet.

Follow the instructions on page 43 in the Teaching Counting and Cardinality booklet.
Complete #3.
Students complete page 52, #3 in the Learning Counting and Cardinality booklet.

Challenge

Follow the instructions on page 43 in the Teaching Counting and Cardinality booklet.
Complete the Challenge.
Students complete the Challenge on page 53 in the Learning Counting and Cardinality booklet.

More Problems for Practice

Students complete page 53, #4 in the Learning Counting and Cardinality booklet.

Students complete page 54, #5 in the Learning Counting and Cardinality booklet.

Content Assessment

Students complete the Assessment #1 on page 55 in the Learning Counting and Cardinality booklet.
Discuss the answers with the class. Help students to improve their answers as needed.

Students complete the Assessment #2 on page 55 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #3 on page 55 in the Learning Counting and Cardinality booklet.
Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Students complete the Assessment #4 on page 55 in the Learning Counting and Cardinality booklet.

Ask partners to check the work but that they cannot touch the model nor can they write anything on another person's paper. They can only discuss. Check students' work around the room.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Optional: Story Problems

Tell students a story problem like the following:

> Jasmine and Jason were sorting groups of bananas. Some groups had 4 bananas, some had 5 bananas, some had 6 bananas, and a few had 7 bananas. Can you create a model on your baseplate to help show which groups had more than 5 bananas and which groups had fewer than 5 bananas?

Help students to complete the story problem and show more or less.

Now, have each pair work together to create a new story problem that they can show on their baseplate and show more than/greater than or less than/fewer than.

As time allows, have students share their stories and baseplate with at least one other team.

Self-Assessment

Ask students to use the blank space at the bottom of page 46 in the Learning Counting and Cardinality booklet.

All students write the word "Partner" in the blank space on the bottom of page 46.

Students should draw a specific color brick after the word "Partner" based on the following:

> I need to work on being a better partner. I did not listen to and help my partner like I should have. Draw an orange brick after the word Partner.

I was a good partner today. I helped my partner but sometimes I did their work for them or I let them do my work. Draw a green brick after the word Partner.

I was a good partner today. I helped my partner by checking their work and not by doing their work. Draw a blue brick after the word Partner.

All students should write “I can use more than and less than correctly”
Students should draw a specific color brick after the words “I can use more than and less than correctly” based on the following:

I need help using more than and less than correctly. Draw an orange brick after the words “I can use more than and less than correctly”

I can use more than and less than correctly. Draw a green brick after the words “I can use more than and less than correctly.”

I can help others use more than and less than correctly. Draw a blue brick after the words “I can use more than and less than correctly.”

Day 8 – Review and Assessment

Welcome

Welcome students to the final day of camp. Ask them if they have had fun and learned a lot about math. YES!

Have students find their partners and their materials and take a seat at the table or desks.

Everyone needs a baseplate.

Modeling a Number

Ask students to work independently and choose a brick and place it in the middle of their baseplate. They should tell their partner the number that brick represents.

Each person should add another brick to their baseplate so the two bricks are touching. What number does the new model represent?

Have students stand and show their baseplate when you ask who the number XXX shown on their baseplate. Start with two and work your way up until everyone has stood and shown their baseplate model.

Did any of the students have the exact same model?

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Partner Rules

Remind students of the partner rules created on Day 1. Have students write a short thank-you note to his or her partner for helping them this week. You can have Thank You preprinted on a piece of paper or create cards on construction or other paper. Have students put the name of their partner on the front and sign their names on the inside. Collect the cards so they can be given at the end of the day.

Modeling a Pattern

Ask students to work independently and create a pattern using at least five bricks on their baseplate. Students may have to work with their partners to ensure they each have enough of the correct bricks.

Have students look at their partner's pattern and tell the next three bricks that should be added. Both partners must agree.

Have students show their patterns to the class, one group at a time. Were any of the patterns exactly alike?

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Ask students to work independently and create a pattern using at least ten bricks on their baseplate. Students may have to work with their partners to ensure they each have enough of the correct bricks.

Four students (two teams) should show their patterns to each other. The person to the right of the person showing the pattern should tell the next five bricks. Everyone in the group should agree on the next five bricks. When everyone agrees, move to the next student's pattern. When all four patterns have been reviewed, the groups should return to their seats.

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Different Ways to Model a Number

Students will now be asked to model unique ways to show a number. Have a baseplate ready modeling ways to show the number six. (Examples: 6 1x1 bricks in a row, a 2x3 brick, a 2x2 brick with two 1x1 bricks, three 2x1 bricks) Take your bricks off the baseplate.

Ask students to model the number 6 in as many ways as they can. Give students plenty of time to continue to think and try. Walk around the room encouraging those who seem to have finished to try and think of more ways. It is okay for students to look at what others are doing to get some ideas.

When you feel most people have made good progress, ask students to stop. Ask students to be prepared to share new models. On a white board or other display that all students can see, create the ideas that students have.

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Ask students to model the number 10 in as many ways as they can. Give students plenty of time to continue to think and try. Walk around the room encouraging those who seem to have finished to try and think of more ways. It is okay for students to look at what others are doing to get some ideas.

When you feel most people have made good progress, ask students to stop. Ask students to be prepared to share new models. On a white board or other display that all students can see, create the ideas that students have.

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Ask students to model the number 15 in as many ways as they can. Give students plenty of time to continue to think and try. Walk around the room encouraging those who seem to have finished to try and think of more ways. It is okay for students to look at what others are doing to get some ideas.

When you feel most people have made good progress, ask students to stop. Ask students to be prepared to share new models. On a white board or other display that all students can see, create the ideas that students have.

