

Putting It All Together



Teacher Guide



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Putting It All Together

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Putting It All Together
Teacher Guide
Core Knowledge Mathematics™

Unit 8: Putting It All Together

At a Glance

Unit 8 is estimated to be completed in 17-23 days.

This unit is divided into four sections including 15 lessons and 6 optional lesson.

- Section A—Counting and Comparing (Lessons 1-5)
- Section B—Math on Our School (Lessons 6-11)
- Section C—Fluency within 5 (Lessons 12-16)
- Section D—All About 10 (Lessons 17-21)

On pages 6-9 of this Teacher Guide is a chart that identifies the section each lesson belongs in and the materials needed for each lesson.

Students choose from centers that have been introduced throughout the year. Students can work at any previously introduced stages of the centers. There are no new centers introduced in this unit.

Unit 8: Putting It All Together

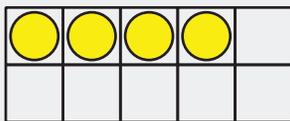
Unit Learning Goals

- Students consolidate and solidify their understanding of various concepts and skills on major work of the grade. They also continue to work toward fluency goals of the grade.

In this unit, students revisit major work and fluency goals of the grade, applying their learning from the year.

Section A focuses on concepts of counting and comparing. Section B highlights the presence of math in students' school community. Section C enables students to practice composing and decomposing numbers within 5, as well as adding and subtracting within 5. Section D focuses on composing and decomposing 10.

The sections in this unit are standalone sections, not required to be completed in order. The goal is to offer ample opportunities for students to integrate the knowledge they have gained and to practice skills related to the expected fluencies of the grade.



$$10 = \underline{8} + \underline{2}$$

The content here lays the foundation for grade 1, where students add and subtract fluently within 10 and count and compare larger quantities. Students will also learn about ten as a unit, which is the basis for understanding place value in the base-ten system.

Section A: Counting and Comparing

Standards Alignments

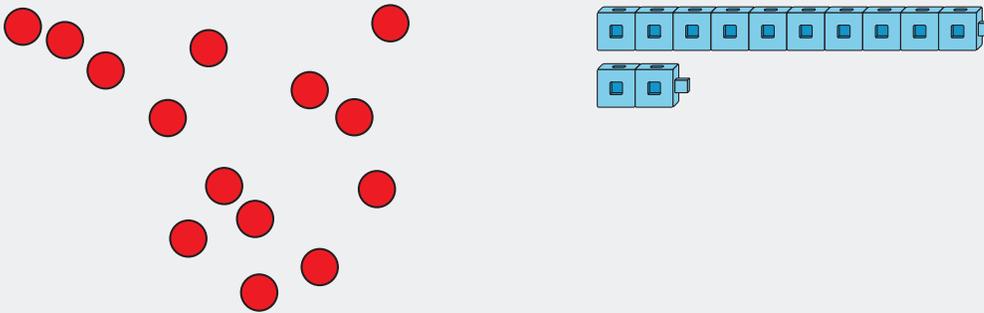
Addressing	K.CC, K.CC.A.1, K.CC.A.2, K.CC.A.3, K.CC.B.4, K.CC.B.4.c, K.CC.B.5, K.CC.C, K.MD.B.3, K.NBT.A.1, K.OA.A.2
Building Towards	1.OA.C.5

Section Learning Goals

- Count and compare groups of objects and images.
- Represent and write numbers up to 20.

In this section, students count and compare collections of up to 20 objects. The focus is on the count sequence up to 20 and using it to determine 1 more or 1 less than a given quantity or number, both with and without a context.

*Compare the groups of objects.
Explain how you know which group has more objects.*



*There were 10 people on the bus. Then 1 person got off the bus.
How many people are on the bus now?*

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Many of the activities in this section are optional because the standards do not expect students to compare quantities or numbers greater than 10. This work prepares students to relate counting to addition and subtraction in grade 1.

 PLC: Lesson 3, Activity 2, Singing Students

Section B: Math in Our School

Standards Alignments

Addressing K.CC, K.CC.A, K.CC.A.3, K.CC.B, K.MD, K.OA, K.OA.A.1, K.OA.A.2, K.OA.A.5

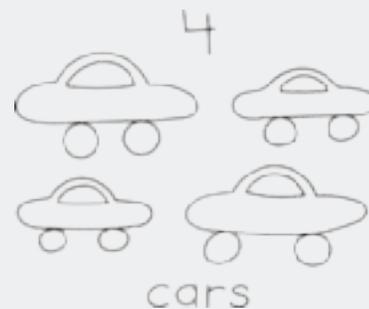
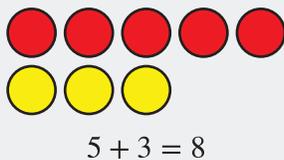
Section Learning Goals

- Represent and write quantities and numbers up to 20.

In this section, students explore and describe the math around them. They participate in activities that allow them to notice, record, ask questions, and tell stories about math in their community.

First, students record quantities that they see in their school as they make their own number book. Next, they ask and answer their own mathematical questions, such as: "How many tiles are there from the office to the cafeteria?" or "Are there more doors or more windows in the library?"

*There are 5 pictures on one side of the hallway.
There are 3 pictures on the other side of the hallway.
How many pictures are there in the hallway?*



Finally, students create, share, and solve story problems about their environment and community. While the school building is used as a context, the activities in this section can be adapted for students to do in their home community.

 PLC: Lesson 8, Activity 1, Find Someone Who

Section C: Fluency within 5

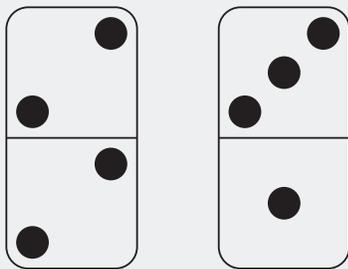
Standards Alignments

Addressing K.CC.A.2, K.CC.C.6, K.MD.B.3, K.OA.A.2, K.OA.A.3, K.OA.A.5
 Building Towards K.OA.A.5

Section Learning Goals

- Fluently add and subtract within 5.

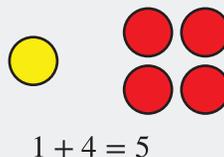
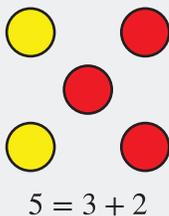
In this section, students develop fluency with adding and subtracting within 5. Repeated practice with different compositions of numbers to 5 prepares students to fluently find the value of addition and subtraction expressions.



Students use a variety of tools and representations for their work with the numbers 1-5.

For instance, they sort domino cards based on the number of dots they have and sort addition and subtraction expressions by their value.

In the final lesson, students apply what they learned and use objects and equations to find a missing part with a total of up to 5.



$$5 - \underline{3} = 2$$

$$5 - \underline{\quad} = 2$$

PLC: Lesson 13, Activity 2, Compare Dots on Dominoes

Section D: All About 10

Standards Alignments

Addressing	K.CC, K.CC.B.4, K.CC.B.4.c, K.CC.B.5, K.NBT.A.1, K.OA.A.1, K.OA.A.2, K.OA.A.3, K.OA.A.4
Building Towards	K.OA.A.4

Section Learning Goals

- Use understanding of 10 to work with numbers to 20.

In this section, students work with 10 as a benchmark when working with numbers within 20. This work prepares them to add within 20 in grade 1, where students will be encouraged to make a ten.

The section begins with students composing and decomposing 10 in different ways and representing these compositions and decompositions with equations. Students then find the number that makes 10 when added to any given number. They also use their understanding of the magnitude of 10 to estimate if groups have more or fewer than 10 items.

Throughout the section, students use fingers, objects, drawings, 10-frames, and equations to represent their thinking. They also create a tool with 10 beads, 5 in each color, to show different compositions of 10.



Finally, students compose and decompose teen numbers 11-19, always working with a group of 10 ones and some more ones.

*“How many students will sit at the table? How many will sit on the rug?
How many students are there altogether?”*



↔ PLC: Lesson 21, Activity 1, Where Will They Sit?

Throughout the Unit

Students choose from centers that have been introduced throughout the year. Students can work at any previously introduced stages of the centers. There are no new centers introduced in this unit.

Materials Needed

LESSON	GATHER	COPY
A.1	<ul style="list-style-type: none"> ● Bags ● Collections of objects ● Materials from a previous activity ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
A.2	<ul style="list-style-type: none"> ● 10-frames ● Collections of objects ● Materials from a previous activity ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
A.3	<ul style="list-style-type: none"> ● 10-frames ● Connecting cubes ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
A.4	<ul style="list-style-type: none"> ● Colored pencils, crayons, or markers ● Connecting cubes ● Materials from a previous activity ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● Number Mat 1-20 (groups of 2) ● One More, One Less Mat (groups of 2)
A.5	<ul style="list-style-type: none"> ● Materials from previous centers 	<ul style="list-style-type: none"> ● Number Cards 1-20 (groups of 4) ● Number Clues (groups of 2)
B.6	<ul style="list-style-type: none"> ● Clipboards ● Materials from previous centers ● Paper 	<ul style="list-style-type: none"> ● none

B.7	<ul style="list-style-type: none"> ● Colored pencils, crayons, or markers ● Materials from a previous activity 	<ul style="list-style-type: none"> ● Number Book (groups of 1)
B.8	<ul style="list-style-type: none"> ● 10-frames ● Clipboards ● Geoblocks ● Solid shapes 	<ul style="list-style-type: none"> ● Find Someone Who Recording Sheet (groups of 1)
B.9	<ul style="list-style-type: none"> ● 10-frames ● Clipboards ● Connecting cubes ● Geoblocks ● Paper ● Pattern blocks ● Solid shapes ● Two-color counters 	<ul style="list-style-type: none"> ● none
B.10	<ul style="list-style-type: none"> ● Clipboards ● Materials from previous centers ● Paper 	<ul style="list-style-type: none"> ● none
B.11	<ul style="list-style-type: none"> ● Connecting cubes or two-color counters ● Tools for creating a visual display 	<ul style="list-style-type: none"> ● none
C.12	<ul style="list-style-type: none"> ● Colored pencils, crayons, or markers ● Materials from a previous activity ● Materials from previous centers 	<ul style="list-style-type: none"> ● Dot Image Cards (groups of 1)
C.13	<ul style="list-style-type: none"> ● Materials from a previous activity ● Materials from previous centers 	<ul style="list-style-type: none"> ● Domino Cards (groups of 2) ● Sorting Chart 1-5 (groups of 2)

C.14	<ul style="list-style-type: none"> ● Colored pencils, crayons, or markers ● Materials from previous centers 	<ul style="list-style-type: none"> ● Expression Cards (groups of 2) ● Sorting Chart 1-5 (groups of 2)
C.15	<ul style="list-style-type: none"> ● Materials from a previous lesson ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
C.16	<ul style="list-style-type: none"> ● Connecting cubes or two-color counters ● Cups ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● Shake and Spill Stage 4 Recording Sheet Kindergarten (groups of 1)
D.17	<ul style="list-style-type: none"> ● Materials from a previous activity ● Materials from previous centers ● Pipe cleaners 	<ul style="list-style-type: none"> ● none
D.18	<ul style="list-style-type: none"> ● 10-frames ● Connecting cubes or two-color counters ● Materials from a previous activity ● Materials from a previous lesson ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
D.19	<ul style="list-style-type: none"> ● 10-frames ● Colored pencils, crayons, or markers ● Connecting cubes or two-color counters ● Materials from a previous lesson ● Materials from previous centers 	<ul style="list-style-type: none"> ● none

D.20	<ul style="list-style-type: none">● Materials from previous centers	<ul style="list-style-type: none">● none
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D.21	<ul style="list-style-type: none">● 10-frames● Collections of objects● Connecting cubes or two-color counters● Materials from a previous lesson● Materials from previous centers	<ul style="list-style-type: none">● none
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Section A: Counting and Comparing

Lesson 1: Sort, Count, and Compare Groups of Objects

Standards Alignments

Addressing K.CC, K.CC.A.2, K.CC.A.3, K.CC.B.4.c, K.CC.B.5, K.CC.C, K.MD.B.3

Teacher-facing Learning Goals

- Sort, count, and compare groups of up to 20 objects.

Student-facing Learning Goals

- Let's figure out which group has more objects.

Lesson Purpose

The purpose of this lesson is for students to sort, count, and compare groups of up to 10 objects.

In previous units, students sorted objects into given categories and categories that they created. Students wrote numbers to represent quantities and compared quantities. In this lesson, students sort objects by color and represent how many objects are in each group. Students compare the number of objects in each group and also compare the total number of objects with a partner. When comparing groups of objects, students may match the objects, use representations they created, or use their knowledge of the count sequence. The standards do not require students to compare written numbers beyond 10. The question in the lesson synthesis is posed so students can reason about how numbers and arrangements can both be helpful in comparing groups of objects. There is not a correct choice as both are valid.

When students compare written numbers or diagrams to decide which group has more, they reason abstractly and quantitatively (MP2).

If students need additional support with the concepts in this lesson, refer back to Unit 2, Section A in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Bags: Activity 1
- Collections of objects: Activity 1
- Materials from a previous activity: Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

In the beginning of the year, students compared groups of objects by matching them. In what ways have their strategies for comparing progressed?

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 8, Section A Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.
- Use numbers and their knowledge of the count sequence to compare groups of objects.

----- **Begin Lesson** -----

Warm-up

 10 min

Choral Count: Count on within 100

Standards Alignments

Addressing K.CC.A.2, K.CC.B.4.c

The purpose of this Choral Count is to invite students to practice counting and notice patterns in the count (MP7, MP8). These understandings help students develop fluency and will be helpful later in this lesson when students will use their knowledge of count sequence to compare groups of objects.

Instructional Routines

Choral Count

Student Responses

							57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77		

Sample responses:

- First the numbers start with a 5, then they have a 6, then they have a 7.
- After 60 the second number starts at 1. After 70 the second number starts at 1 too.

Launch

- "Count by 1, starting at 57."
- Record as students count.
- Stop counting and recording at 77.

Activity

- "What patterns do you see?"
- 1-2 minutes: quiet think time
- Record responses.

Synthesis

- "Name a number that is more than 64."
- "Name a number that is more than 71."
- "Name a number that is less than 67."
- "Name a number that is more than 65."

Activity 1

 10 min

Sort, Count, and Compare

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.CC.C, K.MD.B.3

The purpose of this activity is for students to sort objects into categories and represent and compare the number of objects in each category.

Access for Students with Disabilities

Engagement: Internalize Self-Regulation. Provide students an opportunity to self-assess and reflect on how they showed their thinking. For example, students can assess if their drawings, numbers, or words answer the questions posed to them.

Supports accessibility for: Attention, Conceptual Processing

Materials to Gather

Bags, Collections of objects

Required Preparation

- Each student needs a bag with 2 different colored beads or other objects, with up to 10 of each color.

Student-facing Task Statement

How many beads are in each group?
Show your thinking using drawings, numbers, or words.

Circle the group that has fewer beads.

Student Responses

Answers vary.

Launch

- Give each student a bag of beads.
- "Sort your beads into two groups."
- 1 minute: independent work time

Activity

- "How many beads are in each group? Show your thinking using drawings, numbers, or words."
- 3 minutes: independent work time
- "Compare the number of beads in each group. Which has more beads? Which has fewer beads? Circle the group that has fewer beads."
- 1 minute: independent work time
- "Tell your partner which group has fewer

beads using this sentence: "There are fewer _____ than _____."

- 1 minute: partner discussion

Synthesis

- "In the next activity, we will get to compare the number of beads in our bag to the beads in a partner's bag."

Activity 2 (optional)

🕒 15 min

Who Has More?

Standards Alignments

Addressing K.CC.A.3, K.CC.C, K.MD.B.3

The purpose of this activity is for students to compare groups of up to 20 objects. This activity is optional because the standards do not require students to compare groups of objects or written numbers beyond 10. Students can continue switching bags and counting, representing, and comparing sets of beads, as time permits.

Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the question, "Who has more beads?" This gives both students an opportunity to produce language.

Advances: Conversing

Materials to Gather

Materials from a previous activity

Required Preparation

- Students need the bags of beads and their representations from the previous activity.

Student-facing Task Statement

1. How many beads are in each group?
Show your thinking using drawings, numbers, or words.

2. How many beads are in your bag altogether?

Student Responses

Answers vary.

Launch

- Groups of 2
- “Switch your bag of beads with a partner. Just like you did before, sort the beads into two groups. Figure out how many beads are in each group. Show your thinking using drawings, numbers, or words.”
- 3 minutes: independent work time

Activity

- “Work with your partner to compare the number of beads in each bag. Which bag has more blue beads? Which bag has fewer yellow beads?”
- 3 minutes: partner work time
- “How many beads are in your bag altogether? Write a number to show how many beads there are altogether.”
- 2 minutes: independent work time
- “Work with your partner to compare the number of beads in each bag. Who has more beads in their bag?”
- 3 minutes: partner work time
- Monitor for students who use objects or drawings to share, for example by lining up and matching the objects. Monitor for students who use their knowledge of the count sequence to compare the written numbers.

Synthesis

- Invite previously identified students to share.
- “How did the drawings help you figure out who had more beads altogether?”
- “How did the numbers help you figure out who had more beads altogether?”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Less, Same, More
- Math Fingers
- Tower Build
- Math Stories
- Which One

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Less, Same, More
 - Math Fingers
 - Tower Build
 - Math Stories
 - Which One

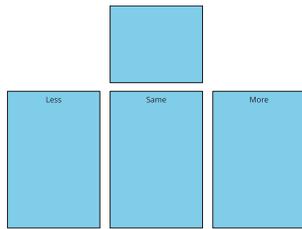
Student-facing Task Statement

Choose a center.

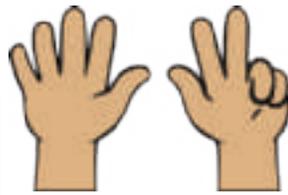
Less, Same, More Math Fingers

Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”



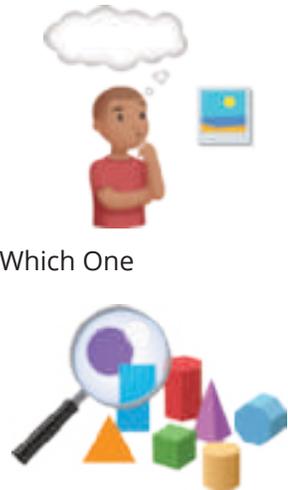
Tower Build



Math Stories



Which One



- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- “Choose what you would like to do next.”
- 8 minutes: center work time

Synthesis

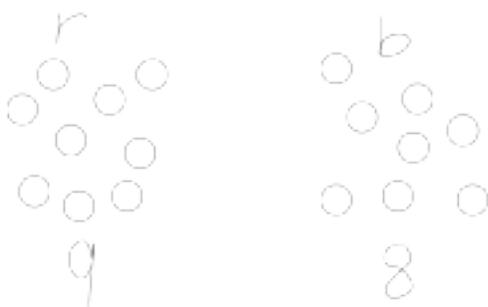
- “What can you do to help you be successful when working in centers? What can your partner(s) do to help you be successful? What can your teacher do?”

Lesson Synthesis

🕒 5 min

Draw two representations, labelled Tyler and Priya:

Tyler



Priya



“Tyler and Priya both showed how many red and blue beads they had in their bag. Which drawing do you think makes it easier to figure out if there are fewer blue beads or red beads?” (Tyler’s makes it easier to compare because he wrote the numbers. I know that 8 is less than 9. Priya’s makes it easier to

compare because she drew circles like they are in a 10-frame. I can see that there is 1 fewer blue bead.)

Lesson 2: Count and Compare Collections (Optional)

Standards Alignments

Addressing K.CC, K.CC.A.3, K.CC.B.4, K.CC.B.5, K.CC.C, K.NBT.A.1

Teacher-facing Learning Goals

- Count and compare groups of up to 20 objects.

Student-facing Learning Goals

- Let's count and compare collections.

Lesson Purpose

The purpose of this lesson is for students to count and compare collections of up to 20 objects.

This lesson is optional because the standards do not require students to compare groups of objects or written numbers beyond 10. As students represent and compare larger collections, organizing the objects and representations becomes more important to help students keep track. Give students access to 10-frames to help them organize their collections if they choose.

Collections can be created from classroom objects such as connecting cubes, two-color counters, pattern blocks, or buttons. Students can also bring in collections of objects to count from home.

If students need additional support with the concepts in this lesson, refer back to Unit 6, Section A in the curriculum materials.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- 10-frames: Activity 1
- Collections of objects: Activity 1
- Materials from a previous activity: Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

As students worked together today, where did you see evidence of the mathematical community established over the course of the school year?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section A Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.
- Use numbers and their knowledge of the count sequence to compare groups of objects.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

How Many Do You See: 10 and Some More

Standards Alignments

Addressing K.NBT.A.1

The purpose of this How Many Do You See is for students to subitize or use grouping strategies to describe the images they see.

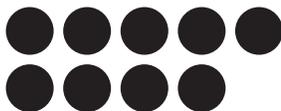
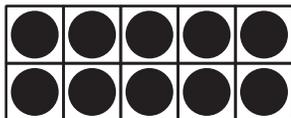
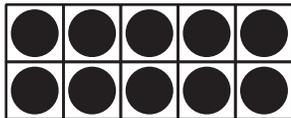
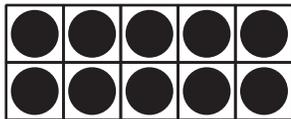
When students use the structure of the 10-frame to determine how many dots there are they look for and make sure of structure (MP7).

Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?
How do you see them?



Student Responses

- 15: 10 and 5 is 15.
- 13: 10 and 3 is 13.

Launch

- Groups of 2
- “How many do you see? How do you see them?”
- Flash the image.
- 30 seconds: quiet think time

Activity

- Display the image.
- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- “How is the 10-frame helpful when figuring out how many dots there are?” (I know that there are 10 dots on the 10-frame and 10 and 5 is 15. I start counting at 10 and count the rest of the dots.)

- 19: I saw 10 and counted on from 10 to 19.

Activity 1

🕒 10 min

Counting Collections

Standards Alignments

Addressing K.CC.A.3, K.CC.B.4, K.CC.B.5

The purpose of this activity is for students to count collections of up to 20 objects and represent their count with drawings and numbers (MP2).

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to plan a strategy, including the tools they will use to figure out how many objects are in their collection.

Supports accessibility for: Conceptual Processing, Organization

Materials to Gather

10-frames, Collections of objects

Required Preparation

- Each student needs a collection of 11–20 objects.

Student-facing Task Statement

How many objects are in your collection?
Show your thinking using drawings, numbers, or words.

Student Responses

Answers vary.

Launch

- Give each student a collection of objects and access to 10-frames.

Activity

- “How many objects are in your collection? Show your thinking using drawings, numbers, or words.”
- 3 minutes: independent work time
- “If you haven’t already, write a number to show how many objects are in your

collection.”

- 2 minutes: independent work time
- Monitor for students who organize their collections in different ways to share in the synthesis.

Synthesis

- Invite 2–3 previously selected students to share how they organized their objects.
- “What is the same about how the objects are organized? What is different?”
- Then, for each collection shared, ask: “How did ____ know there were __ objects in their collection?”

Activity 2

🕒 15 min

Comparing Collections

Standards Alignments

Addressing K.CC.C

The purpose of this activity is for students to compare groups of up to 20 objects. Students count and represent a new collection of objects and then determine which collection has more objects. If a student's collection was shared in the previous activity synthesis, give that student a new collection of objects for this activity.

Access for English Learners

MLR8 Discussion Supports. Invite students to pair gestures with verbal explanations as they figure out which collection has fewer objects.

Advances: Listening, Representing

Materials to Gather

Materials from a previous activity

Required Preparation

- Students need their collection of objects and representation from the previous activity.

Student-facing Task Statement

How many objects are in your collection?
Show your thinking using drawings, numbers, or words.

Student Responses

- Answers vary.

Launch

- Groups of 2
- “Switch your collection with your partner.”

Activity

- “How many objects are in your new collection? Show your thinking using drawings, numbers, or words.”
- 3 minutes: independent work time
- “If you haven’t already, write a number to show how many objects are in your collection.”
- 2 minutes: independent work time
- “Compare your collection with your partner. Figure out which collection has fewer objects.”
- 3 minutes: partner work time
- Monitor for a pair of students who both used a 10-frame to organize and represent their collection and then used the 10-frame to help them compare collections.

Synthesis

- Invite previously identified students to share.
- “Whose collection has more objects? How do you know?” (___ has more. They both have a full 10-frame so I just looked at the other objects.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Less, Same, More
- Math Fingers
- Tower Build
- Math Stories
- Which One

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

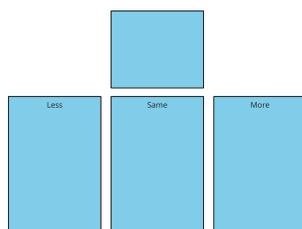
Required Preparation

- Gather materials from:
 - Less, Same, More
 - Math Fingers
 - Tower Build
 - Math Stories
 - Which One

Student-facing Task Statement

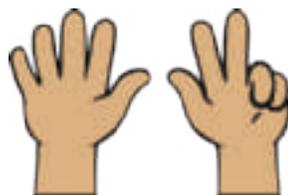
Choose a center.

Less, Same, More



Tower Build

Math Fingers



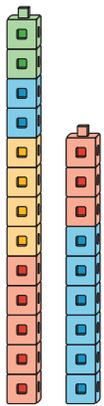
Math Stories

Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.



Which One

- 8 minutes: center work time
- "Choose what you would like to do next."
- 8 minutes: center work time

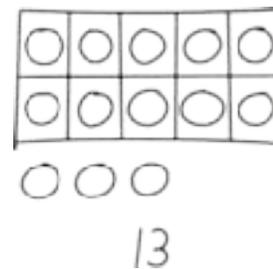
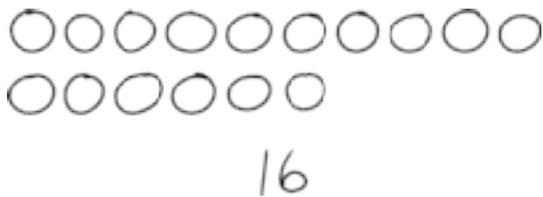
Synthesis

- "If you were going to teach another student how to play _____ center, what would you tell them or show them?"

Lesson Synthesis

🕒 5 min

Draw two representations or display two similar student-created representations.



"Compare the groups of objects. Explain how you know which group has more objects." (I know that 16 is more than 13. I see 10 on top and 10 in the 10-frame, so I looked at the extra circles. 6 is more than 3, so that one must have more.)

Lesson 3: Count to Add and Subtract

Standards Alignments

Addressing K.CC, K.CC.A.1, K.CC.A.2, K.CC.B.4.c, K.OA.A.2
 Building Towards 1.OA.C.5

Teacher-facing Learning Goals

- Solve Add To, Result Unknown and Take From, Result Unknown story problems.
- Use knowledge of the count sequence to add and subtract one and determine one more and one less.

Student-facing Learning Goals

- Let's solve story problems.

Lesson Purpose

The purpose of this lesson is for students to use their knowledge of the count sequence to solve story problems involving adding or subtracting 1.

In previous units, students used objects and drawings to represent and solve Add To, Result Unknown and Take From, Result Unknown story problems. In this lesson, all of the story problems involve adding or subtracting one, which encourages students to use their knowledge of the count sequence to solve the story problems (MP7, MP8). Students may still choose to use objects or drawings to represent and solve story problems, which is great. In grade 1, students will build on this work as they relate counting to addition and subtraction.

If students need additional support with the concepts in this lesson, refer back to Unit 2, Section D and Unit 4, Section B in the curriculum materials.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- 10-frames: Activity 1, Activity 2
- Connecting cubes: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	5 min
Cool-down	5 min

Teacher Reflection Question

In the next lesson, students will determine one more and one less than a given number with no story problem context. How does the work of this lesson prepare students for that work?

Cool-down (to be completed at the end of the lesson)

 5 min

Get off the Bus

Standards Alignments

Addressing K.CC, K.OA.A.2

Student-facing Task Statement

9 students were on the bus.

Then 1 student got off the bus.

How many students are on the bus now?

Show your thinking using objects, drawings, numbers, or words.

Student Responses

8

Begin Lesson

Warm-up

🕒 10 min

Choral Count: Forward and Backward

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2

The purpose of this warm-up is for students to count backward from 10 and 20. By counting backward from 10 to 1 and 20 to 1, students develop fluency with the count sequence to 20, which will be helpful later in this lesson when students use their knowledge of the count sequence to determine one more and one less than a given number. As students count backward, point to the numbers posted so that students can follow along.

Instructional Routines

Choral Count

Student Responses

- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
- 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
- 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

Launch

- “Let’s count to 20.”
- Record as students count.
- “This time, instead of starting a 1 and counting forward, we are going to start at 10 and count backward until we get to 1. Let’s start at 10 and count backward to 1.”

Activity

- Repeat 3–4 times.
- “Let’s start at 20 and count backward to 1.”
- Repeat 2–3 times.

Synthesis

- “In today’s lesson we will solve story problems where counting forward and backward may help you.”

Activity 1

🕒 10 min

Ride the Bus

Standards Alignments

Addressing K.CC.A.2, K.CC.B.4.c, K.OA.A.2
 Building Towards 1.OA.C.5

The purpose of this activity is for students to use their knowledge of the count sequence to solve Add To, Result Unknown and Take From, Result Unknown story problems where one is added or taken away.

🌐 Access for English Learners

MLR8 Discussion Supports. Before beginning group work time, invite a small number of students to act out the story. Listen for and clarify any questions.

Advances: Speaking, Representing

Materials to Gather

10-frames, Connecting cubes

Student-facing Task Statement

1. There were 7 people on the bus.
 Then 1 more person got on the bus.
 How many people are on the bus now?

 Show your thinking using objects, drawings,
 numbers, or words.

2. There were 10 people on the bus.
 Then 1 person got off the bus.
 How many people are on the bus now?

 Show your thinking using objects, drawings,
 numbers, or words.

Launch

- Groups of 2
- Give students access to connecting cubes and 10-frames.
- “Today you are going to solve two story problems about people on a bus.”

Activity

- Read the first story problem.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Monitor for students who accurately retell

Student Responses

1. 8 people
2. 9 people

the story. Choose at least one student to share with the class.

- Reread the task statement.
- “Show your thinking using drawings, numbers, words, or objects.”
- 2 minutes: quiet work time
- 2 minutes: partner discussion
- Repeat the steps with the second story problem.
- Monitor for a student who can explain how they just knew the answer without making a representation.

Synthesis

- Invite a previously identified student to share how they solved the second story problem.

Activity 2

Singing Students

 15 min

  PLC Activity

Standards Alignments

Addressing K.CC.A.2, K.CC.B.4.c, K.OA.A.2
 Building Towards 1.OA.C.5

The purpose of this activity is for students to complete and solve numberless Add To, Result Unknown and Take From, Result Unknown story problems. The story problems are about adding and subtracting 1, but they do not give a starting number and therefore highlight that adding 1 to any number gives the next number in the count sequence while subtracting 1 from any number gives the previous number in the count sequence. While the kindergarten standards only ask students to solve story problems with a result of up to 10, students may choose larger numbers for their problems.

Students may benefit from having the story problems in this activity read aloud multiple times.

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to plan a strategy, including the number they are choosing for the missing number.

Supports accessibility for: Conceptual Processing, Organization

Materials to Gather

10-frames, Connecting cubes

Student-facing Task Statement

- _____ students were singing.
Then 1 more student came to sing with them.
How many students are singing now?

Show your thinking using objects, drawings, numbers, or words.

- _____ students were singing.
Then 1 student stopped singing and went home.
How many students are singing now?

Show your thinking using objects, drawings, numbers, or words.

Student Responses

Answers vary. Sample responses:

- 8 students were singing.
Then 1 more student came to sing with them.
How many students are singing now?

9 students
- 6 students were singing.
Then 1 student stopped singing and went

Launch

- Give students access to connecting cubes and 10-frames.
- “Some students were singing. Then 1 more student came to sing with them. How many students are singing now?”
- “What do you notice? What do you wonder?” (Students were singing. Another student came to sing. How many students were singing? How many students are singing now?)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.

Activity

- “The story problem is missing the first number. Fill in a number and tell the story problem to your partner. Show your thinking using objects, drawings, numbers, or words.”
- 4 minutes: partner work time
- Repeat the steps, including noticing and wondering, with the second story problem.

Synthesis

- Invite a student to share a story for the first problem. (There were 8 students singing.

home.
How many students are singing now?

5 students

Then 1 more student came to sing with them. How many students are singing now?)

- “How many students are singing now? How do you know?” (9 because 9 is 1 more than 8. 9 comes after 8 when we count.)
- “What if there were 9 students singing and 1 more came to sing with them? How many students are singing now? How do you know?” (10. 10 is 1 more than 9.)

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Less, Same, More
- Math Fingers
- Tower Build
- Math Stories
- Which One

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

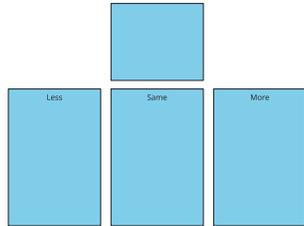
- Gather materials from:
 - Less, Same, More
 - Math Fingers
 - Tower Build

- Math Stories
- Which One

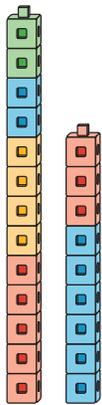
Student-facing Task Statement

Choose a center.

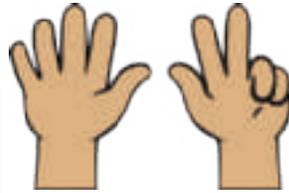
Less, Same, More



Tower Build



Math Fingers



Math Stories



Which One



Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time

Synthesis

- "What can you do when there is a math problem or center that you're not sure about?"

Lesson Synthesis

🕒 5 min

"Today we worked with story problems where one thing is added or one thing is subtracted, or taken away."

"When you add 1 to a number, which number do you get?" (The next number when we count, the number that is one more)

"Can someone share an example of when they did that today?"

"When you take away 1 from a number, which number do you get?" (The one before the number when we count, the number that is one less, the number you say when you count backward)

Complete Cool-Down

Response to Student Thinking

Students answer 10 when solving the story problem.

Next Day Support

- Before the warm-up, have students work in partners to discuss a correct response to this cool-down.
- Give students access to connecting cubes.

Lesson 4: One More and One Less (Optional)

Standards Alignments

Addressing K.CC, K.CC.B.4, K.CC.B.5

Teacher-facing Learning Goals

- Count out a group of up to 20 objects.
- Use knowledge of the count sequence to add and subtract one and determine one more and one less.

Student-facing Learning Goals

- Let's find 1 more or 1 less.

Lesson Purpose

The purpose of this lesson is for students to use their knowledge of the count sequence to determine one more and one less than groups of objects and numbers.

In a previous lesson, students used their knowledge of the count sequence to solve story problems involving adding and subtracting one. In this lesson, students apply this understanding to determining one more and one less than a given group of objects or numbers without a context. Students practice counting out a given number of objects. When determining one more or one less, students may recount their collection from 1 or may use their knowledge of the count sequence to know what 1 more or 1 less is. This lesson is optional because the standards do not require students to compare groups of objects or written numbers beyond 10.

If students need additional support with the concepts in this lesson, refer back to Unit 2, Section D in the curriculum materials.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Colored pencils, crayons, or markers:

Materials to Copy

- Number Mat 1-20 (groups of 2): Activity 1

- Activity 2
- Connecting cubes: Activity 1
 - Materials from a previous activity: Activity 2
 - Materials from previous centers: Activity 3
 - Two-color counters: Activity 1

- One More, One Less Mat (groups of 2): Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	5 min

Teacher Reflection Question

Look for students you have not observed doing items on the Section A checklist. Identify opportunities to observe these students in the next lesson.

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 8, Section A Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.
- Use their knowledge of the count sequence to find the new number after one is added or taken away from a given number.

----- Begin Lesson -----

Warm-up

🕒 10 min

How Many Do You See: One Less

Standards Alignments

Addressing K.CC

The purpose of this How Many Do You See is to allow students to use subitizing or grouping strategies to describe the images they see.

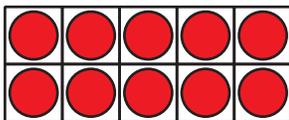
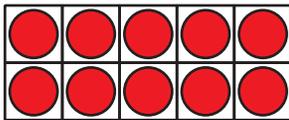
When students notice that one less is always the previous number in the count sequence they observe regularity in repeated reasoning (MP8).

Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?
How do you see them?



Launch

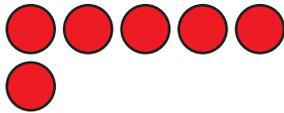
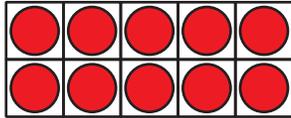
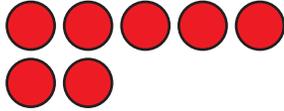
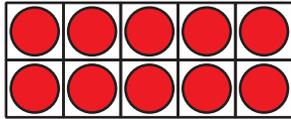
- Groups of 2
- “How many do you see? How do you see them?”
- Flash the image.
- 30 seconds: quiet think time

Activity

- Display the image.
- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- Display the last 2 images.
- “How did this image help you figure out how many dots there are in this image?” (I knew that there were 17 and 1 less is 16.)



Student Responses

- 12: 10 on the 10-frame and 2 more is 12.
- 11: It is 1 more than 10.
- 17: There are 10 in the 10-frame and 7 more.
- 16: There is 1 less than 17.

Activity 1

🕒 15 min

Count Out and Show One More or One Less

Standards Alignments

Addressing K.CC.B.4, K.CC.B.5

The purpose of this activity is for students to count out a given number of objects and determine the new amount if one more is added or if one is taken away. Students may count the objects each time or may use their knowledge of the count sequence to determine the new amount (MP8).

Access for English Learners

MLR8 Discussion Supports. During partner work time, invite each partner to read each starting number and new number aloud. Listen for and clarify questions about adding and taking away.
Advances: Speaking, Conversing

Materials to Gather

Connecting cubes, Two-color counters

Materials to Copy

Number Mat 1-20 (groups of 2)

Required Preparation

- Each group of 2 needs 1 connecting cube and at least 20 two-color counters.

Student-facing Task Statement

Show your number.
Show how your partner changed the number.

Round 1:

Starting Number:	New Number:
------------------	-------------

Round 2:

Starting Number:	New Number:
------------------	-------------

Round 3:

Starting Number:	New Number:
------------------	-------------

Round 4:

Starting Number:	New Number:
------------------	-------------

Student Responses

Answers vary.

Launch

- Groups of 2
- Give each group of students a connecting cube, a number mat, and two-color counters.
- “We are going to play a game called 1 More or 1 Less.”
- “First one partner will roll a cube onto the number mat and count out that number of counters.”
- Demonstrate rolling a cube onto the number mat and counting out the correct number of counters.
- “Now the other partner decides whether they want to take away one counter or add one counter.”
- Ask the class or invite a student to add 1 counter or take away 1 counter.
- “Now the first partner figures out how many counters there are now. Both partners use drawings or numbers to show what happened. How could I record what happened?” (You could write 15 and 14. You could draw 15 counters first and then cross one out because one was taken away.)

- Demonstrate recording based on student suggestions.

Activity

- “Take turns playing with your partner.”
- 8 minutes: partner work time
- Monitor for students who know how many counters there are without counting when 1 is added or subtracted.

Synthesis

- Display the number 14 and 14 counters.
- “Mai has the number 14. Her partner decided to add 1 more counter. How many counters will Mai have now? How do you know without counting all the counters?” (15. I know that 15 comes after 14 when we count. 15 is 1 more than 14.)

Activity 2

 15 min

Color One More or One Less

Standards Alignments

Addressing K.CC

The purpose of this activity is for students to practice using the count sequence to recognize 1 more or 1 less than a number. Students should have access to counters if needed to determine 1 more or 1 less than the given number.

An alternative version of the game is introduced in the lesson synthesis which students may wish to play.

Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Give students access to 10-frames to help them with counting in their game.

Supports accessibility for: Organization

Materials to Gather

Colored pencils, crayons, or markers,
Materials from a previous activity

Materials to Copy

One More, One Less Mat (groups of 2)

Required Preparation

- Each group of 2 needs the number mat, two-color counters, and the connecting cube from the previous activity.
- Each group 2 also needs crayons and a copy of the 1 more, 1 less mat.

Student-facing Task Statement

- Roll to choose a number and 1 more or 1 less.
- Color the number that is 1 more or 1 less than your number.
- Record the starting number and the new number.

10	17	2	9
19	5	13	16
7	1	18	12
20	14	6	3
4	8	11	15

	Starting Number:	New Number:
Round 1:	_____	_____
Round 2:	_____	_____
Round 3:	_____	_____

Launch

- Groups of 2
- “We are going to play another game with one more and one less. You will take turns rolling a connecting cube onto the number mat and the one more, one less mat.”
- “If my cube lands on 7 and 1 more, I need to color the number that is 1 more than 7 in my book. I’m going to color 8 because 8 is 1 more than 7.”
- “Once you’ve finished, record the starting number and the new number. I’m going to write 7 and 8. I rolled 7. 8 is 1 more than 7.”
- Give each group of students a number mat, a 1 more 1 less mat, a connecting cube, and access to counters and crayons.

Activity

- “Take turns playing with your partner. You can make drawings or use counters if they help you.”
- 10 minutes: partner work time

Round 4: _____

Student Responses

Responses vary.

Synthesis

- Display 17.
- “Clare and her partner rolled a 17 and 1 less. How can you figure out Clare’s new number?” (I just know that 16 is before 17. I know 6 is one less than 7 so 16 is one less than 17.)
- “Which numbers didn’t you color in? Choose one of the numbers and tell your partner one way that you could have covered that number.” (I could have covered 12 if we rolled 11 and 1 more.)

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Less, Same, More
- Math Fingers
- Tower Build
- Math Stories
- Which One

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

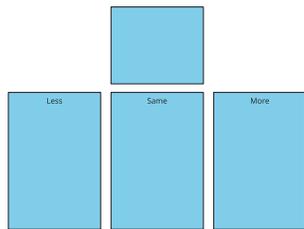
- Gather materials from:
 - Less, Same, More

- Math Fingers
- Tower Build
- Math Stories
- Which One

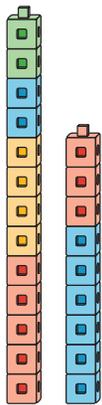
Student-facing Task Statement

Choose a center.

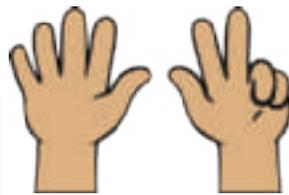
Less, Same, More



Tower Build



Math Fingers



Math Stories



Which One



Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time

Synthesis

- "What makes working in centers fun for you?"

Lesson Synthesis

🕒 5 min

"Today we played games where we figured out one more and one less."

Display the number mat and the student book page from the second activity.

"Kiran and Jada invented a new version of the game we played. Each time you roll a number, you color in both the number that is one more and the number that is one less. If they roll the number 7, which

numbers would they color in? How do you know?" (They would color in 8 because when we count we say 6, 7, 8, so 8 is 1 more. They would also color in 6 because if you have 7 and take 1 away, you have 6.)

"Kiran and Jada colored in 9 and 11. What number did they roll? How do you know?" (They rolled 10. 11 is 1 more than 10 and 9 is 1 less than 10. If I show 10 fingers and put down 1 finger, there are 9 fingers still up.)

Lesson 5: Order Numbers 1-20 (Optional)

Standards Alignments

Addressing K.CC, K.CC.A.1, K.CC.A.2, K.CC.A.3

Teacher-facing Learning Goals

- Order numbers 1-20.
- Use knowledge of the count sequence to add and subtract 1 and determine one more and one less.

Student-facing Learning Goals

- Let's think about the order of numbers 1-20.

Lesson Purpose

The purpose of this lesson is for students to put numbers 1–20 in order and use their knowledge of the count sequence to identify one more or one less than a given number.

In a previous lesson, students initially counted out objects and added or subtracted one object to determine one more or one less than a given number. In this lesson, students continue working on identifying one more and one less than a given number up to 20 without objects and relating one more and one less to the count sequence (MP8). This lesson is optional because the standards do not require students to compare groups of objects or written numbers beyond 10.