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Time to Move with Skip Counting

Have students sit in a circle on the floor. They will be making a pattern as they skip count. Start with twos. Choose one student to walk around the circle, starting with the person to their left and count by twos. The people who are 2,4,6, etc., stand. The people who are 1,3,5, etc., stay seated. The class should help by skip counting aloud.

Next, skip count by threes. Choose one student to walk around the circle, starting with the person to their left and count by threes. The people who are 3,6,9, etc., stand. The people who are 1,2,4,5, etc., stay seated. The class should help by skip counting aloud.

Next, skip count by fives. Choose one student to walk around the circle, starting with the person to their left and count by fives. The people who are 5,10,15, etc., stand. The people who are 1,2,3, 4,6, etc., stay seated. The class should help by skip counting aloud.

Repeat these until everyone has had a chance to walk around the circle.

Have students find their partners and their materials and take a seat at the table or desks.

Odd and Even Numbers

Ask students to create the numbers 1-12 on their baseplates. Each number must be made using only one color.

Ask students to compare the models they have created. Do students see any patterns? If so, have students explain.

Which models represent odd numbers? Which models represent even numbers? Is there an easy way to tell? Ask students to explain.

Use the models to count by threes. What number would come after the number 12?

Challenge: Ask students to count by twos starting with the number 5. Can they make the jump to modeling a progression of 7,9,11?

Ask students to put their finger on the model representing 8. What number is one less? Seven. What number is three more than seven? Ten. Help students to move up and down their models counting more or less. Continue asking for new numbers until most students are doing well. Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Rectangles and Squares

Have students use 1x1 bricks to create a 3x5 model.
What number does the model represent? Fifteen.

Cover the 1x1 bricks with 1x3 bricks. How many 1x3 bricks are needed? Five.

Try covering the model with 1x2 bricks. What happens? 1x2 bricks cannot cover the model exactly. There is a brick leftover. Ask students why?

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Have students use 1x1 bricks to create the number 13. Is this model a rectangle? No. No matter what pattern you try to make, there will always be one brick by itself.

Ask students to create a rectangle by adding more bricks. What is the new rectangular pattern? (depends on how many they add and their original design)

Ask students to tell the number their rectangle represents. Now create a model that is 7 less. What is the new shape and what is the new number the model represents? (Answers will vary.) Students can change the shape to suit their taste.

Have all students sit down and remove the bricks from their baseplates. Ask students to put the bricks in the correct locations in the trays.

Have students create models of squares. Ask students to create a 2x2 square. Have partners check each other's work. Ask what number the model represents. Four. Spot check, then have everyone remove the bricks and put them away properly.

Ask students to create a 3x3 square. Have partners check each other's work. Ask what number the model represents. Nine. Spot check, then have everyone remove the bricks and put them away properly.

Ask students to create a 4x4 square. Have partners check each other's work. Ask what number the model represents. Sixteen. Spot check, then have everyone remove the bricks and put them away properly.

Ask students to create a 5x5 square. Have partners check each other's work. Ask what number the model represents – it is a really big one. Twenty-five. Have the class count together so everyone hears the numbers after 20. Spot check, then have everyone remove the bricks and put them away properly.

Ask students to create a 6x6 square. Have partners check each other's work. Ask what number the model represents – it is a super big one. Thirty-six. Have the class count together so everyone hears the numbers after 20. Spot check, then have everyone remove the bricks and put them away properly.

Have students place the bricks into the correct compartments of the Brick Math bin.
Have both partners check the bin(s) and give you a thumbs-up that they are perfect.

Time to Move

Have everyone move to the circle area. Ask students to line up in one large circle making sure no one is touching or too close. Have students count off, one, two, three, four, etc., around the circle. All people with an odd number take two baby steps forward. All people with an even number raise your right hand. All people with an odd number sit down. All people with an even number lower your right hand. Very good. Everyone can sit down.

How many people are in our class? What was the largest number someone had?
What is the largest rectangle we can make with our class? What should we try? Have students make suggestions and then allow students to try to create the idea. Help students as needed. Many rectangles can be made with some additional people not able to fit inside. Ask the class how many people are outside the rectangle. Be sure that one person is not always left outside the rectangle.

Have students find their partners and their materials and take a seat at the table or desks.

Teacher Assessment of Student Performance

The Student Assessment Chart on page 56 of the Counting and Cardinality Student Edition booklet should be completed before class begins. You will need to make your own assessments and make appropriate comments so parents can see the progress made. If you wish, students can complete this as a self-assessment by making a checkmark in the correct boxes, and then you can add your own assessments and comments.

Optional Parent Activity and Materials Check In

Allow parents to come to the classroom the last 20 minutes of the camp day.
Each parent will work with their child. The child will be the teacher for these activities and will help their parents learn how to use the bricks.

Have each partner ask their parent to count out 20 1x1 bricks. If a parent is unable to attend, the student can do the activity on their own.

Have students ask their parents to create a model of the number 7. Ask if the number is odd or even. Odd. Then ask the parent to add three more bricks and determine the new number by counting from one. Again, ask if the number is odd or even. Even. Ask the parent to make a number one less. They take away one brick and the new number is nine. Ask if it is odd or even. Odd.

Place all the 1x1 bricks back in the correct compartment.

Have students ask their parents to make a 4x4 square. Then ask them to make another 4x4 square using different bricks. Can they make 4 different 4x4 squares on the baseplate? Students can help their parents as needed. Students should check the models.

Place all the bricks back in the correct compartments of the Brick Math bin.

Ask parents to spot check the compartments and make sure all the bricks are in the correct locations. Have students look on the floor to find any stray bricks.

Have each team bring their materials to you in numerical order, so you can keep track of your sets. Give each child their assessment sheet to be given to their parent. Everyone can leave and you have your sets in order and organized for the next use.