If students need additional support with the concepts in this lesson, refer back to Unit 6, Section B in the curriculum materials.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3

Materials to Copy

- Number Cards 1-20 (groups of 4): Activity 1

- Number Clues (groups of 2): Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

Were you able to circulate and hear student thinking while students worked together in the second activity? If so, what routines or structures helped students work independently? If not, what routines or structures can you establish to ensure that you are able to circulate and talk to students as they work in groups?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section A Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.
- Use their knowledge of the count sequence to find the new number after one is added or taken away from a given number.

----- Begin Lesson -----

Warm-up

🕒 10 min

Choral Count: Count Backward

Standards Alignments

Addressing K.CC.A.2

The purpose of this warm-up is for students to practice counting backward from 10 and 20. By counting backward from 10 to 1, students develop fluency with the count sequence to 10, which will be helpful later in this lesson when order numbers 1–20 and find one more and one less than a given number. As students count backward, point to the numbers posted so that students can follow along.

Instructional Routines

Choral Count

Student Responses

- 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
- 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

Launch

- “Let’s start at 10 and count backward to 1.”
- Record as students count.

Activity

- Repeat 3–4 times.
- “Let’s start at 20 and count backward to 1.”
- Record as students count.
- Repeat 2–3 times.

Synthesis

- “If we start at 17 and count backward to 1, what number would we say after 16?”
- “If we start at 11 and count backward to 1, what number would we say after 11?”

Activity 1

 10 min

Order Numbers

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2, K.CC.A.3

The purpose of this activity is for students to put numbers 1–20 in order.

Access for English Learners

MLR8 Discussion Supports. Invite each group to chorally read numbers 1–20 in order once the group agrees on the order. Listen for and clarify questions.

Advances: Speaking, Conversing

Materials to Copy

Number Cards 1-20 (groups of 4)

Required Preparation

- Create a set of cards from the Instructional master for each group of 4.

Student-facing Task Statement

Write the numbers in order.

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Student Responses

Students order and write the numbers from 1–20.

Launch

- Groups of 4
- Give each group of students a set of number cards, not in sequence.

Activity

- “Work with your group to put the numbers in order from 1 to 20.”
- 3 minutes: small-group work time
- “Once your group agrees that the numbers are in the correct order, write the numbers in order from 1 to 20.”
- 3 minutes: independent work time

Synthesis

- “How did you decide the order of the numbers?”
- Display numbers 1–12 in order.
- “Clare is putting the numbers in order. What would you say to her to help her find the number that comes next?” (Look for 13 because it comes after 12. Look for the number that has a 3 because the last

number has a 2.)

Activity 2

🕒 15 min

Number Clues

Standards Alignments

Addressing K.CC.A.2

The purpose of this activity is for students to use their knowledge of the number sequence to find the number that matches clues with one more and one less. Numbers 1–20 are displayed around the room. The numbers may be displayed in order, or the sequence of numbers can be mixed up for more of a challenge. The cards with number clues are included as a Instructional master; one example is included in the student-facing task statement. Consider developing a signal, such as ringing a bell, so that students know when to move around the classroom. In the activity synthesis, students consider why there can be different clues that match a given number.

🕒 Access for Students with Disabilities

Engagement: Internalize Self-Regulation. Provide students an opportunity to self-assess and reflect on the number clue and if that number clue matches the number they will stand by. For example, students can choral count together to check that the number 9 is 1 less than 10.

Supports accessibility for: Memory, Conceptual Processing

Materials to Copy

Number Clues (groups of 2)

Required Preparation

- Each group of 2 needs one card from the Instructional master.
- Display large numbers 1 to 20 around the room. The numbers may be displayed in order, or the sequence of numbers can be mixed up for more of a challenge.

Student Responses

Answers vary.

Launch

- Groups of 2

- Display number cards 0–20 around the room, in order or mixed up.
- Give each group of students a card.
- “On your card there are some clues. Each clue says ‘1 more than ____’ or ‘1 less than ____.’”
- “Look at your first clue. Decide with your partner which number matches the clue. Then look around the room and find that number. When I give the signal, walk over to that number.”

Activity

- 2 minutes: partner work time
- “Discuss with the other people at your number. Did you have the same clue? Are you all at the correct number? How do you know?”
- 2 minutes: small-group work time
- Repeat the steps with the rest of the clues.
- During the final round, monitor for a group that notices there are 2 different clues that match the number and discuss why they both match.

Synthesis

- Invite previously identified students to share what they noticed during the last round of number clues.
- “‘1 more than 15’ and ‘1 less than 17’ are both clues to 16.”
- “What are two different clues that could match the number 12?”

Activity 3

 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Less, Same, More
- Math Fingers
- Tower Build
- Math Stories
- Which One

Materials to Gather

Materials from previous centers

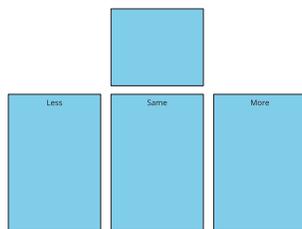
Required Preparation

- Gather materials from:
 - Less, Same, More
 - Math Fingers
 - Tower Build
 - Math Stories
 - Which One

Student-facing Task Statement

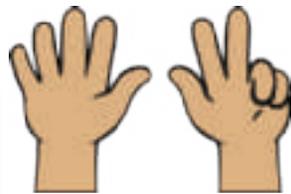
Choose a center.

Less, Same, More



Tower Build

Math Fingers



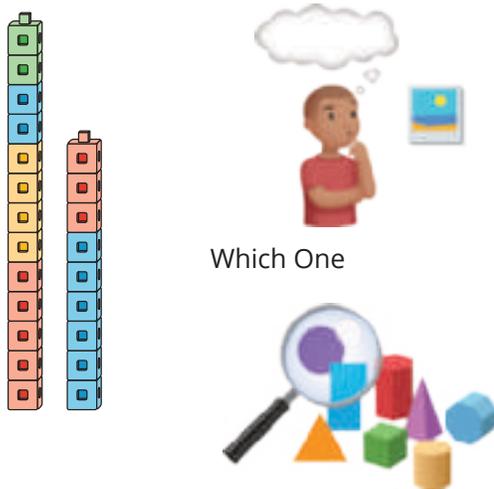
Math Stories

Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time



- "Choose what you would like to do next."
- 8 minutes: center work time

Synthesis

- "In math class, it's important to be able to explain your thinking. Describe a time when you were able to explain your ideas to other people in your class."

Lesson Synthesis

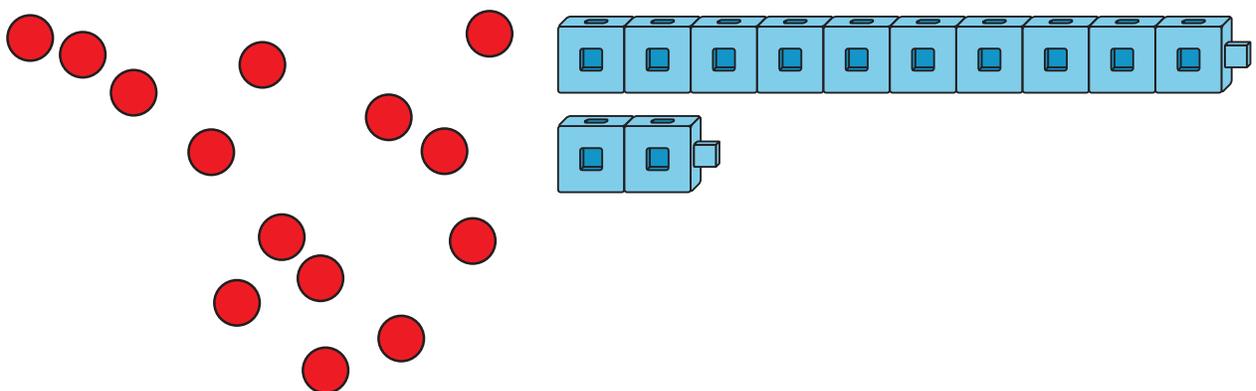
🕒 5 min

Display number cards 1–20 in order, but with 16 missing.

"I put my numbers in order from 1 to 20, but one of my numbers went missing. Which number is missing and how do you know?" (16 is missing. The missing number comes after 15. The missing number is 1 more than 15. The missing number is 1 less than 17.)

✍ Student Section Summary

In this section, we counted and compared groups of objects.



There are 14 counters and 12 cubes. There are fewer cubes.

We also used what we know about counting to help us figure out 1 more and 1 less.

1, 2, 3, 4, 5, 6, 7, **8**

8 is 1 more than 7.

There were 10 people on the bus.

Then 1 person got off the bus.

How many people are on the bus now?

1, 2, 3, 4, 5, 6, 7, 8, **9**, 10

9 comes before 10 when we count, so 9 is 1 less than 10.

Section B: Math in Our School

Lesson 6: Create Number Books (Part 1)

Standards Alignments

Addressing K.CC, K.CC.A, K.CC.A.3, K.CC.B

Teacher-facing Learning Goals

- Answer mathematical questions about the community.
- Identify number and quantity in the environment.
- Represent and write numbers to 20.

Student-facing Learning Goals

- Let's find things to count at our school.

Lesson Purpose

The purpose of this lesson is for students to use numbers to represent objects in their environment.

In this lesson, students explore and identify common features of number books and take a walk around the school to record important objects or features to include in their number book. In the next lesson, students will create and share their own number book.

If students need additional support with the concepts in this lesson, refer back to Unit 2, Section C in the curriculum materials.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Clipboards: Activity 2

- Materials from previous centers: Activity 3
- Paper: Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

If you were to teach this lesson over again, what activity would you redo? How would your proposed changes support student learning?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section B Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.
- Use objects, drawings, numbers, words, and expressions or equations to represent quantities up to 20.

----- Begin Lesson -----

Warm-up

🕒 10 min

Notice and Wonder: All Hands On

Standards Alignments

Addressing K.CC.A, K.CC.B

The purpose of this warm-up is to elicit the idea that there are lots of things to count around us and different ways to count them, which will be useful when students find objects in the school to include in a number book in a later activity. While students may notice and wonder many things about these hands, the number of hands and fingers are the important discussion points.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?
What do you wonder?



Student Responses

Students may notice

- There are 3 pairs of hands
- There are 6 hands
- There are a lot of fingers.
- There are 3 groups of 10 fingers.

Students may wonder

- Whose hands are they?
- Why are their hands on the table?
- How many fingers are there altogether?

Launch

- Groups of 2
- Display the image.
- “What do you notice? What do you wonder?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- “What did you see in the picture that you can count?” (How many hands there are, how many fingers there are, how many people.)
- “How can you figure out how many people there are?” (Each person has 2 hands. There are 3 people.)

- How many people are there?

Activity 1

🕒 10 min

Explore Number Books

Standards Alignments

Addressing K.CC.B

The purpose of this activity is for students to identify common features of books about numbers, such as having numbers and drawings on each page.

Some examples of number and math books include “One Is a Snail, Ten Is a Crab: A Counting by Feet Book” by April Pulley Sayre and Jeff Sayre, “Fish Eyes” by Lois Ehlert, and “One Duck Stuck” by Phyllis Root. If time allows, read some of the number books to the class.

Required Preparation

- Gather a variety of number books for the class to look through.

Student Responses

Students identify common features of number books.

Launch

- Groups of 2
- Give students access to a variety of number books.
- “Look through these books with your partner. Tell your partner what you notice and wonder on each page.”

Activity

- 5 minutes: partner work time
- “As you look through the books, think about what is the same and what is different about each book.” (This book is about animals and that book is about children. The books all have numbers on the pages.)

- 3 minutes: partner work time
- Share responses.

Synthesis

- Display a page that includes a number, a picture, and some words or a sentence.
- “What do you see on this page?”
- Share responses.
- “We are going to make number books about our school. Just like these number books, each page will include a number, a drawing, and some words.”

Activity 2

 15 min

School Walk

Standards Alignments

Addressing K.CC.A.3, K.CC.B

The purpose of this activity is for students to identify important objects or features in their school community and connect them to numbers. When students identify objects around them that they can count they make a first step toward quantifying their world (MP4).

Access for English Learners

MLR8 Discussion Supports. Invite students to do the school walk with a partner and to say the names of the things that they record aloud.

Advances: Speaking, Conversing

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to think of different objects they might look for on their walk. For example, students might say they will look for balls on the playground or leaves on branches.

Supports accessibility for: Memory, Organization

Materials to Gather

Clipboards, Paper

Student Responses

Students identify important objects or features in the school and connect them to numbers.

Launch

- Give each student a clipboard with a blank piece of paper.
- “We’re going to take a walk around the school. As we’re walking, look for things that you would like to include in your number book. Use your recording sheet so that you remember your ideas. If I wanted to write about how many tables are in our class, what could I put on my recording sheet so I remember?” (You could draw a table. You could write the number 6 because there are 6 tables. You write the word table.)
- Demonstrate recording based on students’ suggestions.

Activity

- 10 minutes: whole-class school walk

Synthesis

- “What are you most excited to include in your number book about our school?”
- Share and record responses.
- “Did anyone find something that they want to include in their number book that there are 3 of? What about 10?”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Picture Books
- Find the Pair
- Math Stories
- Build Shapes
- Make or Break Apart Numbers

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Picture Books
 - Find the Pair
 - Math Stories
 - Build Shapes
 - Make or Break Apart Numbers

Student-facing Task Statement

Choose a center.

Find the Pair



Math Stories



Build Shapes

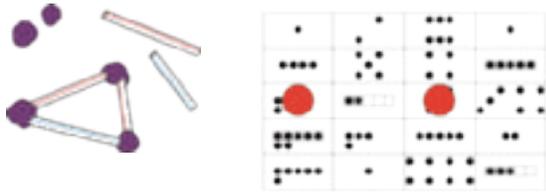
Make or Break Apart Numbers

Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.



Picture Books



- 8 minutes: center work time
- "Choose what you would like to do next."
- 8 minutes: center work time

Synthesis

- "If you were going to teach another student how to play _____ center, what would you tell them or show them?"

Lesson Synthesis

🕒 5 min

"Today we looked at number books and thought about ideas for how to write our own number books. What do you think will be the most challenging part of making a number book?"

Lesson 7: Create Number Books (Part 2)

Standards Alignments

Addressing K.CC, K.CC.A.3, K.CC.B, K.OA.A.5

Teacher-facing Learning Goals

- Represent and write numbers to 20.

Student-facing Learning Goals

- Let's make a number book about our school.

Lesson Purpose

The purpose of this lesson is for students to use numbers to represent objects in their environment.

In a previous lesson, students explored number books and brainstormed important objects and features of their school community to include in a number book. In this lesson, students create, revise, and share their own number books about their school community. When students represent objects in their school with pictures and numbers, the reason abstractly and quantitatively (MP2).

If students need additional support with the concepts in this lesson, refer back to Unit 2, Section C in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Colored pencils, crayons, or markers: Activity 1
- Materials from a previous activity: Activity 2

Materials to Copy

- Number Book (groups of 1): Activity 1

Lesson Timeline

Warm-up 10 min

Teacher Reflection Question

Students used numbers, pictures, and words in their number books. How have you seen each

Activity 1	30 min	student progress in their ability to create and make connections between multiple representations of numbers?
Activity 2	10 min	
Lesson Synthesis	5 min	
Cool-down	5 min	

Cool-down (to be completed at the end of the lesson)

🕒 5 min

Classroom Number Page

Standards Alignments

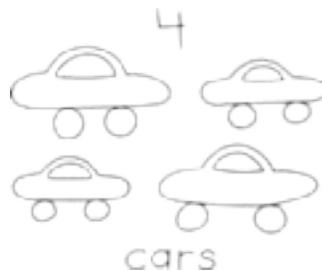
Addressing K.CC

Student-facing Task Statement

Choose 1 object in our classroom.
Create a number book page about the object.
Include a number, a drawing, and letters, a word, or words.

Student Responses

Sample response:



----- Begin Lesson -----

Warm-up

🕒 10 min

How Many Do You See: Different Dots

Standards Alignments

Addressing K.OA.A.5

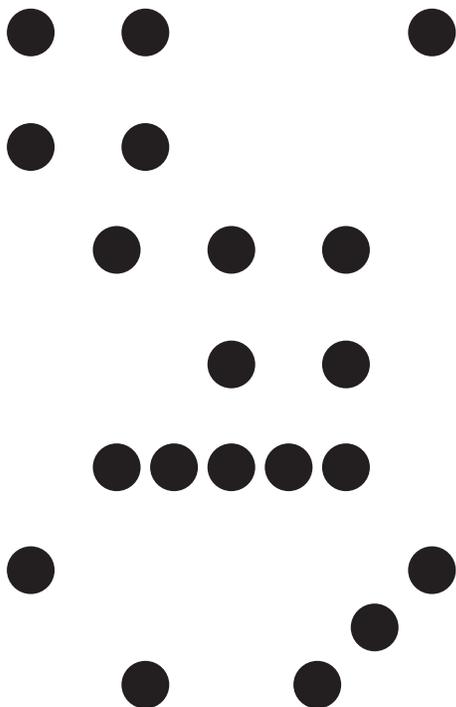
The purpose of this How Many Do You See is for students to subitize or use grouping strategies to describe the images they see.

Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?
How do you see them?



Student Responses

Sample responses:

- 5: I see 4 and 1 more. 5 is 1 more than 4.
- 5: It looks the same but the 1 is on the other side. There are 3 and 2.
- 5: It's a line of 5 like in a 5-frame.

Launch

- Groups of 2
- "How many do you see? How do you see them?"
- Flash the image.
- 30 seconds: quiet think time

Activity

- Display the image.
- "Discuss your thinking with your partner."
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- "Let's write an expression or equation for each group of dots."
- Record expressions and equations that students share.
- "The same group of 5 dots can look different depending on how you arrange the dots. When you are working on your number book today, you can think about different ways to show how many objects there are."

- 5: There are 2 and 3 like on a number cube.

Activity 1

🕒 30 min

Make Number Books

Standards Alignments

Addressing K.CC.A.3, K.CC.B

The purpose of this activity is for students to create a number book about their school community. Students share their work with a partner, receive feedback, and then improve their work (MP3). In the activity synthesis, students will create a title and front cover for their book. As students work during the activity, have them leave the first page blank. If time allows, invite students to make a rough draft and then a final draft of their book.

🌐 Access for English Learners

MLR8 Discussion Supports. Create a visual display of a page with a number, a picture, and some words or a sentence. Reference the display during the directions, pointing to each component.
Advances: Speaking, Representing

♿ Access for Students with Disabilities

Engagement: Internalize Self-Regulation. Provide students an opportunity to self-assess and reflect on their pages. For example, students should verify that each page has a number, a picture, and some words or a sentence.
Supports accessibility for: Memory, Organization

Materials to Gather

Colored pencils, crayons, or markers

Materials to Copy

Number Book (groups of 1)

Required Preparation

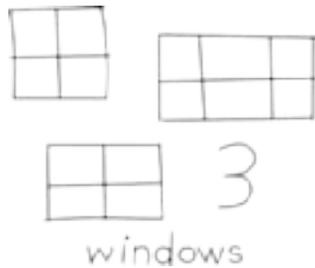
- Assemble a number book for each student by copying and stapling the pages in the Instructional master.

Student Responses

Sample response:

Launch

- Groups of 2



- Give each student a number book and access to colored pencils, crayons, and markers.
- “Look through your recording sheet to decide what you would like to put on the first page of your number book about our school.”
- 1 minute: quiet think time
- 2 minutes: partner discussion

Activity

- “Remember that each page should have a number, a picture, and some words or a sentence.”
- 10 minutes: independent work time
- “Share what you have so far with your partner.”
- 3 minutes: partner discussion
- “Think of at least one thing that your partner did really well in their book.”
- 30 seconds: quiet think time
- 2 minutes: partner discussion
- Share responses.
- “Think of one or two things that your partner could add or change to make their book even better.”
- 30 seconds: quiet think time
- 2 minutes: partner discussion
- Share responses.
- “Think about your partner’s suggestions as you continue working on your number book.”
- 7 minutes: independent work time

Synthesis

- “Now that we’ve made the pages for our book, we should think of a title for the book. A title can tell you what the book is about. What are our books about?” (Our

school, numbers, objects, math)

- 1 minute: quiet think time
- Share and record responses.
- “You can use some of these words to help you think of a title for your book. Once you have written your title, you can draw a picture for the front cover.”
- 5 minutes: independent work time

Activity 2

🕒 10 min

Share Number Books

Standards Alignments

Addressing K.CC.A.3, K.CC.B

The purpose of this activity is for students to share the number books that they created in the previous activity.

Materials to Gather

Materials from a previous activity

Required Preparation

- Students need the number book that they created in the previous activity.

Student Responses

Students share their number books.

Launch

- Groups of 4
- “Each person will take turns reading their number book to their group. After each group member reads their book, each person will share one or two things that they enjoyed about the book.”

Activity

- 8 minutes: small-group work time

Synthesis

- “What new things did you learn about our school from the number books?”

Lesson Synthesis

🕒 5 min

“Today we created number books about our school. Find the page that you are most proud of in your book. Why are you proud of this page?”

“How did your partner help you make this page even better?”

Complete Cool-Down

Response to Student Thinking

Students do not include a number, drawing, and a word or words. Students include only one or two of these elements.

Next Day Support

- Before the warm-up, select a student's cool-down from the previous lesson (name anonymous). Ask students to identify what the student did well and what the student needs to do to improve the cool-down.

Lesson 8: Find Someone Who, Find Something That

Standards Alignments

Addressing K.CC, K.CC.B, K.MD, K.OA

Teacher-facing Learning Goals

- Answer mathematical questions about their community.

Student-facing Learning Goals

- Let's learn more about our classmates and our classroom.

Lesson Purpose

The purpose of this lesson is for students to answer mathematical questions about their classmates and community.

Because students are often most comfortable asking “how many” questions, this lesson exposes students to many different kinds of mathematical questions that they can ask about their community with prompts like “Find 2 things that you can compare the length of.” The activities in this lesson will prepare students to develop a wide variety of their own mathematical questions in the next two lessons.

If students need additional support with the concepts in this lesson, refer back to Unit 4, Section B in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Materials to Gather

- 10-frames: Activity 2
- Clipboards: Activity 1
- Geoblocks: Activity 2
- Solid shapes: Activity 2

Materials to Copy

- Find Someone Who Recording Sheet (groups of 1): Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	20 min
Lesson Synthesis	10 min

Teacher Reflection Question

When can you incorporate different types of questions, such as “Are there more apples or oranges?” or “Which line is longer?” throughout the day?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section B Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

Which One Doesn't Belong: Representations of 6

Standards Alignments

Addressing K.CC.B

This warm-up prompts students to carefully analyze and compare different representations of numbers.

Instructional Routines

Which One Doesn't Belong?

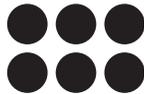
Student-facing Task Statement

Which one doesn't belong?

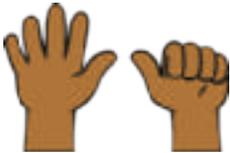
A



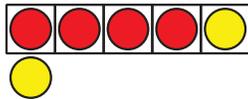
B



C



D



Student Responses

Sample responses:

A doesn't belong because:

- It is the only one that doesn't show 6.

B doesn't belong because:

- It is the only one that doesn't show a group of 5 and some more.

C doesn't belong because:

- It is the only one that doesn't use dots.

D doesn't belong because:

- It is the only one that uses 2 different colors.

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 2–3 minutes: partner discussion
- Share and record responses.

Synthesis

- Display Image D.
- "What are 2 ways to make 6 that you can see with these dots?" (5 and 1, 4 and 2)
- "What other ways can you make 6?" (3 and 3, 1 and 5, 6 and 0, 2 and 4)

Activity 1

Find Someone Who

🕒 20 min

👤 ↔ 👤 PLC Activity

Standards Alignments

Addressing K.CC, K.OA

The purpose of this activity is for students to ask and answer mathematical questions about their classmates. Students are provided with prompts, such as “Find someone who has more than 5 letters in their name.” They will need to talk to their peers to complete the prompts. If necessary, adjust the prompts to make them more relevant and engaging for your students.

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Chunk this task into more manageable parts. Check in with students to provide feedback and encouragement after each chunk.

Supports accessibility for: Organization, Attention

Materials to Gather

Clipboards

Materials to Copy

Find Someone Who Recording Sheet (groups of 1)

Student Responses

Students talk to classmates to identify a classmate that fits each prompt.

Launch

- Give each student a clipboard and a recording sheet.
- “I’m going to give you a prompt like, ‘Find someone who has purple hair.’ Your job is to walk around and talk to different partners until you find someone who has purple hair and ask them to write their name on your sheet.”

Activity

- “Find someone who has more than 5 letters in their first name. When you find someone, have them write their name in the first box.”
- 3 minutes: whole-class work time
- Repeat the steps with the rest of the prompts.

Synthesis

- “What did you do to find someone who has less than 5 letters in their first name?” (I asked ___ because I know ___ has only 4 letters. I asked everyone how many letters were in their name until I found ___ who only has 3 letters in their name.)

Activity 2

🕒 20 min

Find Something That

Standards Alignments

Addressing K.CC, K.MD, K.OA

The purpose of this activity is for students to recognize different ways math is around them in their community. Students find an object or objects that fit particular prompts, such as “Find a group of objects that you could use to fill in a 10-frame.” and “Find 2 objects that you can compare the weight of.” When students identify objects in the classroom that fit different constraints they are taking an important step toward modeling with mathematics (MP4).

🌐 Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating each prompt. This gives both students an opportunity to produce language.

Advances: Conversing

Materials to Gather

10-frames, Geoblocks, Solid shapes

Student-facing Task Statement

1. Find something that you can count.
2. Find 2 objects that you can compare the weight of.

Launch

- Groups of 2
- Give students access to 10-frames, geoblocks, and solid shapes.

3. Find something that you know how many there are without counting.
4. Find something that there are 5 of.
5. Find 2 groups of objects that make 10 objects altogether.
6. Find a group of objects that you could use to fill in a 10-frame.
7. Find something that you could make using solid shapes.
8. Find 2 groups of objects that you can compare the number of.
9. Find something that has a number on it.
10. Find 2 objects that you can compare the length of.

Student Responses

Students identify an object or objects to fit each prompt.

- “Work with your partner to find an object or objects that goes with each prompt.”

Activity

- “Find something that you can count.”
- 30 seconds: quiet think time
- 2 minutes: partner work time
- “Now count what you found.”
- 1 minute: partner work time
- Repeat the steps with the rest of the prompts.

Synthesis

- Invite students to share the two objects that they found for the final prompt.
- “How did you compare the length of the objects?” (We could just see that one was longer and one was shorter. We lined them up at the bottom and saw which one stuck out more.)

Lesson Synthesis

🕒 10 min

“What is one new thing that you learned about your classmates today?”

“What is one new thing that you learned about our classroom today?”

“Tomorrow, you will get to develop your own math questions about our classroom and school. You can think about some of the kinds of questions that we answer today.”

Lesson 9: Where's the Math?

Standards Alignments

Addressing K.CC, K.MD, K.OA

Teacher-facing Learning Goals

- Ask and answer mathematical questions about the community.

Student-facing Learning Goals

- Let's ask and answer math questions about our school community.

Lesson Purpose

The purpose of this lesson is for students to ask and answer mathematical questions about their school community.

Students take a walk around the school and develop mathematical questions about their school community. The walk can focus on one particular area of the school or the surrounding community. Then students choose a question to answer. They make a plan of how to answer the question with their partner and determine which tools they will need to answer the question. These activities can happen over the course of two days to allow students time to answer multiple questions.

If students need additional support with the concepts in this lesson, refer back to Unit 4, Section B in the curriculum materials.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

What Do You Know About ____? (Warm-up)

Materials to Gather

- 10-frames: Activity 2
- Clipboards: Activity 1
- Connecting cubes: Activity 2
- Geoblocks: Activity 2

- Paper: Activity 1
- Pattern blocks: Activity 2
- Solid shapes: Activity 2
- Two-color counters: Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	30 min
Lesson Synthesis	5 min

Teacher Reflection Question

MP1 asks students to make sense of problems and persevere in solving them. MP5 asks students to use appropriate tools strategically. Where did you see evidence of students engaging in these mathematical practices throughout the lesson?

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 8, Section B Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.
- Use objects, drawings, numbers, words, and expressions or equations to represent quantities up to 20.

----- Begin Lesson -----

Warm-up

 10 min

What Do You Know About Our School?

Standards Alignments

Addressing K.CC, K.MD, K.OA

The purpose of this What Do You Know About is to invite students to share what they know about the school, which prepares students to ask and answer mathematical questions about the school community in later activities.

Instructional Routines

What Do You Know About ____?

Student-facing Task Statement

What do you know about our school?

Student Responses

Sample responses:

- There are 2 floors.
- There are older kids and younger kids.
- There is a cafeteria where we eat lunch.
- The playground is outside. There is a slide and a jungle gym.

Launch

- “What do you know about our school?”
- 1 minute: quiet think time

Activity

- Record responses.

Synthesis

- “We know a lot of things about our school. In the next activities, we will get to think about things that we don’t know about our school yet and how we could work together and use math to figure these things out.”

Activity 1

🕒 15 min

Another School Walk

Standards Alignments

Addressing K.CC, K.MD, K.OA

The purpose of this activity is for students to develop mathematical questions about their school

community. This walk could also take place on the playground or in the local community.

Access for English Learners

MLR8 Discussion Supports. Synthesis: As students share their questions, include a drawing or annotation to clarify any questions about context. Invite students to notice common language used in mathematical questions such as: how many, how much, which, more than, taller than, etc.
Advances: Speaking, Representing

Materials to Gather

Clipboards, Paper

Student-facing Task Statement

What math questions do you have about our school?

Student Responses

Sample responses:

- How many doors are there in the school?
- Are there more windows or more doors?
- How many tiles does it take to get from the library to the cafeteria?
- Are there any objects that look like pyramids in the hallways?
- How many connecting cubes tall is the door to the nurse's office?
- Which is longer: the hallway to the cafeteria or the hallway to the gym?
- How many pattern blocks would it take to fill in the carpet square?

Launch

- Give each student a clipboard with a blank piece of paper.
- "We're going to take another walk around the school. Your job is to think of math questions that you would like to answer about our school. Use your recording sheet to help you remember what questions you have."

Activity

- 15 minutes: whole-class school walk

Synthesis

- Invite students to share their questions.
- Record student questions on an anchor chart. Keep the chart display during the next activity.

Activity 2

 30 min

Answer Our Mathematical Questions

Standards Alignments

Addressing K.CC, K.MD, K.OA

The purpose of this activity is for students to answer mathematical questions about their school community (MP4). Students work with a partner to choose a question to answer. Students work together to develop a plan for how they will answer the question and what, if any, math tools they will need. Then students have time to work together to answer the question. Students will need an opportunity to go out into the school to answer many of the questions. If necessary, this activity can be adjusted to be completed in one room or one area of the school. If time allows, students can pick multiple questions to answer.

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to plan a strategy, including what they will include to show their thinking (drawings, numbers, or words). Students can take turns verbally sharing their plan with their partner and work on an overall plan to answer their question.

Supports accessibility for: Conceptual Processing, Organization

Materials to Gather

10-frames, Connecting cubes, Geoblocks, Pattern blocks, Solid shapes, Two-color counters

Required Preparation

- Students need access to all math tools that they have used throughout the year.

Student-facing Task Statement

Question:

Student Responses

Students work with a partner to answer their chosen question.

Launch

- Groups of 2
- Give students access to all math tools.
- Reread the questions from the previous activity.
- “Choose 1 question that you want to answer with your partner. Write the question at the top of your page.”
- 1 minute: partner discussion
- 2 minutes: independent work time

- “What will you need to do to answer the question? What tools do you need?”
- 3 minutes: partner discussion

Activity

- “Work with your partner to answer your question. Show your thinking using drawings, numbers, or words.”
- 10 minutes: partner work time

Synthesis

- “Were there any unexpected challenges that you faced when trying to answer the question you chose?”
- “Were there any questions that you could not answer? Why not? What information or tool would help you answer that question?”

Lesson Synthesis

 5 min

“Today we asked and answered math questions about our school. What is a math question that you could ask about your home?”

Share and record responses.

“How could you figure out the answer to your question?”

Share responses.

Lesson 10: Tell Stories about Our School

Standards Alignments

Addressing K.CC, K.CC.A, K.CC.B, K.OA.A.2

Teacher-facing Learning Goals

- Tell story problems about their community.

Student-facing Learning Goals

- Let's tell math stories about our school.

Lesson Purpose

The purpose of this lesson is for students to develop story problems about their school community.

In previous lessons, students represented objects in number books and answered mathematical questions about their school community. In this lesson, students develop story problems about their school community. In the next lesson, students will share and solve their story problems.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section B in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Clipboards: Activity 1
- Materials from previous centers: Activity 3
- Paper: Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	15 min

Teacher Reflection Question

What do your students think it means to be good at math? How are you helping them change negative impressions they might have

Activity 2	15 min	about their ability to reason mathematically?
Activity 3	15 min	
Lesson Synthesis	5 min	

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section B Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Students draw pictures to solve story problems.
- Students write expressions to solve story problems.
- Students observe relationships between different types of story problems.
- Students ask “how many” questions about objects around the school.
- Students count objects around the school.

Begin Lesson

Warm-up

🕒 10 min

Notice and Wonder: Bubbles in the Park

Standards Alignments

Addressing K.CC.A, K.CC.B

The purpose of this warm-up is to elicit the idea that we can notice math in everyday situations, which will be useful when students tell story problems about their school community in a later activity. While students may notice and wonder many things about this image, questions that students develop about the image are the important discussion points.

Consider using a picture of your own school community that students can tell stories about, in place of the image in the book.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?
What do you wonder?



Student Responses

Students may notice:

- They are at a park.
- I see 6 kids.
- The man is blowing bubbles.

Students may wonder:

- How many bubbles are there?
- How did he make a bubble that is so big?
- What kind of plants are there?

Launch

- Groups of 2
- Display the image.
- “What do you notice? What do you wonder?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- “In this lesson, we will be telling story problems about our school. Can you think of a story problem about this picture?” (There are 5 small bubbles and 1 big bubble. How many bubbles are there?)

Activity 1

 15 min

Story Problem Brainstorm

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to develop ideas for story problems that they can write about their classroom, school, or community. In the next activities, students will develop, share, and solve their own story problems (MP2, MP4).

This activity can be completed in a different area as previous walks. For example, this walk can focus on the playground or outside environment or take place in one area of the school, such as the library.

Access for English Learners

MLR8 Discussion Supports. Invite students to do the walk with a partner and to share the mathematical ideas they see.

Advances: Speaking, Conversing

Materials to Gather

Clipboards, Paper

Student Responses

Sample Responses:

- I counted a group of 4 squares on the playground and another group of 5 squares.
- I saw 6 basketballs and 3 footballs in the gym.
- There were 7 students with me and then 5 of them went into the school.
- I saw 3 birds sitting on the roof and 4 more flying.

Launch

- Give each student a clipboard with a blank piece of paper.
- “As we walk today, notice mathematical ideas that you see. Focus on things that you can tell a story problem about. Take notes to help you remember.”

Activity

- 10 minutes: whole-class school walk

Synthesis

- Invite students to share what they observed.
- “How can you tell a story problem about ____?”
- “In the next activity we are going to tell our own story problems about our school. What are some important things to remember when you tell a story problem?” (Make sure that you include a question.)

Activity 2

🕒 15 min

Write Story Problems About Our School

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to develop a story problem about their school community (MP2, MP4). While the kindergarten standards only ask students to solve story problems with a result of up to 10, students may choose to use larger numbers in their story problems.

🕒 Access for Students with Disabilities

Engagement: Internalize Self-Regulation. Provide students an opportunity to self-assess and reflect on story problems and what should be included in them. For example, students should make sure they include a question and numbers, drawings or words.

Supports accessibility for: Attention, Conceptual Processing

Student-facing Task Statement

Student Responses

Answers vary. Sample responses:

Launch

- Groups of 2
- “Think of a story problem that you can tell about our school. You can record your

- There are 6 basketballs in the gym.
There are 3 footballs in the gym.

How many balls are in the gym?

- 9 books are on the table in the library.
Elena took 2 of the books home.

How many books are still on the table?

- 4 kids are sitting at the lunch table.
4 more kids come to sit at the lunch table.

How many kids are sitting at the lunch table now?

story problem with drawings, numbers, or words.”

Activity

- 5 minutes: independent work time
- Monitor for students who develop different types of story problems.
- “Share your story problem with your partner.”
- 3 minutes: partner discussion

Synthesis

- Invite previously identified students to share their story problems.

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Picture Books
- Find the Pair
- Math Stories
- Build Shapes
- Make or Break Apart Numbers

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Picture Books
 - Find the Pair
 - Math Stories
 - Build Shapes
 - Make or Break Apart Numbers

Student-facing Task Statement

Choose a center.

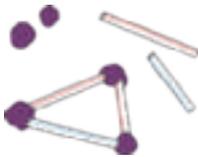
Find the Pair



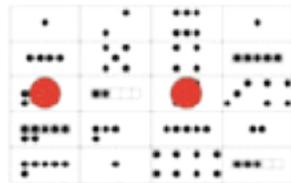
Math Stories



Build Shapes



Make or Break Apart Numbers



Picture Books



Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time

Synthesis

- “In math class, it’s important to listen to other people’s ideas. Describe a time when you learned something by listening carefully to someone in your class.”

Lesson Synthesis

🕒 5 min

“Today we told story problems about our school. Tomorrow you will share and solve some of these story problems.”

“Han wrote this story problem:
There are 5 teachers in the hallway.
There are 4 students in the hallway.”

“What feedback can you give to Han to help him improve his story problem?” (You need to include a question at the end of the story problem. You can ask “How many people are in the hallway?”)

Lesson 11: Share Story Problems

Standards Alignments

Addressing K.CC, K.OA.A.1, K.OA.A.2, K.OA.A.5

Teacher-facing Learning Goals

- Solve story problems about their community.

Student-facing Learning Goals

- Let's share and solve our story problems.

Lesson Purpose

The purpose of this lesson is for students to represent and solve story problems about their school community.

In a previous lesson, students wrote story problems about their school community. In this lesson, students create a poster to share their story problem and make connections between different story problems and representations as they participate in a gallery walk.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section B in the curriculum materials.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Number Talk (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Activity 1
- Tools for creating a visual display: Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	25 min
Activity 2	15 min
Lesson Synthesis	10 min

Teacher Reflection Question

Reflect on how comfortable your students are asking questions of you and of each other. What can you do to encourage students to ask questions?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section B Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Count, read, and write numbers up to 20.
- Use objects, drawings, numbers, words, and expressions or equations to represent quantities up to 20.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

Number Talk: Add and Subtract 2 and 3

Standards Alignments

Addressing K.OA.A.5

The purpose of this Number Talk is to elicit strategies and understandings students have for adding and subtracting within 5. These understandings help students develop fluency.

Instructional Routines

Number Talk

Student-facing Task Statement

Find the value of each expression.

- $3 - 2$
- $3 + 2$
- $4 - 2$
- $4 - 3$

Student Responses

- 1: I put up 3 fingers and then put down 2.
- 5: I know that 3 and 2 go together to make 5.
- 2: I pictured 4 and pretended to take away 2. There were 2 left.
- 1: I took away 1 more than last time.

Launch

- Display one expression.
- “Give me a signal when you have an answer and can explain how you got it.”
- 1 minute: quiet think time

Activity

- Record answers and strategy.
- Keep expressions and work displayed.
- Repeat with each expression.

Synthesis

- Record each expression as an equation as students share their answers.
- “When did you need to add? When did you need to subtract? Did you use the same strategy to add and to subtract?”

Activity 1

🕒 25 min

Display Story Problems and Solutions

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

The purpose of this activity is for students to represent and solve the story problem that they

developed in the previous lesson (MP2). Students create a poster to display their story problem. This activity can also be adapted so that students create a poster about another student's story problem or work together in partners and make a joint poster about one story problem.

Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Give students access to 10-frames to help them solve their story problems.

Supports accessibility for: Organization

Materials to Gather

Connecting cubes or two-color counters,
Tools for creating a visual display

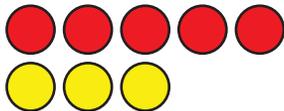
Student Responses

Answers vary. Sample response:

There are 5 pictures on one side of the hallway.

There are 3 pictures on the other side of the hallway.

How many pictures are there in the hallway?



$$5 + 3 = 8$$

There are 8 pictures.

Launch

- Give each student a piece of chart paper and access to connecting cubes or two-color counters and crayons.
- "Tell your partner the story problem that you came up with yesterday."
- "Today you are going to make a poster to show your story problem. Solve the story problem. Show your thinking using drawings, numbers, or words."

Activity

- 10 minutes: independent work time
- "If you have time, you may want to show different ways to solve the problem using pictures, numbers, words, or symbols."
- 10 minutes: independent work time

Synthesis

- "Now you are going to get a chance to look at the work that your classmates did."

Activity 2

🕒 15 min

Story Problem Gallery Walk

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

The purpose of this activity is for students to share how they represented their story problems and make connections between different representations (MP2).

Access for English Learners

MLR8 Discussion Supports. During the Gallery Walk, invite students to tell each student what they notice about their poster, including what is the same and what is different from their own poster. This gives all students an opportunity to produce language.

Advances: Conversing

Launch

- “We are going to do a gallery walk so that we can see everyone’s work for their story problem. As you walk around, think about how each poster is the same as and different from your poster. Think of any ideas that you may want to add or change about your poster.”

Activity

- Invite half the class to stand next to their poster while the other half of the class walks around and looks at the posters.
- 5 minutes: gallery walk
- Switch groups.
- 5 minutes: gallery walk

Synthesis

- Display two different student posters.

- “What is the same about how ____ and ____ showed their story problems? What is different?”
- “If you would like, you can add to your poster.”

Lesson Synthesis

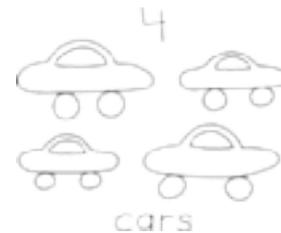
🕒 10 min

“What is your favorite thing we have done in math class this year?”

Student Section Summary

In this section, we explored our school community.

We created number books to show important things from our school.



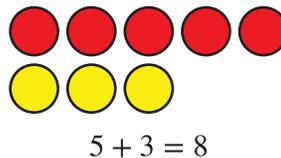
We asked questions about our school and used tools to answer the questions.

We told story problems about our school.

There are 5 pictures on one side of the hallway.

There are 3 pictures on the other side of the hallway.

How many pictures are there in the hallway?



There are 8 pictures.

Section C: Fluency within 5

Lesson 12: Make Dot Images

Standards Alignments

Addressing K.OA.A.3, K.OA.A.5

Building Towards K.OA.A.5

Teacher-facing Learning Goals

- Recognize compositions and decompositions of numbers to 5.

Student-facing Learning Goals

- Let's make our own groups of dots.

Lesson Purpose

The purpose of this lesson is for students to develop fluency with adding and subtracting within 5 as they identify compositions and decompositions of numbers to 5.

Students participate in a How Many Do You See routine and then create their own dot images to use in a version of the routine in small groups. Understanding that numbers can be composed and decomposed in multiple ways is an important step towards adding and subtracting fluently within 5. When they make dot images and share with their partners students practice, through visualization (MP7), fluency for arithmetic facts within 5.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section A in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Colored pencils, crayons, or markers:

Materials to Copy

- Dot Image Cards (groups of 1): Activity 1

Activity 1

- Materials from a previous activity: Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

As students worked with their partners and small groups today, whose ideas were heard, valued, and accepted? How can you adjust the group structure tomorrow to ensure each student's ideas are part of the collective learning?

Cool-down (to be completed at the end of the lesson)

⌚ 0 min

Unit 8, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.5

Student-facing Task Statement

Lesson observations

Student Responses

- Students count all to find the sum.
- Students use their knowledge of the count sequence to find certain sums.
- Students know certain sums.
- Students represent all, then cross off or remove to find the difference.
- Students use their knowledge of the count sequence to find certain differences.
- Students know certain differences.

----- **Begin Lesson** -----

Warm-up

🕒 10 min

How Many Do You See: Dots in Different Colors

Standards Alignments

Building Towards K.OA.A.5

The purpose of this How Many Do You See is to allow students to use subitizing or grouping strategies to describe the images they see.

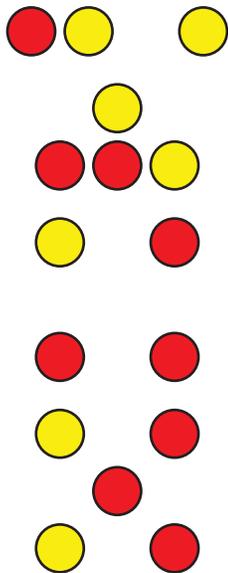
Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?

How do you see them?



Student Responses

Sample responses:

- 3: There are 2 yellow and 1 red.
- 4: I see 2 red and 2 yellow. I see 1 on top and 3 on the bottom.
- 4: There are 2 on the top and 2 on the bottom. There are 3 red and 1 yellow.

Launch

- Groups of 2
- “How many do you see? How do you see them?”
- Flash the image.
- 30 seconds: quiet think time

Activity

- Display the image.
- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- Display last image.
- “What are the 2 parts that you see? What is the total?” (I see 2 red and 3 yellow. 2 and 3 are the parts. There are 5 altogether.)
- “We have been looking at dots in How Many Do You See throughout the year. In the next activity, you will get to make your own groups of dots.”

- 5: There are 3 red and 2 yellow.

Activity 1

🕒 10 min

Make Your Own Dot Images

Standards Alignments

Addressing K.OA.A.3
Building Towards K.OA.A.5

The purpose of this activity is for students to highlight compositions and decompositions of numbers to 5. Students create a set of cards with dot images by coloring in dot arrangements and drawing their own arrangements of up to 5 dots. Students will use the cards they create in the next activity.

🕒 Access for Students with Disabilities

Engagement: Internalize Self-Regulation. Provide students an opportunity to self-assess and reflect on the dot cards they made. For example, they can verify that they used at least 2 different colors to color the dots.

Supports accessibility for: Organization, Attention

Materials to Gather

Colored pencils, crayons, or markers

Materials to Copy

Dot Image Cards (groups of 1)

Required Preparation

- Create a set of cards from the Instructional master for each student.

Student Responses

Answers vary.

Launch

- Give each student dot cards and access to colored pencils, crayons, or markers.

Activity

- “You are going to get to make your own groups of dots. Use at least 2 different colors to color in the dots to help your

partner see the different parts in the total. There are some blank cards. On these cards, you can draw your own groups of dots and color them in.”

- 7 minutes: independent work time

Synthesis

- “Pick your favorite dot image. Tell your partner why it is your favorite and what parts you see inside of the total.”
- “In our next activity, you will share your dot images in a small group. What do you need to do to be a good group member and help everyone learn?”

Activity 2

 15 min

How Many Dots Do You See?

Standards Alignments

Addressing	K.OA.A.3
Building Towards	K.OA.A.5

The purpose of this activity is for students to identify more than one composition and decomposition of numbers to 5. Students use the dot image cards that they created in the previous activity to play their own version of the “How Many Do You See?” routine in small groups.

Access for English Learners

MLR8 Discussion Supports. Synthesis: At the appropriate time, give groups 2–3 minutes to plan what they will say when they present to the class. “Practice what you will say when you share your dot image with the class. Talk about what is important to say, and decide who will share each part.”

Advances: Speaking, Conversing, Representing

Materials to Gather

Materials from a previous activity

Required Preparation

- Each student needs the dot image cards from the previous activity.

Student Responses

Answers vary.

Launch

- Groups of 4
- “You are going to use the dot cards you created in small groups, just like when we do our How Many Do You See warm-up. The first person will hold up one of their dot cards for their group members to see. The rest of the group members will have time to think. Then they will share how many dots they see and how they see them. Take turns sharing your dot images.”

Activity

- 8 minutes: small-group work time

Synthesis

- “Work together to choose one dot image to share from your group. Choose a dot image that the members of the group saw in different ways.”
- Invite each group to share their dot image.

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- 5-frames
- Roll and Add
- Bingo
- Geoblocks
- Find the Value of Expressions

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

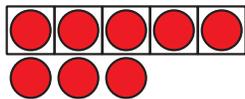
Required Preparation

- Gather materials from:
 - 5-frames
 - Roll and Add
 - Bingo
 - Geoblocks
 - Find the Value of Expressions

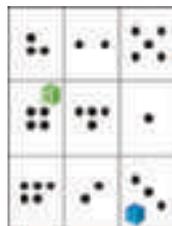
Student-facing Task Statement

Choose a center.

5-frames



Roll and Add



Bingo

Geoblocks

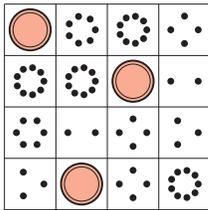


Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- "Choose what you would like to do next."



Find the Value of
Expressions

$$3 + 5 \quad 7 - 5$$

- 8 minutes: center work time

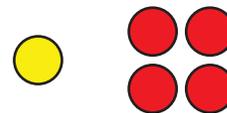
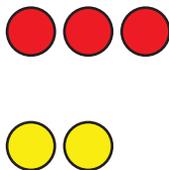
Synthesis

- "What makes working in centers fun for you?"

Lesson Synthesis

🕒 5 min

Display dots as pictured, or choose two student-created cards:



"What is the same about these dot images? What is different about them?" (They both have the same total. They both show 5 dots total. They are different because they show different parts. One shows 4 and 1 and one shows 3 and 2.)

Lesson 13: Dominoes to 5

Standards Alignments

Addressing K.CC.C.6, K.MD.B.3, K.OA.A.3, K.OA.A.5

Teacher-facing Learning Goals

- Recognize compositions and decompositions of numbers to 5.

Student-facing Learning Goals

- Let's sort different ways to make numbers to 5.

Lesson Purpose

The purpose of this lesson is for students to develop fluency with adding and subtracting within 5 as they identify compositions and decompositions of numbers to 5.

In a previous lesson, students created their own dot images and identified different compositions and decompositions of numbers to 5. In this lesson, students work with dominoes. Students sort dominoes by total, which encourages them to recognize different compositions and decompositions of numbers to 5 and think about both the parts and the total at the same time. Students also compare the number of dots on the dominoes.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section B in the curriculum materials.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Materials from a previous activity: Activity 2
- Materials from previous centers: Activity 3

Materials to Copy

- Domino Cards (groups of 2): Activity 1
- Sorting Chart 1-5 (groups of 2): Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

Students are expected to fluently add and subtract within 5 by the end of kindergarten. How does the work students do in this lesson prepare them to fluently add and subtract within 5?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.5

Student-facing Task Statement

Lesson observations

Student Responses

- Students count all to find the sum.
- Students use their knowledge of the count sequence to find certain sums.
- Students know certain sums.
- Students represent all, then cross off or remove to find the difference.
- Students use their knowledge of the count sequence to find certain differences.
- Students know certain differences.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

Notice and Wonder: Ways to Make 4

Standards Alignments

Addressing K.OA.A.5

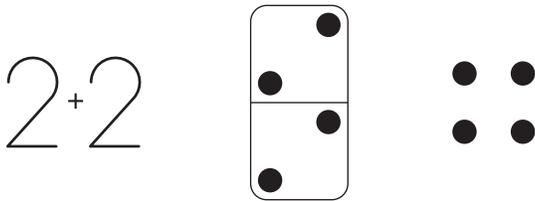
The purpose of this warm-up is to elicit the idea that numbers can be represented in different ways, which will be useful when students use dominoes and dot images to identify and represent compositions within 5. While students may notice and wonder many things about these groups of objects, representing compositions and decompositions in multiple ways is the important discussion point.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?
What do you wonder?



Student Responses

Students may notice:

- All of the representations show the total 4.
- All of the representations show the parts 2 and 2.

Students may wonder:

- Could we represent this another way?
- Are there other ways to make 4?

Launch

- Groups of 2
- Display the image.
- “What do you notice? What do you wonder?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- “How else can we show that 2 and 2 is 4?” (2 fingers and 2 fingers is 4 fingers. 2 cubes and 2 cubes is 4 cubes.)

Activity 1

Domino Sort

🕒 10 min

Standards Alignments

Addressing K.MD.B.3, K.OA.A.3, K.OA.A.5

The purpose of this activity is for students to sort dominoes into groups by total as they identify different compositions and decompositions of numbers to 5. Because the totals are small, it is likely that students will be able to recognize the number of dots on each side of the dominoes without counting (MP7). Students represent each domino with an expression (MP2).

Access for English Learners

MLR8 Discussion Supports. Invite each partner to read the completed expressions aloud. Listen for and clarify any questions about the parts and total of each domino.

Advances: Conversing

Materials to Copy

Domino Cards (groups of 2), Sorting Chart 1-5 (groups of 2)

Required Preparation

- Create a set of domino cards from the Instructional master for each group of 2. If actual dominoes are available, give students the dominoes which show a total of 5 or less.

Student-facing Task Statement

Sort the dominoes based on the total number of dots.

Choose 1 group.

Write an expression for each domino.

Launch

- Groups of 2
- Give each group of students a set of cards and a sorting mat.

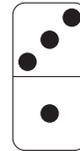
Activity

- “Work together to sort the dominoes into groups based on the total number of dots. As you work together, tell your partner the parts that you see and how many total dots you see.”
- 3 minutes: partner work time
- “Choose one of the groups that you sorted the dominoes into. Write an expression to show each domino.”

- 4 minutes: independent work time

Synthesis

- Invite a student to share their sort.
- “What is the same about all of the dominoes in this group?” (They all show 4.)
- Display the domino card with 1 dot and 3 dots:



- “Tell your partner about this domino. What is the total? What parts do you see?” (The total is 4. The parts are 3 and 1.)
- “What expression did you write for this domino?” ($3 + 1$ or $1 + 3$)
- “ $3 + 1$ and $1 + 3$ can both show the parts on this domino.”

Activity 2

Compare Dots on Dominoes

🕒 15 min

👤 ↔ 👤 PLC Activity

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to compare groups of images. Students may compare the total number of dots on each domino, or they may compare the parts. For instance, a student might observe, “These dominoes both have 1 dot on the bottom. This one has 3 dots on top and that one has 2 dots on top, so this one has more dots because 3 is more than 2.”

As a variation, the student whose card has more dots takes both cards.

Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Make connections between the different dominoes that students describe and the equations. Invite students to point out where they see each number in the equation on the corresponding domino.

Supports accessibility for: Conceptual Processing

Materials to Gather

Materials from a previous activity

Required Preparation

- Each group of 2 needs the domino cards from the previous activity.

Student-facing Task Statement

Flip over a card.

Compare the number of dots using “fewer” or “the same number.”

Compare the number of dots using “more” or “the same number.”

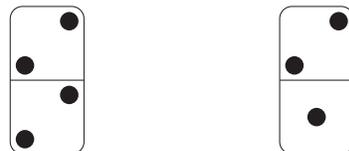
Student Responses

Sample responses:

- This domino has fewer dots because 1 is less than 4.
- The domino with 3 and 2 has more dots than the domino with 1 and 1.

Launch

- Groups of 2
- Invite each student to make a pile with half of the domino cards.
- “We are going to play a comparing game with our dominoes. You and your partner will both flip over one card. One partner will compare the number of dots using ‘fewer’ or ‘the same number’ and explain how they know. The other partner will compare the number of dots using ‘more’ or ‘the same number.’ Let’s play one round together.”
- Display 2 domino cards:



- “Choose who will go first. Compare the number of dots using ‘fewer’ or ‘the same number’ and explain how you know.”
- 1 minute: partner discussion
- “The domino with 2 dots and 1 dot has

fewer dots than the domino with 2 dots and 2 dots. 3 is less than 4.”

- “If you did not go first, compare the number of dots using 'more' or 'the same number' and explain how you know.”
- 1 minute: partner discussion.

Activity

- “Take turns playing with your partner until you run out of cards.”
- 8 minutes: partner work time

Synthesis

- “What were some of the ways you saw 5 on the dominoes?” (0 and 5, 5 and 0, 4 and 1, 1 and 4, 2 and 3, 3 and 2)
- Share and record each response with an equation.

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- 5-frames
- Roll and Add
- Bingo
- Geoblocks
- Find the Value of Expressions

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

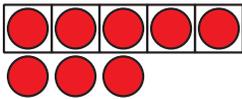
Required Preparation

- Gather materials from:
 - 5-frames
 - Roll and Add
 - Bingo
 - Geoblocks
 - Find the Value of Expressions

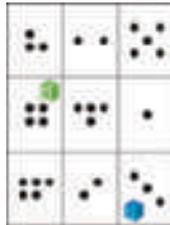
Student-facing Task Statement

Choose a center.

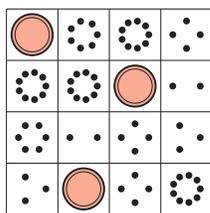
5-frames



Roll and Add



Bingo



Geoblocks



Find the Value of Expressions



Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- “Choose what you would like to do next.”
- 8 minutes: center work time

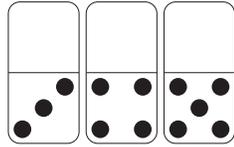
Synthesis

- “What can you do when there is a math problem or center that you’re not sure about?”

Lesson Synthesis

🕒 5 min

Display these domino cards:



"What do you notice? What do you wonder?" (I notice that they each go up by 1. I notice that the tops are all blank. I wonder why they only used 1 part instead of 2.)



"What expression can we write for this domino? How do you know?" ($4 + 0$. There are 4 dots and 0 dots.)

"Tell your partner an expression for each domino." ($3 + 0$, $4 + 0$, $5 + 0$)

Lesson 14: Sort and Color Expressions and Images within 5

Standards Alignments

Addressing K.CC.A.2, K.MD.B.3, K.OA.A.3, K.OA.A.5

Teacher-facing Learning Goals

- Add and subtract within 5.

Student-facing Learning Goals

- Let's practice adding and subtracting.

Lesson Purpose

The purpose of this lesson is for students to develop fluency with adding and subtracting within 5.

Students work with images of dots and expressions. Students color and sort images and expressions by total or difference.

If students need additional support with the concepts in this lesson, refer back to Unit 4, Section C in the curriculum materials.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Colored pencils, crayons, or markers: Activity 1
- Materials from previous centers: Activity 3

Materials to Copy

- Expression Cards (groups of 2): Activity 2
- Sorting Chart 1-5 (groups of 2): Activity 2

Lesson Timeline

Warm-up	10 min
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Teacher Reflection Question

What part of the lesson went really well today in terms of students' learning? What did you do

Activity 1	15 min	that made that part go well?
Activity 2	10 min	
Activity 3	20 min	
Lesson Synthesis	5 min	

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.5

Student-facing Task Statement

Lesson observations

Student Responses

- Students count all to find the sum.
- Students use their knowledge of the count sequence to find certain sums.
- Students know certain sums.
- Students represent all, then cross off or remove to find the difference.
- Students use their knowledge of the count sequence to find certain differences.
- Students know certain differences.

----- Begin Lesson -----

Warm-up

🕒 10 min

Choral Count: Practice Counting On

Standards Alignments

Addressing K.CC.A.2

The purpose of this Choral Count is to invite students to practice counting on from a given number and notice patterns in the count.

Instructional Routines

Choral Count

Student Responses

- 13, 14, 15, 16, 17, 18, 19, 20

Sample responses:

- All of the numbers start with 1 except the last number.
- The second number goes up like when we count.

Launch

- “Count by 1, starting at 13.”
- Record as students count.
- Stop counting and recording at 20.

Activity

- “What patterns do you see?”
- 1–2 minutes: quiet think time
- Record responses.

Synthesis

- “Name a number that is more than 4.”
- “Name a number that is more than 11.”
- “Name a number that is less than 7.”
- “Name a number that is more than 15.”

Activity 1

🕒 15 min

Owl Color

Standards Alignments

Addressing K.OA.A.3, K.OA.A.5

The purpose of this activity is for students to develop fluency as they find the value of addition and subtraction expressions within 5.

Access for Students with Disabilities

Representation: Access for Perception. Students with color blindness may benefit from additional guidance to identify which colors to use. Provide access to colored pencils or crayons with labels that indicate the color and the corresponding number it should be used for.

Supports accessibility for: Visual-Spatial Processing

Materials to Gather

Colored pencils, crayons, or markers

Student-facing Task Statement

Color each section.



Student Responses

Students color in the coloring page based on the key.

Launch

- Display the student book.
- “This code tells us which color to use. If the group of dots or expression shows 5, you are going to color that section brown.”
- “This section says $2 + 0$. What color should I color this section? How do you know?” (You should color it green. $2 + 0$ is 2.)
- “Figure out the total number of dots in each image. Find the value of each expression. Check the key to determine which color to use on this section. If the expression is $2 + 1$, you would color that section red, because in the key it says that ‘3’ should be colored red.”

Activity

- 15 minutes: independent work time

Synthesis

- “What are the different ways that 3 and 2 is shown on your coloring page?” ($2 + 3$, $3 + 2$.)
- “How could you show that 3 and 2 is 5 in a different way?” (I could show 3 and 2 is 5 on my fingers or with dominoes or with counters.)
- “Can you think of a way to make 4 that isn’t

shown on the coloring page?" (2 dots and 2 dots, 5 dots with 1 crossed out)

Activity 2

🕒 10 min

Sort Expressions by Total and Difference

Standards Alignments

Addressing K.MD.B.3, K.OA.A.3, K.OA.A.5

The purpose of this activity is for students to sort compositions and decompositions of numbers to 5 represented as expressions. Students find the value of expressions as they sort the cards into groups by total.

🌐 Access for English Learners

MLR8 Discussion Supports. Students should take turns sorting the cards and explaining their reasoning to their partner. Display the following sentence frames for all to see: "I noticed ___, so I . . ." Encourage students to challenge each other when they disagree.

Advances: Speaking, Conversing, Representing

Materials to Copy

Expression Cards (groups of 2), Sorting Chart 1-5 (groups of 2)

Required Preparation

- Create a set of cards from the Instructional master for each group of 2.

Student Responses

Students sort the expressions by total.

Launch

- Groups of 2
- Give each group of students a set of cards.

Activity

- "For each number, work with your partner

to find all of the expressions that show that number.”

- 5 minutes: partner work time
- “Write one more expression for each number.”
- 3 minutes: independent work time

Synthesis

- Invite a student to share how they sorted the cards.

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- 5-frames
- Roll and Add
- Bingo
- Geoblocks
- Find the Value of Expressions

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

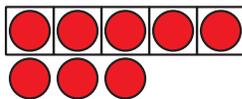
- Gather materials from:
 - 5-frames
 - Roll and Add

- Bingo
- Geoblocks
- Find the Value of Expressions

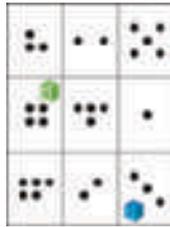
Student-facing Task Statement

Choose a center.

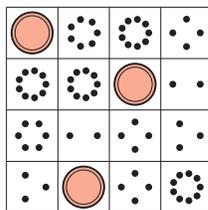
5-frames



Roll and Add



Bingo



Geoblocks



Find the Value of Expressions



Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- "Choose what you would like to do next."
- 8 minutes: center work time

Synthesis

- "What can you do to help you be successful when working in centers? What can your partner(s) do to help you be successful? What can your teacher do?"

Lesson Synthesis

🕒 5 min

Draw equations and dots:

$$2 + 1 = 3$$



$$5 - 2 = 3$$



"What do you notice is the same and different about these equations and drawings?" (They both show the same number. They both have 2 as a part. One equation shows addition and the other shows

subtraction.)

Lesson 15: Addition and Subtraction Expressions within 5

Standards Alignments

Addressing K.C.C.6, K.OA.A.2, K.OA.A.5

Teacher-facing Learning Goals

- Add and subtract within 5.

Student-facing Learning Goals

- Let's add and subtract within 5.

Lesson Purpose

The purpose of this lesson is for students to develop fluency with adding and subtracting within 5.

Students move around the room as they find the value of expressions. Students also compare totals and differences of expressions.

If students need additional support with the concepts in this lesson, refer back to Unit 4, Section C in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Materials to Gather

- Materials from a previous lesson: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

At what points during the lesson did you learn the most about your students' thinking? What

Activity 1	10 min
Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	5 min
Cool-down	5 min

structures made those points most valuable in learning about your students? How will you use what you learned in tomorrow's lesson?

Cool-down (to be completed at the end of the lesson)

🕒 5 min

Addition and Subtraction Expressions

Standards Alignments

Addressing K.OA.A.2, K.OA.A.5

Student-facing Task Statement

Find the value of each expression.

- $2 + 3$
- $4 - 1$
- $5 - 3$

Student Responses

1. 5
2. 3
3. 2

----- Begin Lesson -----

Warm-up

🕒 10 min

Which One Doesn't Belong: Expressions and Equations

Standards Alignments

Addressing K.OA.A.2, K.OA.A.5

This warm-up prompts students to carefully analyze and compare expressions and equations.

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?

A

$$3 + 1$$

B

$$3 = 2 + 1$$

C

$$3 + 0$$

D

$$4 - 1$$

Student Responses

Sample responses:

- A doesn't belong because it is the only one that is not 3.
- B doesn't belong because it is the only one that has the answer. It is an equation.
- C doesn't belong because it is the only one with a zero.
- D doesn't belong because it is the only one that is not addition.

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 2-3 minutes: partner discussion
- Share and record responses.

Synthesis

- "Let's find at least one reason why each one doesn't belong."

Activity 1

🕒 10 min

Four Corners: Totals and Differences

Standards Alignments

Addressing K.OA.A.2, K.OA.A.5

The purpose of this activity is for students to fluently add and subtract within 5. Students look at the expression on their card and move quickly to the corner that is labeled with the correct answer. There are 16 expression cards included in the Instructional master.

🌐 Access for English Learners

MLR8 Discussion Supports. Invite students to read the expression card aloud to each partner. Listen for and clarify any questions about the the expressions.

Advances: Conversing

Materials to Gather

Materials from a previous lesson

Required Preparation

- Each student needs one card from the Expression Cards set used in a previous lesson.
- Label each corner of the classroom with a large number: 2, 3, 4, and 5.

Launch

- Give each student an expression card.
- “Find the value of the expression on your card. Go to the corner that is labeled with the value of the expression.”

Activity

- 30 seconds: independent work time
- “Find a partner in your corner. Show them your card and tell them how you found the value of your expression.”

- 2 minutes: partner discussion
- “Walk back to the center of the room. Trade your card with a partner.”
- Repeat the steps above 3–4 times, as time allows.

Synthesis

- Display the expression $3 - 1$.
- “Noah saw this expression and went to the corner labeled 4. Was he correct? How do you know?” (No, because this is 3 take away 1 and that is 2.)
- “Why do you think he went to the corner labeled 4?” (He might have thought it was $3 + 1$ instead of $3 - 1$.)

Activity 2

🕒 15 min

Compare Expressions

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to compare the total or difference of expressions. Students may add or subtract to find the value or they may decide which expression is greater based on reasoning about operations or the number sequence (MP7). For example, students know that $4 + 1$ is greater than $4 - 3$ because one is adding to 4 and the other is taking away. As a variation, the student whose card has an expression with a lesser value takes both cards.

🕒 Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Invite students to agree on a set amount of wait time before yelling out “Me!”. For example, both students flip over cards, wait 15 seconds and then share their statements after the set amount of wait time.

Supports accessibility for: Social-Emotional Functioning, Attention

Materials to Gather

Materials from a previous lesson

Required Preparation

- Each group of 2 needs a set of Expression Cards from a previous lesson.

Student Responses

Sample responses:

- $5 - 1$ is more than $1 + 2$ because 4 is 1 less than 5 and 1 and 2 is 3. 4 is more than 3.
- $4 - 2$ is the same number as $2 + 0$. $4 - 2$ is 2 and $2 + 0$ is 2.

Launch

- Groups of 2
- Give each group of students a set of expression cards.
- Invite each student to make a pile with half of the cards.
- "You and your partner will both flip over a card. Look at both expressions. If your expression shows the number that is more, say 'Me!' and then explain to your partner how you know. If both expressions show the same number, say 'Same!'"
- Display two expression cards: $2 + 0$ and $4 + 1$.
- "Which expression shows a number that is more?" ($4 + 1$ is more than $2 + 0$. I know that because 4 and 1 more is 5, which is more than 2.)

Activity

- "Take turns playing with your partner until you run out of cards."
- 8 minutes: partner work time

Synthesis

- Display cards with $4 - 2$ and $2 + 0$.
- "Tell your partner about these expressions using 'less' or 'the same number as.'" ($4 - 2$ is the same number as $2 + 0$. They are both 2.)

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- 5-frames
- Roll and Add
- Bingo
- Geoblocks
- Find the Value of Expressions

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

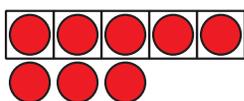
Required Preparation

- Gather materials from:
 - 5-frames
 - Roll and Add
 - Bingo
 - Geoblocks
 - Find the Value of Expressions

Student-facing Task Statement

Choose a center.

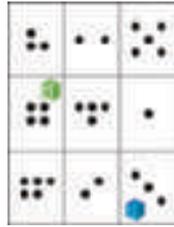
5-frames



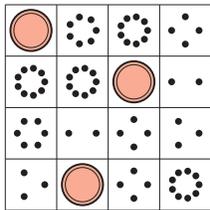
Roll and Add

Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”



Bingo



Find the Value of Expressions

$$3 + 5 \quad 7 - 5$$

Geoblocks



- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time

Synthesis

- "Tell your partner about a time when you used a math tool to help you during centers. How did the tool help you?"

Lesson Synthesis

🕒 5 min

"Today we found the value of expressions and compared expressions."

Invite students to stand up on the carpet.

"I'm going to say and write a number or expression. Your job is to work together to get into groups of the correct number. If you can't find a group, stand in the middle of the carpet. If you need another person in your group, find someone in the middle of the carpet."

"Get into groups of 3."

"Get into groups of $3 + 2$."

"Get into groups of $2 + 0$."

"Get into groups of 4."

"Get into groups of 2."

"Get into groups of $2 - 1$."

Lesson 16: Parts to Make 5

Standards Alignments

Addressing K.OA.A.5

Teacher-facing Learning Goals

- Add and subtract within 5.
- Find a missing value to make a given total within 5.

Student-facing Learning Goals

- Let's find the missing part.

Lesson Purpose

The purpose of this lesson is for students to develop fluency with adding and subtracting within 5.

Students practice finding the missing part with groups of up to 5 objects in the first activity. In the second activity, students fill in equations with a missing value that all equal the same number. The second activity is optional because determining the missing value of an equation is not required by the kindergarten standards.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section A in the curriculum materials.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Activity 2
- Cups: Activity 1
- Materials from previous centers: Activity 3

Materials to Copy

- Shake and Spill Stage 4 Recording Sheet Kindergarten (groups of 1): Activity 1

- Two-color counters: Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	5 min

Teacher Reflection Question

Given one part, how do students find the other part to make 5? How do students explain how they found the missing part?

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 8, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.5

Student-facing Task Statement

Lesson observations

Student Responses

- Students count all to find the sum.
- Students use their knowledge of the count sequence to find certain sums.
- Students know certain sums.
- Students represent all, then cross off or remove to find the difference.
- Students use their knowledge of the count sequence to find certain differences.
- Students know certain differences.

----- **Begin Lesson** -----

Warm-up

🕒 10 min

How Many Do You See: Add and Subtract

Standards Alignments

Addressing K.OA.A.5

The purpose of this How Many Do You See is to allow students to use subitizing or grouping strategies to describe the images they see.

Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?

How do you see them?



Student Responses

Sample responses:

- 5: The 5-frame is full.
- 3: There are 2 less than before. I can see that it is 3.
- 2: I can just see that there are 2.
- 4: There are 2 and 2 more.

Launch

- Groups of 2
- “How many do you see? How do you see them?”
- Flash the image.
- 30 seconds: quiet think time

Activity

- Display the image.
- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- Display the first two images.
- “What changed from the first image to the second image?” (There were 5 and 2 were taken away.)
- “Tell your partner how you can show what happened with an expression.” ($5 - 2$)
- Repeat with the last two images.

Activity 1

🕒 15 min

Revisit Shake and Spill, Cover

Standards Alignments

Addressing K.OA.A.5

The purpose of this activity is for students to play Stage 4 in the Shake and Spill center, which was introduced in an earlier unit. This activity supports students in finding the missing part of an equation in a later activity.

Students use 3, 4, or 5 counters. They see some of the counters and determine how many more counters are under the cup. Students write an expression to represent each composition and decomposition.

🕒 Access for Students with Disabilities

Representation: Access for Perception. Synthesis: Use a cup and two-color counters to demonstrate that there is 1 yellow counter hiding under the cup.

Supports accessibility for: Conceptual Processing, Visual-Spatial Processing

Materials to Gather

Cups, Two-color counters

Materials to Copy

Shake and Spill Stage 4 Recording Sheet
Kindergarten (groups of 1)

Student-facing Task Statement

Put 3, 4, or 5 counters in the cup.

Shake and spill the counters.

Hide some of the counters under the cup.

Figure out how many of the counters are hidden.

Write an expression.

Launch

- Groups of 2
- Give each group of students a cup, 5 two-color counters, and two recording sheets.
- “We are going to play Shake and Spill, Cover.”
- If needed, review and demonstrate the steps of the center.
- “Take turns with your partner spilling and covering the yellow counters. On each turn you can decide to use 3, 4, or 5 counters. Make sure you and your partner agree on

Student Responses

Answers vary.

how many total counters you are using before you shake, spill, cover, and record.”

Activity

- 8 minutes: partner work time

Synthesis

- Display the number 3 and the expression $2 + \underline{\quad}$.
- “Han and Mai spilled 3 counters and hid the yellow ones. This is what they wrote on the recording sheet. What is missing from the expression? How do you know?” (1 is missing. 2 and 1 are the parts that go together to make 3. If they can see 2 red counters, 1 yellow counter is hiding under the cup.)

Activity 2 (optional)

🕒 15 min

Missing Value

Standards Alignments

Addressing K.OA.A.5

The purpose of this activity is for students to find the missing value in addition and subtraction equations. This activity is optional because determining the missing value of an equation is not required by the standards. Students may “just know” some of the answers or they may use counting forward or backward (MP7) or they may draw a picture.

🌐 Access for English Learners

MLR8 Discussion Supports. Invite students to read their completed equations aloud.
Advances: Listening, Speaking

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Fill in the missing part of each equation.

$$3 - \underline{\quad} = 2$$

$$5 - \underline{\quad} = 4$$

$$2 + \underline{\quad} = 2$$

$$3 + \underline{\quad} = 4$$

$$5 - \underline{\quad} = 2$$

$$4 - \underline{\quad} = 4$$

$$1 + \underline{\quad} = 2$$

$$2 + \underline{\quad} = 4$$

$$5 - \underline{\quad} = 3$$

$$1 + \underline{\quad} = 5$$

$$2 + \underline{\quad} = 3$$

$$4 + \underline{\quad} = 5$$

$$4 - \underline{\quad} = 3$$

$$5 - \underline{\quad} = 5$$

$$0 + \underline{\quad} = 3$$

$$3 + \underline{\quad} = 5$$

Student Responses

$$3 - \underline{1} = 2$$

$$5 - \underline{1} = 4$$

$$2 + \underline{0} = 2$$

$$3 + \underline{1} = 4$$

$$5 - \underline{3} = 2$$

$$4 - \underline{0} = 4$$

$$1 + \underline{1} = 2$$

$$2 + \underline{2} = 4$$

$$5 - \underline{2} = 3$$

$$1 + \underline{4} = 5$$

$$2 + \underline{1} = 3$$

$$4 + \underline{1} = 5$$

$$4 - \underline{1} = 3$$

$$5 - \underline{0} = 5$$

$$0 + \underline{3} = 3$$

$$3 + \underline{2} = 5$$

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- Display the student book.
- “What do you notice? What do you wonder?” (The equations have a number missing. Why are there numbers missing?)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- “Fill in the missing part of each equation.”

Activity

- 10 minutes: partner work time
- Monitor for students who use two-color counters or connecting cubes.
- Monitor for students who draw pictures.

Synthesis

- Invite previously identified students to share.

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units.

Students can choose to work at any stage of the centers.

- 5-frames
- Roll and Add
- Bingo
- Geoblocks
- Find the Value of Expressions

Materials to Gather

Materials from previous centers

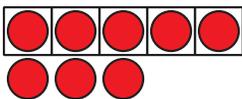
Required Preparation

- Gather materials from:
 - 5-frames
 - Roll and Add
 - Bingo
 - Geoblocks
 - Find the Value of Expressions

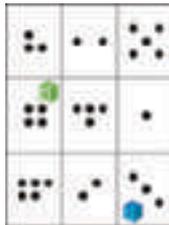
Student-facing Task Statement

Choose a center.

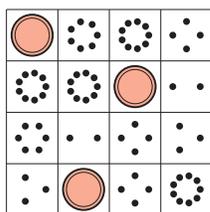
5-frames



Roll and Add



Bingo



Geoblocks



Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time

Synthesis

- "If you were going to teach another student

Find the Value of Expressions

$$\boxed{3+5} \quad \boxed{7-5}$$

how to play _____ center, what would you tell them or show them?"

Lesson Synthesis

🕒 5 min

"Today we found the missing part with groups of objects and equations."

Display $5 = 3 + \underline{\quad}$

"What number is missing from the equation so that it shows 5? How do you know?" (2 is missing. 3 and 2 is 5. If I have 3 fingers up on my hand, I need to put up 2 more fingers to show 5 fingers.)

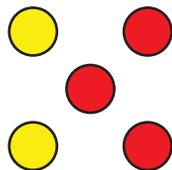
Display $5 - \underline{\quad} = 2$

"What number is missing from the equation? How do you know?" (3 and 2 make 5. If you have 5 and take away 3, there will be 2 left.)

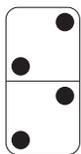
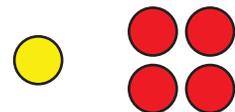
Student Section Summary

In this section, we showed different ways to make numbers to 5.

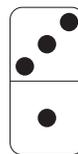
$$5 = 3 + 2$$



$$1 + 4 = 5$$



$$2 + 2 = 4$$



$$4 = 3 + 1$$

We added and subtracted within 5.

$$2 + 1 = 3$$



$$5 - 2 = 3$$



We filled in the missing part in equations.

$$2 + \underline{\quad} = 3$$

$$2 + \underline{1} = 3$$

$$5 - \underline{\quad} = 2$$

$$5 - \underline{3} = 2$$

Section D: All About 10

Lesson 17: Make and Break Apart 10 (Optional)

Standards Alignments

Addressing K.OA.A.3

Teacher-facing Learning Goals

- Relate equations to different compositions and decompositions of 10.

Student-facing Learning Goals

- Let's look for groups that make 10.

Lesson Purpose

The purpose of this lesson is for students to compose and decompose 10 in multiple ways.

In a previous unit, students composed and decomposed 10 in multiple ways using their fingers and 10-frames. This lesson is optional because it is an opportunity for practice that not all students may need. This lesson provides additional practice with compositions and decompositions of 10 before students find the number that makes 10 when added to a given number. Students create a tool with 10 beads, 5 in each color, that can be used in addition to a 10-frame and fingers to show different compositions and decompositions of 10. Students may choose to use this tool throughout the section.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section C in the curriculum materials.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Estimation Exploration (Warm-up)

Materials to Gather

- Materials from a previous activity: Activity 2

- Materials from previous centers: Activity 3
- Pipe cleaners: Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

Teacher Reflection Question

How is the bead tool that students made in this lesson similar to and different from other tools that they have used? How do you anticipate that students will use the bead tools in future lessons?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section D Checkpoint

Standards Alignments

Addressing K.OA.A.3

Student-facing Task Statement

Lesson observations

Student Responses

- Use 10 as a benchmark to compose and decompose numbers in different ways.
- Relate equations to compositions and decompositions of numbers.

----- **Begin Lesson** -----

Warm-up

🕒 10 min

Estimation Exploration: 5 and 5 makes 10

Standards Alignments

Addressing K.OA.A.3

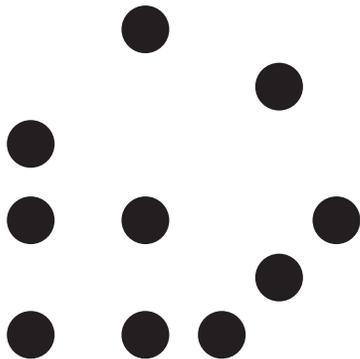
The purpose of an Estimation Exploration is to practice the skill of estimating a reasonable answer based on experience and known information. Students initially see an image of 10 scattered dots. In the second image, students see the same arrangement of dots with 5 colored red and 5 colored yellow. Students may be able to make an estimate based on the second image because they can see the smaller groups (4 and 1 red, 2 and 3 yellow) and know that 5 and 5 makes 10.

Instructional Routines

Estimation Exploration

Student-facing Task Statement

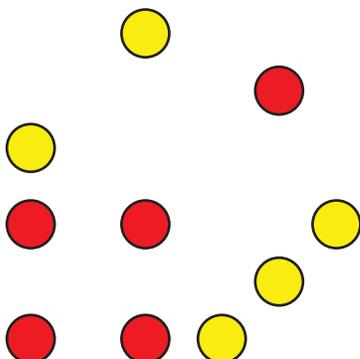
1. How many dots are there?



Record an estimate that is:

too low	about right	too high

2. How many dots are there?



Launch

- Groups of 2
- Display the image.
- “What is an estimate that’s too high? Too low? About right?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.
- “Let’s look at the same dots in a different way.”
- Display the image.
- “Do you want to revise, or change, your estimates?”
- 1 minute: quiet think time
- 1 minute: partner discussion
- Record responses.
- “There are 10 dots.”

Synthesis

- “How did the second picture help you make an estimate?” (I could see 5 red and 5 yellow. I

Record an estimate that is:

too low	about right	too high

know that 5 and 5 is 10.)

Student Responses

- Sample responses
 - too low: 1, 3, 5
 - about right: 8, 10, 12
 - too high: 15, 20, 25
- Sample responses
 - too low: 5, 6, 7
 - about right: 9, 10, 12
 - too high: 14, 15, 20

Activity 1

🕒 10 min

10 Beads

Standards Alignments

Addressing K.OA.A.3

The purpose of this activity is for students to create a tool that can be used to show different ways to compose and decompose 10. Students use two different colored beads to encourage them to see that 10 can be broken into 2 groups of 5, similar to the 10-frame and fingers. Once students have placed the beads on the pipe cleaner, tie or secure each end so that the beads stay on the pipe cleaner.

🕒 Access for Students with Disabilities

Representation: Access for Perception. Use gestures or visibly separate the beads to help students with color blindness to be able to distinguish between the two colors of the beads they will be putting on their tool.

Supports accessibility for: Visual-Spatial Processing

Materials to Gather

Pipe cleaners

Required Preparation

- Each student needs a pipe cleaner and 10 beads, 5 beads of one color and 5 beads of another color.

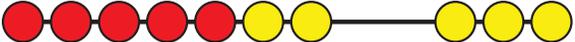
Launch

- Give each student a pipe cleaner and 10 beads, 5 beads of one color and 5 beads of another color.
- “We are going to make a tool that will help us work with the number 10.”

Activity

- “First, count out 5 red beads and put them on your pipe cleaner.”
- 2 minutes: independent work time
- “Now count out 5 yellow beads and put them on the pipe cleaner.”
- 2 minutes: independent work time
- “Push the beads together in the middle of the pipe cleaner. How many beads do you have?” (10)
- “What groups do you see in your 10 beads?” (5 red and 5 yellow)

Synthesis

- Display a pipe cleaner with 7 beads pushed to one side and 3 beads pushed to the other side.
- 
- “What groups do you see?” (7 and 3 or 3 and 7)
 - “How did you know this group had 7 beads?” (I saw 5 red beads and 2 more yellow beads. I know 5 and 2 is 7.)

Activity 2

🕒 10 min

Make and Break Apart 10

Standards Alignments

Addressing K.OA.A.3

The purpose of this activity is for students to compose and decompose 10 using objects, images, and equations. Students work with equations with the total before and after the equal sign.

🌐 Access for English Learners

MLR8 Discussion Supports. Synthesis: For each question, invite students to turn to a partner and share their response. This gives all students an opportunity to produce language.

Advances: Listening, Speaking

Materials to Gather

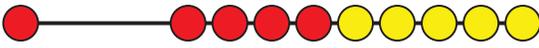
Materials from a previous activity

Required Preparation

- Each student needs the bead tool that they created in the previous activity.

Student-facing Task Statement

- $7 + 3 = 10$
- $10 = 4 + 6$
- $9 + 1 = 10$
- $10 = 2 + 8$
- $\underline{\quad} + \underline{\quad} = 10$

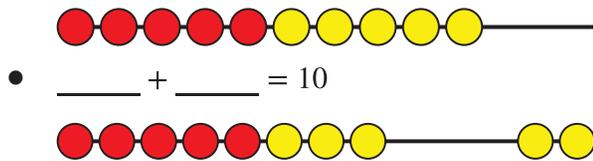
- $10 = \underline{\quad} + \underline{\quad}$

- $\underline{\quad} + \underline{\quad} = 10$

Launch

- Groups of 2
- “We can use the bead tool we made to show different ways to make and break apart 10. Show your partner one way that you can break apart 10 into 2 groups.”
- “Take turns playing with your partner. Use your beads to show each equation. When your partner shows you their beads, tell them the equation to make 10 and draw a picture to show what the beads look like.”

Activity

- 4 minutes: partner work time



Student Responses

$$5 + 5 = 10$$

$$10 = 1 + 9$$

$$10 + 0 = 10$$

$$8 + 2 = 10$$

- "Fill in each equation to match the pictures of beads. You can use your bead tool if it's helpful."
- 3 minutes: independent work time

Synthesis

- Display $2 + 8 = 10$.
- Invite a student to demonstrate $2 + 8 = 10$ with their beads.
- "What 2 parts do you see? What total do you see?" (2 and 8, 10)
- "How will the beads look different if we show $10 = 2 + 8$?" (The beads will look the same. There are still 10. 2 and 8 are still the parts.)

Activity 3

🕒 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Shake and Spill
- Number Race
- Grab and Count
- What's Behind My Back?
- Pattern Blocks

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Shake and Spill
 - Number Race
 - Grab and Count
 - What's Behind My Back?
 - Pattern Blocks

Student-facing Task Statement

Choose a center.

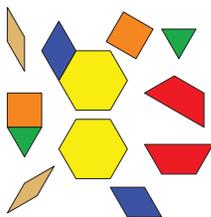
Shake and Spill



Grab and Count



Pattern Blocks



Number Race



What's Behind My Back?



Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time
- "Choose what you would like to do next."
- 10 minutes: center work time

Synthesis

- "If you were going to teach another student how to play ____ center, what would you tell them or show them?"

Lesson Synthesis

🕒 5 min

- "Today we used beads to show different ways to make and break apart 10. What math can you do with your beads?" (I can show $2 + 2$. I can show numbers. I can count.)

- “What if you wanted to show 12? How could you use your beads?” (I could show my beads and 2 fingers. I could work with a friend and use 2 sets of beads.)

Lesson 18: All the Ways to Make 10 (Optional)

Standards Alignments

Addressing K.CC.B.4.c, K.OA.A.1, K.OA.A.2, K.OA.A.3, K.OA.A.4

Building Towards K.OA.A.4

Teacher-facing Learning Goals

- Compose and decompose 10 in multiple ways.

Student-facing Learning Goals

- Let's find all the ways to make 10.

Lesson Purpose

The purpose of this lesson is for students to find all of the compositions and decompositions of 10 in the context of a story problem.

In a previous unit, students found more than one solution to Put Together/Take Apart, Both Addends Unknown story problems. In a previous lesson, students used objects, images, and equations to make and break apart 10.

In this lesson, students solve a Put Together/Take Apart, Both Addends Unknown story problem with a total of 10. Then students work together to find all of the solutions to a Put Together/Take Apart, Both Addends Unknown story problem with a total of 10. Students may notice patterns in the solutions, such as that when one addend increases the other addend decreases, to help them determine if they have found all of the solutions. This lesson is optional because the standards do not require students to find all of the solutions for Put Together/Take Apart, Both Addends Unknown story problems.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section C in the curriculum materials.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Number Talk (Warm-up)

Materials to Gather

- 10-frames: Activity 1, Activity 2
- Connecting cubes or two-color counters: Activity 1, Activity 2
- Materials from a previous activity: Activity 2
- Materials from a previous lesson: Activity 1
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	5 min
Cool-down	5 min

Teacher Reflection Question

As students worked together today, where did you see evidence of the mathematical community established over the course of the school year?

Cool-down (to be completed at the end of the lesson)

 5 min

Find 2 Solutions

Standards Alignments

Addressing K.OA.A.2, K.OA.A.3

Student-facing Task Statement

There are 10 birds on the wire.
Some of the birds are red.
The rest of the birds are blue.

How many of the birds are red?
Then how many of the birds are blue?

Show your thinking using objects, drawings, words, or numbers.
Find more than 1 solution to the problem.

Student Responses

Answers vary. Sample response:

- 4 red birds, 6 blue birds
- 7 blue birds, 3 red birds

Begin Lesson

Warm-up

🕒 10 min

Number Talk: Add and Subtract 1

Standards Alignments

Addressing K.CC.B.4.c, K.OA.A.1

The purpose of this Number Talk is to elicit strategies and understandings students have for adding and subtracting one. These understandings help students develop fluency. When students relate adding and subtracting one to the count sequence, they look for and make use of structure (MP7).

Instructional Routines

Number Talk

Student-facing Task Statement

Find the value of each expression.

- $4 + 1$
- $5 + 1$
- $8 - 1$
- $7 - 1$

Student Responses

- 5: I counted 4, 5.
- 6: 6 comes right after 5.

Launch

- Display one expression.
- “Give me a signal when you have an answer and can explain how you got it.”
- 1 minute: quiet think time

Activity

- Record answers and strategy.
- Keep expressions and work displayed.
- Repeat with each expression.

- 7: 7 comes before 8.
- 6: I counted back 7, 6.

Synthesis

- If needed, ask “How can you use counting to find the value of these expressions?” (I can start at the first number and count forward or backward 1. I can think about the number that comes before or after when I count.)

Activity 1

🕒 10 min

Ten Pigeons

Standards Alignments

Addressing K.OA.A.2, K.OA.A.3
Building Towards K.OA.A.4

The purpose of this activity is for students to solve a Put Together, Total Unknown story problem and a related Put Together/Take Apart, Both Addends Unknown story problem (MP2). Students may use the solution from the first story problem to help them solve the second story problem.

Access for English Learners

MLR8 Discussion Supports. Use multimodal examples to show the meaning of the prepositions and nouns in the story. Use verbal descriptions along with gestures, drawings, or concrete objects to show “pigeons in the fountain” and “pigeons on the bench.”

Advances: Listening, Representing

Materials to Gather

10-frames, Connecting cubes or two-color counters, Materials from a previous lesson

Required Preparation

- Students can use their bead tool from a previous lesson.

Student-facing Task Statement

1. There are 6 pigeons in the fountain.
There are 4 pigeons on the bench.

Launch

- Groups of 2

How many pigeons are there?

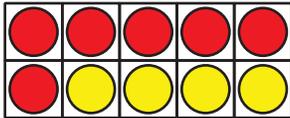
Show your thinking with objects, drawings, numbers, or words.

- There were 10 pigeons.
Some of the pigeons were in the fountain.
The rest of the pigeons were on the bench.
How many of the pigeons were in the fountain?
Then how many of the pigeons were on the bench?

Show your thinking with objects, drawings, numbers, or words.

Student Responses

- There are 10 pigeons. 6 and 4 is 10.
- Sample responses: There are 6 pigeons in the fountain and 4 on the bench.



- Give students access to connecting cubes or two-color counters, bead tools, and 10-frames.
- Read and display the task statement.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- “Show your thinking using drawings, numbers, words, or objects.”

Activity

- 2 minutes: independent work time
- 2 minutes: partner discussion
- Repeat the steps with the second problem.
- Monitor for students who use the numbers from the first story problem to solve the second problem and for students who find other solutions.

Synthesis

- “How are the two story problems the same?” (They are both about pigeons. There are 10 pigeons in both story problems.)
- “How are the two story problems different?” (In the first problem I know how many pigeons are in the fountain and how many are on the bench. In the second problem I know that there are 10 pigeons, but I don’t know how many are on the fountain and how many are on the bench. There is more than 1 way to solve the second story problem.)
- Invite a student who used the solution from the first story problem to solve the second story problem to share.
- “How did you know that there could be 6 pigeons in the fountain and 4 pigeons on the bench?” (In the first story problem

there were 6 in the fountain and 4 on the bench.)

- “Were there any other ways to solve the second story problem?” (There could be 5 pigeons in the fountain and 5 on the bench.)
- “In the next activity, we will try to find all of the ways that the 10 pigeons could be in the fountain and on the bench.”

Activity 2

🕒 10 min

All of the Ways to Make 10

Standards Alignments

Addressing K.OA.A.2, K.OA.A.3, K.OA.A.4

The purpose of this activity is for students to find all of the compositions and decompositions of 10 in the context of a Put Together/Take Apart, Both Addends Unknown story problem. Monitor for students who:

- change the number of red and yellow counters on a 10-frame (MP5).
- move the beads on a bead tool (MP5).
- use their knowledge, possibly from memory, of different decompositions of 10.
- use patterns such as switching the number of pigeons in the fountain and on the bench (MP7).

The purpose of the activity synthesis is to use the 10-frame and the bead tool to visualize how the parts that make 10 are related, specifically that adding one to one number takes one away from the other number in the decomposition.

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to plan a strategy, including the tools they will use, to figure out all the different ways to make 10. Students can take turns verbally sharing their plan with their partner and work on an overall plan to find all the ways to make 10.

Supports accessibility for: Organization, Conceptual Processing

Materials to Gather

10-frames, Connecting cubes or two-color counters, Materials from a previous activity

Required Preparation

- Students can use their bead tool from a previous lesson.
- Create a chart displaying solutions to be used during the lesson synthesis.

pigeons in the fountain	pigeons on the bench
9	1
8	2
7	3
6	4
5	5
4	6
3	7
2	8
1	9

Student-facing Task Statement

There were 10 pigeons.
Some of the pigeons were in the fountain.
The rest of the pigeons were on the bench.
How many of the pigeons were in the fountain?
Then how many of the pigeons were on the bench?

Show your thinking with objects, drawings, numbers, or words.

Student Responses

- There are 9 pigeons in the fountain and 1

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters, bead tools, and 10-frames.
- Display and read the task statement.
- “Work with your partner to show all of the ways that the 10 pigeons could be in the fountain and on the bench.”

Activity

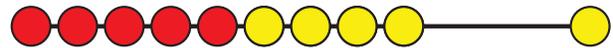
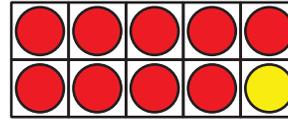
- 7 minutes: partner work time

on the bench.

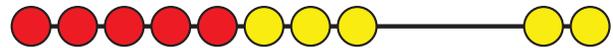
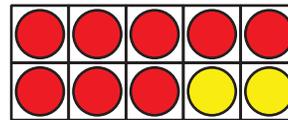
- There are 8 pigeons in the fountain and 2 on the bench.
- There are 7 pigeons in the fountain and 3 on the bench.
- There are 6 pigeons in the fountain and 4 on the bench.
- There are 5 pigeons in the fountain and 5 on the bench.
- There are 4 pigeons in the fountain and 6 on the bench.
- There are 3 pigeons in the fountain and 7 on the bench.
- There are 2 pigeons in the fountain and 8 on the bench.
- There was 1 pigeon in the fountain and 9 on the bench.

Synthesis

- Display a 10-frame with 9 red counters and 1 yellow counter and a bead tool with 9 beads on the left and 1 on the right.



- “How do the 10-frame and the bead tool show a solution for the story problem?” (There can be 9 pigeons in the fountain and 1 pigeon on the bench.)
- Switch one red counter to yellow, as pictured, and move 1 bead from the right to the left.



- “What if I change one of the red counters to yellow? What if I move one bead over?” (Then 8 pigeons are in the fountain and 2 pigeons are on the bench.)
- “Can I keep changing red counters to yellow? Can I keep moving the beads to the other side? What will happen?” (Yes, more pigeons will be on the bench and fewer pigeons will be in the fountain.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Shake and Spill
- Number Race
- Grab and Count
- What's Behind My Back?
- Pattern Blocks

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Shake and Spill
 - Number Race
 - Grab and Count
 - What's Behind My Back?
 - Pattern Blocks

Student-facing Task Statement

Choose a center.

Shake and Spill



Grab and Count



Number Race



What's Behind My Back?

Launch

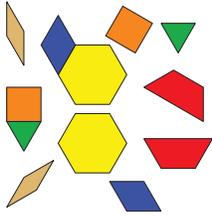
- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of



Pattern Blocks



their choice.

- 8 minutes: center work time
- "Choose what you would like to do next."
- 8 minutes: center work time

Synthesis

- "What makes working in centers fun for you?"

Lesson Synthesis

🕒 5 min

Display the chart with solutions to the story problem.

"Tyler and Priya recorded the different ways that the pigeons could be in the fountain and on the bench."

pigeons in the fountain	pigeons on the bench
9	1
8	2
7	3
6	4
5	5
4	6
3	7
2	8
1	9

“What do you notice? What patterns do you see?” (There are lots of ways to make 10. The numbers in one column are counting up and the numbers in the other column are counting down. I see that there are 7 and 3 and 3 and 7.)

Lesson 19: Find the Number that Makes 10 (Optional)

Standards Alignments

Addressing K.OA.A.3, K.OA.A.4

Teacher-facing Learning Goals

- Fill in equations to represent compositions and decompositions of 10.
- Find the number that makes 10 when added to a given number.

Student-facing Learning Goals

- Let's add to make 10.

Lesson Purpose

The purpose of this lesson is for students to find the number that makes 10 when added to a given number.

Students have access to tools used throughout the year, including two-color counters, connecting cubes, fingers, 10-frames, and bead tools, to help them find the number that makes 10. With repeated experience, students may know some of the numbers needed to make 10 by memory, such as 5 and 5 or 9 and 1. Students fill in equations to represent these compositions and decompositions of 10. This lesson is optional because the standards do not require students to fill in equations with one missing addend in kindergarten.

If students need additional support with the concepts in this lesson, refer back to Unit 5, Section C in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- 10-frames: Activity 1, Activity 2
- Colored pencils, crayons, or markers:

Activity 1

- Connecting cubes or two-color counters: Activity 1, Activity 2
- Materials from a previous lesson: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

What opportunities are you giving students to reflect on their understanding of the mathematical content?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section D Checkpoint

Standards Alignments

Addressing K.OA.A.4

Student-facing Task Statement

Lesson observations

Student Responses

- Given a number, find how many more are needed to make 10.
- Use 10 as a benchmark to compose and decompose numbers in different ways.
- Relate equations to compositions and decompositions of numbers.

----- **Begin Lesson** -----

Warm-up

🕒 10 min

How Many Do You See: Make 10

Standards Alignments

Addressing K.OA.A.3, K.OA.A.4

The purpose of this How Many Do You See is to allow students to use subitizing or grouping strategies to describe the images they see.

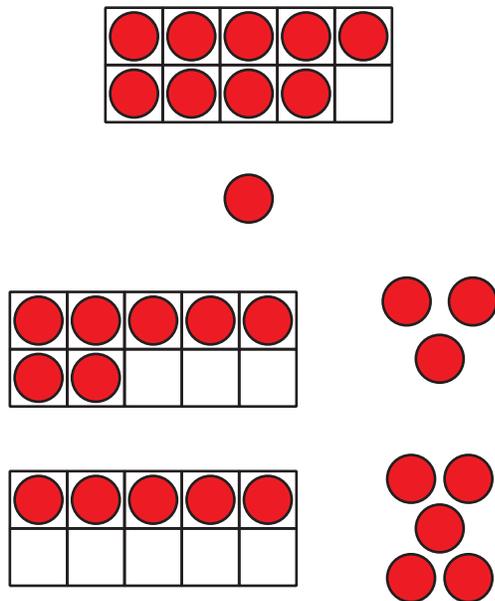
Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?

How do you see them?



Student Responses

- 10: One is missing from the 10-frame and it is below.
- 10: You could move the 3 on the outside into the 10-frame.
- 10: I see 5 in the frame and 5 outside of the

Launch

- Groups of 2
- “How many do you see? How do you see them?”
- Flash the image.
- 30 seconds: quiet think time

Activity

- Display the image.
- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- “How does the 10-frame help you see different ways to make 10?” (I know that there are 5 squares in each row and 10 squares altogether. I can look at the empty squares to figure out how many more are needed to make 10.)

frame.

Activity 1

 15 min

Color the Number to Make 10

Standards Alignments

Addressing K.OA.A.4

The purpose of this activity is for students to practice finding the number that makes 10 when added to a given number. They can represent this number on their bead tool, fingers, or 10-frame and determine the number that needs to be added to make 10 (MP5).

Access for English Learners

MLR8 Discussion Supports. During partner work time, invite each partner to read each equation aloud. Listen for and clarify questions about the equations.

Advances: Speaking, Conversing

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Chunk the board in the student-facing task into more manageable parts. Check in with students after using a smaller version of the board.

Supports accessibility for: Organization, Attention

Materials to Gather

10-frames, Colored pencils, crayons, or markers, Connecting cubes or two-color counters, Materials from a previous lesson

Required Preparation

- Students can use their bead tool from a previous lesson.

Student-facing Task Statement

- Partner A: Color in 1 number.
- Partner B: Color in the number that makes

Launch

- Groups of 2
- Give students access to colored pencils,

10 with the same color.

- Switch colors and roles and repeat.

10	5	3	2
7	1	9	8
4	8	9	4
6	2	3	0
1	7	5	6

Choose your favorite way to make 10.
Fill in the equation.

$$10 = \underline{\quad} + \underline{\quad}$$

Student Responses

Answers vary.

connecting cubes or two-color counters, bead tools, and 10-frames.

- “You are going to play a game with your partner. One partner will color in one of the squares on the board. The other partner will have to figure out which number you need to make 10 with that number and color it in with the same color. Keep playing until you color in all of the matches. Switch partners and colors each time.”

Activity

- 12 minutes: partner work time
- “Choose your favorite way to make 10 and fill in the equation.”
- 1 minute: independent work time

Synthesis

- Invite students to share how they figured out the number needed to make 10.
- Display $10 = 8 + \underline{\quad}$.
- “Elena was filling in her equation. She only filled in the number her partner colored. She wrote $10 = 8 + \underline{\quad}$. What number did Elena color in? How do you know?” (She colored in 2. 8 and 2 make 10.)

Activity 2

🕒 10 min

Add to Make 10

Standards Alignments

Addressing K.OA.A.4

The purpose of this activity is for students to find the number that makes 10 when added to a given number. Students fill in equations with a missing addend. Students choose appropriate tools strategically as they choose from tools used throughout the year (MP5). For some equations, students may not need a tool because they know the composition to make 10, which is discussed in the activity synthesis.

Materials to Gather

10-frames, Connecting cubes or two-color counters, Materials from a previous lesson

Required Preparation

- Students can use their bead tool from a previous lesson.

Student-facing Task Statement

Fill in the equation to show ways to make 10.

- $10 = 9 + \underline{\quad}$
- $10 = 3 + \underline{\quad}$
- $10 = 5 + \underline{\quad}$
- $10 = 4 + \underline{\quad}$
- $10 = 8 + \underline{\quad}$
- $10 = 7 + \underline{\quad}$

Student Responses

1. $10 = 9 + 1$
2. $10 = 3 + 7$
3. $10 = 5 + 5$
4. $10 = 4 + 6$
5. $10 = 8 + 2$
6. $10 = 7 + 3$

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters, bead tools, and 10-frames.
- “Fill in each equation so that they show a way to make 10.”

Activity

- 4 minutes: independent work time
- 4 minutes: partner work time

Synthesis

- “How did you choose which tool to use to help you figure out which number you needed to make 10? Were there any problems that you didn’t need to use a tool to figure out?”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Shake and Spill
- Number Race
- Grab and Count
- What's Behind My Back?
- Pattern Blocks

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Shake and Spill
 - Number Race
 - Grab and Count
 - What's Behind My Back?
 - Pattern Blocks

Student-facing Task Statement

Choose a center.

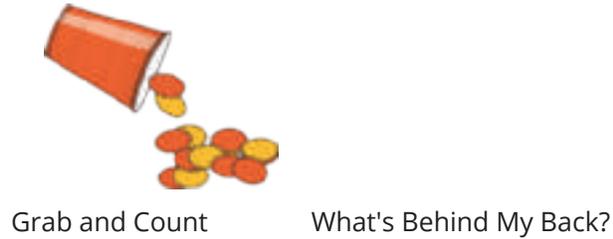
Shake and Spill

Number Race



Launch

- Groups of 2
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do

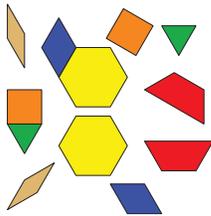


Grab and Count

What's Behind My Back?



Pattern Blocks



first.”

- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- “Choose what you would like to do next.”
- 8 minutes: center work time

Synthesis

- “What can you do to help you be successful when working in centers? What can your partner(s) do to help you be successful? What can your teacher do?”

Lesson Synthesis

🕒 5 min

“Today we figured out what number we needed to make 10 and showed the ways to make 10 with equations.”

“Tell your partner one way to make 10. Tell them at least 2 ways that you can show it.” (5 and 5. I can show 5 fingers and 5 fingers. 7 and 3. I can show 7 red counters and 3 yellow counters on a 10-frame.)

Lesson 20: More or Less than 10?

Standards Alignments

Addressing K.CC, K.CC.B.4

Teacher-facing Learning Goals

- Estimate whether a group has more or fewer than 10 objects or images.

Student-facing Learning Goals

- Let's decide if there are more or fewer than 10 things in a group.

Lesson Purpose

The purpose of this lesson is for students to estimate whether a group has more or fewer than 10 objects or images.

In previous lessons and units, students represented 10 in many different ways and used these representations to compose and decompose 10. In this lesson, students use their understanding of 10 to estimate how many images there are. Students also assess the reasonableness of given estimates. The focus on understanding the magnitude of 10 prepares students for work with place value in the base-ten system in grade 1.

If students need additional support with the concepts in this lesson, refer back to Unit 6, Section B in the curriculum materials.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Estimation Exploration (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

In grade 1, students learn that a group of 10 ones makes a new unit called a ten. How has

Activity 1	10 min	this work prepared students to understand 10 ones as 1 new unit?
Activity 2	10 min	
Activity 3	25 min	
Lesson Synthesis	5 min	

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section D Checkpoint

Standards Alignments

Addressing K.CC

Student-facing Task Statement

Lesson observations

Student Responses

- Use 10 as a benchmark to estimate and count.

Begin Lesson

Warm-up

🕒 10 min

Estimation Exploration: Close to 10

Standards Alignments

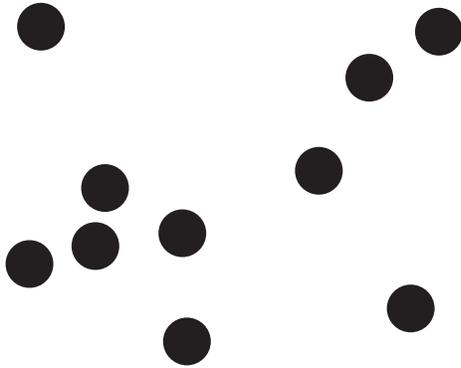
Addressing K.CC.B.4

The purpose of an Estimation Exploration is to practice the skill of estimating a reasonable answer based on experience and known information.

Instructional Routines

Estimation Exploration

Student-facing Task Statement



Record an estimate that is:

too low	about right	too high

Student Responses

Sample responses:

- Too low: 2–5
- About right: 8–12
- Too high: 15–20

Launch

- Groups of 2
- Display the image.
- “What is an estimate that’s too high? Too low? About right?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.

Synthesis

- “There are 10 dots. Why was it hard to tell there were 10 dots?” (Usually we see 10 on a 10-frame or fingers or with beads. It was hard to see how many there were because they were scattered.)

Activity 1

🕒 10 min

Use 10 to Estimate

Standards Alignments

Addressing K.CC.B.4

The purpose of this activity is for students to use what they know about 10 and what it looks like to estimate whether a group has more or less than 10 images. Students then count the images to see if they estimated correctly. It is important for students to know that there is not always a right answer, particularly when the number of images is close to 10, as in the second and fourth questions. It is important that answers of both “more” and “fewer” are accepted and the emphasis is on students sharing their reasoning (MP3).

Student-facing Task Statement

Write “more” or “fewer” to finish each sentence.

1. I think there are _____ than 10 pencils.



How many pencils are there? _____

2. I think there are _____ than 10 pencils.



How many pencils are there? _____

3. I think there are _____ than 10 pencils.



Launch

- Groups of 2
- “Now we are going to look at some pictures of pencils and think about whether there are more than 10 or fewer than 10 pencils without counting them. Write ‘more’ on the line if you think there are more than 10 pencils. Write ‘fewer’ on the line if you think there are fewer than 10 pencils.”

Activity

- 3 minutes: independent work time
- Monitor for a student who writes “more” and a student who writes “fewer” for the second problem.
- “Figure out how many pencils are in each picture and write a number on the line. Were your guesses correct?”
- 3 minutes: partner work time

Synthesis

- Display the image:



- “Some students said they thought there

How many pencils are there? _____

4. I think there are _____ than 10 pencils.



How many pencils are there? _____

5. I think there are _____ than 10 pencils.



How many pencils are there? _____

Student Responses

Answers vary. Sample response:

1. fewer, 3
2. fewer or more, 11
3. fewer, 4
4. fewer or more, 9
5. more, 15

were more than 10 pencils and some thought there were fewer than 10 pencils. Both of those are good answers.”

- Invite a student to share why they thought there were more than 10.
- Invite a student to share why they thought there were fewer than 10.
- “When groups are close to 10, it is hard to tell whether there are more or fewer than 10 without counting.”

Activity 2

🕒 10 min

Could She Be Right?

Standards Alignments

Addressing K.CC.B.4

The purpose of this activity is for students to analyze the reasonableness of estimates. It is important for students to know that there is not always a right answer, particularly when the estimate is close to the number of images, as in the third question. It is important that answers to both questions are accepted and the emphasis is on students sharing their reasoning (MP3).

Access for English Learners

MLR8 Discussion Supports. Display and read sentence frames to support small-group discussion: "I agree because . . ." and "I disagree because . . ."

Advances: Speaking, Conversing

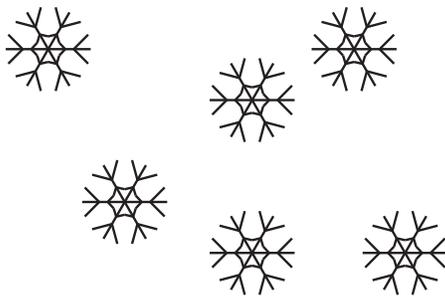
Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Students may benefit from feedback that emphasizes effort, and attempting to answer the question. For example, emphasizing that it is not important to get the right answer but being able to estimate something close is the important skill.

Supports accessibility for: Social-Emotional Functioning

Student-facing Task Statement

- Elena says there are about 11 snowflakes.
Do you think she could be right?
Why or why not?



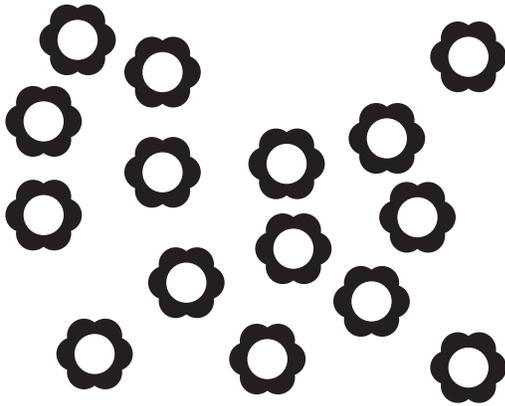
- Elena says there are about 8 flowers.
Do you think she could be right?
Why or why not?

Launch

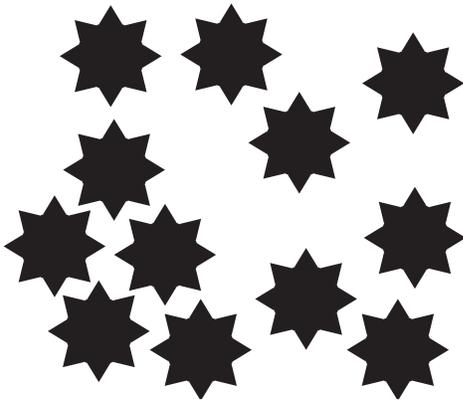
- Groups of 2
- "Elena looked at some pictures and guessed how many there were without counting. We are going to look at the pictures and think about if Elena's guess could be right."

Activity

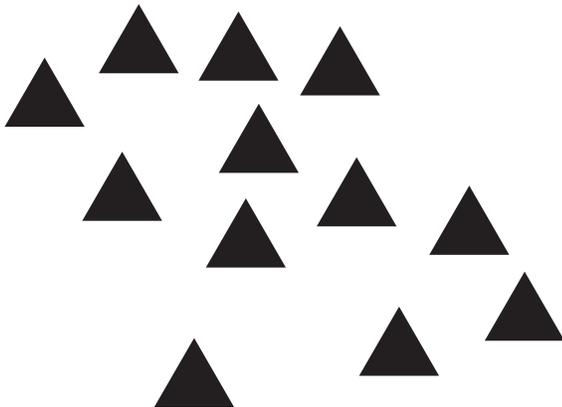
- Read the first problem.
- 2 minutes: partner discussion
- Share responses.
- Repeat the steps with the rest of the problems.



3. Elena says there are about 11 suns.
Do you think she could be right?
Why or why not?



Synthesis:



Synthesis

- Display the last image of triangles.
- “Do you think 6 or 14 is a better guess for the number of triangles in this picture? Why?” (14 is a better estimate. I can see a 3 on the top and then there are a lot more, so there are more than 6.)

Student Responses

Sample responses:

1. No, because 11 is more than 10 and there are definitely less than 10 in this picture.
No, this doesn't look like enough to be 11.
2. No, there are too many here to be 8.
It looks like there are more than 10 so it couldn't be 8.
3. Yes, it looks like about 10 suns so it could be 11.
Yes, it doesn't look like a lot more than 10 or a lot less than 10 so it could be 11.

Activity 3

🕒 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Shake and Spill
- Number Race
- Grab and Count
- What's Behind My Back?
- Pattern Blocks

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

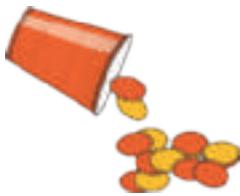
- Gather materials from:

- Shake and Spill
- Number Race
- Grab and Count
- What's Behind My Back?
- Pattern Blocks

Student-facing Task Statement

Choose a center.

Shake and Spill



Number Race



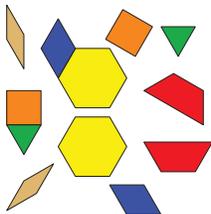
Grab and Count



What's Behind My Back?



Pattern Blocks



Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time
- "Choose what you would like to do next."
- 10 minutes: center work time

Synthesis

- "Tell your partner about a time when you used a math tool to help you during centers. How did the tool help you?"

Lesson Synthesis

🕒 5 min

"Today we looked at pictures and estimated whether they had more or fewer than 10 things."

Display a cup with 9 pencils.

"Do you think there are more than 10 or fewer than 10 pencils in the cup? What makes you think that?"

(There are about 10 pencils. I see a lot of pencils so there are more than 10 pencils. I think there are fewer than 10 pencils.)

“We can say there are about 10 pencils in the cup.”

Lesson 21: Compose and Decompose Numbers 11–19

Standards Alignments

Addressing K.CC.B.5, K.NBT.A.1

Teacher-facing Learning Goals

- Compose and decompose numbers 11–19 using 10 ones and some more ones.

Student-facing Learning Goals

- Let's make groups of 10.

Lesson Purpose

The purpose of this lesson is for students to compose and decompose numbers 11–19 using 10 ones and some more ones.

In the first activity, students decompose groups of 11–19 objects into groups of 10 ones and some more ones. Then students determine the missing part to compose numbers 11–19.

If students need additional support with the concepts in this lesson, refer back to Unit 6, Section B in the curriculum materials.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Materials to Gather

- 10-frames: Activity 2
- Collections of objects: Activity 1
- Connecting cubes or two-color counters: Activity 2
- Materials from a previous lesson: Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

As you finish up this unit, reflect on the norms and activities that have supported each student in learning math. How have you seen each student grow as a young mathematician throughout this work? How have you seen yourself grow as a teacher?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 8, Section D Checkpoint

Standards Alignments

Addressing K.NBT.A.1

Student-facing Task Statement

Lesson observations

Student Responses

- Use 10 as a benchmark to compose and decompose numbers in different ways.
- Relate equations to compositions and decompositions of numbers.
- Use 10 as a benchmark to estimate and count.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

Which One Doesn't Belong: Numbers 11–20

Standards Alignments

Addressing K.NBT.A.1

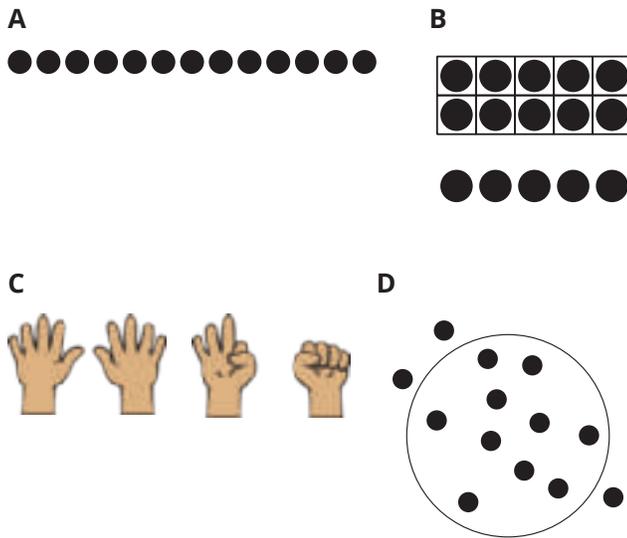
This warm-up prompts students to carefully analyze and compare arrangements of 11–19 images.

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?



Student Responses

Sample responses:

A doesn't belong because:

- It is the only one where you can't see a group of 10.

B doesn't belong because:

- It is the only one that doesn't show 13. There are 15 dots.
- It is the only one with a 10-frame.

C doesn't belong because:

- It is the only one that doesn't have dots.

D doesn't belong because:

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 2–3 minutes: partner discussion
- Share and record responses.

Synthesis

- "Let's find at least one reason why each one doesn't belong."

- It is the only one that is not organized. The dots are messy.

Activity 1

 15 min

Where Will They Sit?

   PLC Activity

Standards Alignments

Addressing K.CC.B.5, K.NBT.A.1

The purpose of this activity is for students to compose and decompose numbers 11–19 as 10 ones and some more ones. Students work with groups of 11–19 objects to represent a context about students in a classroom where there is room for 10 students to sit at a table and the rest of the students sit on a rug. To solve the problem, students may count the total number of objects and then find a group of 10 or they may start by putting 10 objects at the table and see how many cubes are left on the rug and count all, count on, or know the total without counting. They record the two groups and the total by filling in equations.

Students work with multiple collections of 11–19 objects. They can be given access to a variety of collections of objects to choose from and then switch collections with other groups.

Access for English Learners

MLR8 Discussion Supports. Invite students to act out the scenario. Listen for and clarify any questions about the context.

Advances: Speaking, Representing

Access for Students with Disabilities

Action and Expression. Develop Expression and Communication: Give students access to 10-frames to help them figure out the number of students that will be sitting at the table and rug.

Supports accessibility for: Conceptual Processing, Visual-Spatial Processing

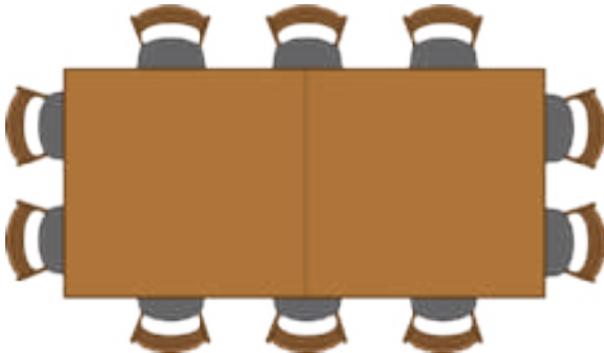
Materials to Gather

Collections of objects

Required Preparation

- Each group of 2 needs access to at least 2 collections of 11–19 objects.

Student-facing Task Statement



1.




$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

2.




$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

3.




$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

4.




$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

5.

Launch

- Groups of 2
- Give each group of students access to collections of 11–19 objects.
- “We are going to pretend that the objects in the collection are students.”
- “The students will either sit at the table or on the rug.”
- Display the image.
- “All of the students want to sit at the table. How many of the students can sit at the table?” (10 students)
- 1 minute: independent work time
- “10 students can sit at the table. The students who do not fit at the table will sit on the rug.”
- “Work with your partner to figure out how many students will sit at the table, how many will sit on the rug, and how many students there are altogether. Fill in an equation for each bag of objects.”

Activity

- 7 minutes: partner work time

Synthesis

- “The collection Jada is working with has 14 objects. She showed 10 students sitting at the table. How many do you think will be still on the rug? Why do you think that?” (4, 10 and 4 is 14)



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

6.



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Student Responses

Answers vary. Sample responses:

- 10 students sit at the table, 4 sit on the rug,
 $10 + 4 = 14$
- 10 students sit at the table, 7 sit on the rug,
 $10 + 7 = 17$

Activity 2 (optional)

 10 min

Finish the Equations

Standards Alignments

Addressing K.NBT.A.1

The purpose of this activity is for students to compose and decompose numbers 11–19 as 10 ones and some more ones in the context of filling in equations with a missing addend. Students may just know the numbers needed to make numbers 11–19 with repeated experience or they may use objects like connecting cubes and two-color counters to represent the equations. This activity is optional because the standards do not require students to fill in equations with one missing addend in kindergarten.

Materials to Gather

10-frames, Connecting cubes or two-color counters, Materials from a previous lesson

Required Preparation

- Students can use their bead tool from a previous lesson.

Student-facing Task Statement

- $17 = 10 + \underline{\quad}$
- $19 = \underline{\quad} + 9$
- $10 + \underline{\quad} = 14$
- $\underline{\quad} + 2 = 12$
- $11 = \underline{\quad} + 1$
- $15 = 10 + \underline{\quad}$

Student Responses

- $17 = 10 + \underline{7}$
- $19 = \underline{10} + 9$
- $10 + \underline{4} = 14$
- $\underline{10} + 2 = 12$
- $11 = \underline{10} + 1$
- $15 = 10 + \underline{5}$

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters, 10-frames, and bead tools.
- Display the student book.
- “Kiran wrote equations to show the total number of students and how many students sat at the table and how many sat on the rug, but he didn’t finish the equations. Finish filling in each equation. You can use connecting cubes or two-color counters if they are helpful.”

Activity

- 4 minutes: independent work time
- 4 minutes: partner work time
- Monitor for students who:
 - count out the total number of objects and then determine the two parts.
 - just know the parts to make teen numbers.

Synthesis

- Invite students who used objects to share.
- Invite students who just knew the missing number in the equation to share.
- “What is the same about each equation? What is different?” (They all have 10. Sometimes the total number of students is on the left and sometimes it is on the right.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts. Students choose from 5 centers introduced in previous units. Students can choose to work at any stage of the centers.

- Shake and Spill
- Number Race
- Grab and Count
- What's Behind My Back?
- Pattern Blocks

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Shake and Spill
 - Number Race
 - Grab and Count
 - What's Behind My Back?
 - Pattern Blocks

Student-facing Task Statement

Choose a center.

Shake and Spill



Number Race



Launch

- Groups of 2
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

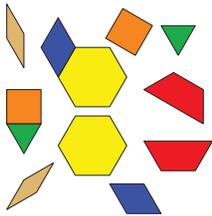
Grab and Count



What's Behind My Back?



Pattern Blocks



Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- "Choose what you would like to do next."
- 8 minutes: center work time

Synthesis

- "What can you do when there is a math problem or center that you're not sure about?"

Lesson Synthesis

⌚ 5 min

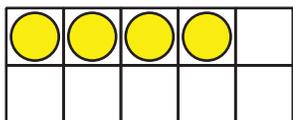
Display 11, 12, 13, 14, 15, 16, 17, 18, 19.

"Choose one of the numbers. Tell your partner something you know about that number."

"How are all of these numbers alike?" (They all are more than 10. They all have 10 and some more.)

✍ Student Section Summary

In this section, we used our fingers, objects, 10-frames, and drawings to find all of the ways to make 10.



$$10 = 4 + 6$$



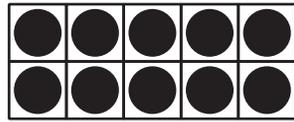
$$10 = 9 + 1$$

We figured out how many more are needed to make 10.

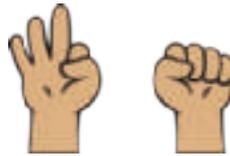
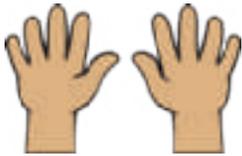
$$10 = 8 + \underline{\quad}$$

$$10 = 8 + \underline{2}$$

We showed numbers 11-19 as 10 and some more.



$$15 = 10 + 5$$



$$10 + 3 = 13$$

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Core Knowledge **MATHEMATICS™**



Family Support
Materials

Family Support Materials

Putting It All Together

In this unit, students put together their understanding from throughout the year to cap off major work and fluency goals of the grade.

Section A: Counting and Comparing

In this section, students count and compare collections of up to 20 objects. Students focus on the count sequence up to 20 and use their knowledge of the count sequence to determine one more or one less than a given quantity or number.

Section B: Math in Our School

In this section, students explore and describe the math that they see in their environment. Students participate in multiple activities that allow them to notice, record, ask questions, and tell stories about math in their community. Students record quantities that they see in their school by making their own number book. Then students ask and answer their own mathematical questions about their school, such as “how many tiles are there from the office to the cafeteria?” or “are there more doors or more windows in the library?” Finally students create, share, and solve story problems about their school environment and community. While the school building is used as a context, the activities in this section can be adapted for students to do in the community or at home.

Section C: Fluency within 5

In this section, students develop fluency with adding and subtracting within 5. Repeated practice with different compositions of numbers to 5 prepares students to fluently find the value of addition and subtraction expression. Students apply what they learned throughout the section to find a missing part with totals up to 5 with both objects and equations.

Section D: All About 10

In this section, students work with 10 as a benchmark for numbers within 20. This work prepares them for Grade 1 work adding within 20 where students will be encouraged to make a ten. Students compose and decompose 10 in different ways and connect these compositions and decompositions with equations. Students find the number that makes 10 when added to any given number. They use their understanding of the magnitude of 10 to estimate if groups have more or fewer than 10 items. Finally, students compose and decompose teen numbers 11–19, always working with a group of 10 ones and some more ones. Throughout this section, students use fingers, objects, drawings, 10-frames and equations to represent their thinking.

Try it at home!

Near the end of the unit, ask your student to solve the following problems:

- Are there more doors or windows in our home?

- Let's find objects in our home to count.

Questions that may be helpful as they work:

- How do you know?
- Are there more than 10 objects/doors/windows or less than 10 objects/doors/windows?

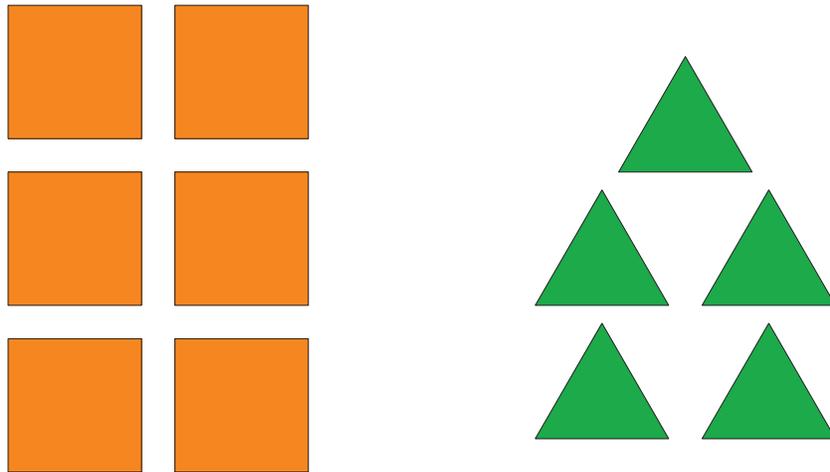
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Unit Assessments

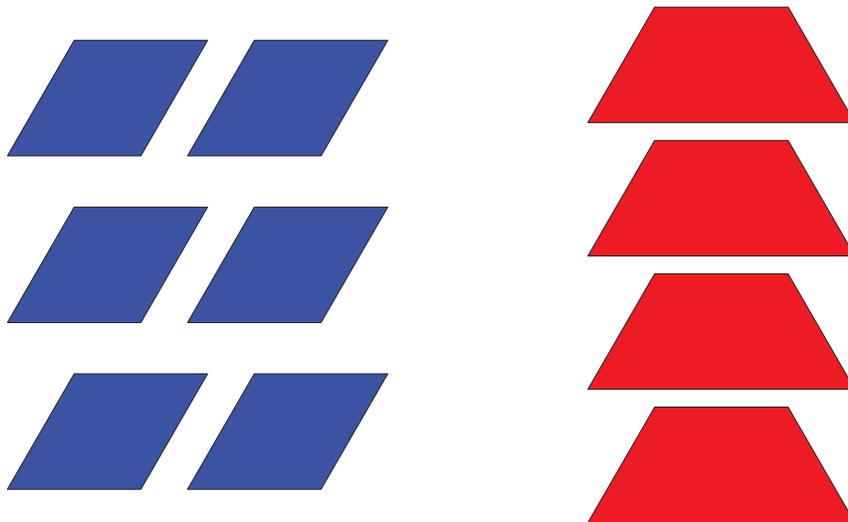
End-of-Course Assessment and Resources

Putting It All Together: End-of-Course Assessment and Resources

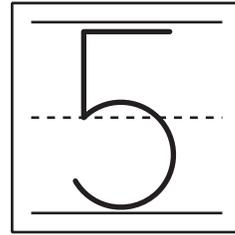
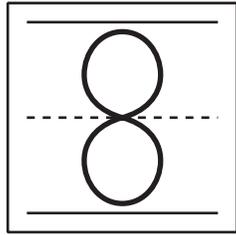
1. a. Circle the group that has fewer things.



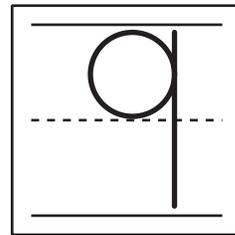
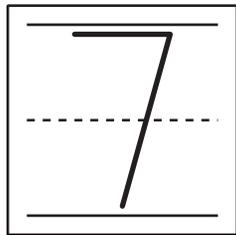
b. Circle the group that has more things.



2. a. Circle the number that is more.



b. Circle the number that is less.



3. Write the number that makes 10 with each number.

a. 9 _____

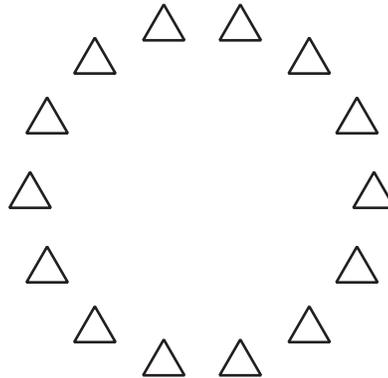
b. 5 _____

c. 2 _____

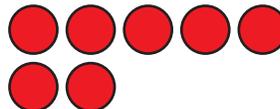
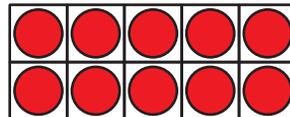
4. a. How many dots are there?



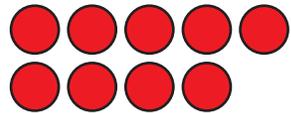
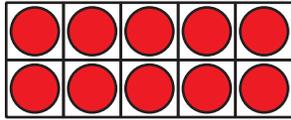
b. How many triangles are there?



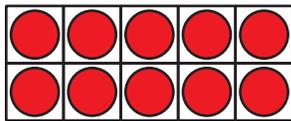
c. How many counters are there?



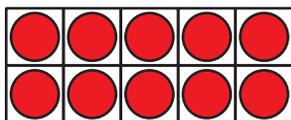
5. Draw a line from each picture to the expression it matches.



$10 + 4$



$10 + 5$



$10 + 9$

6. Write numbers to make each equation true.

a. $10 + 6 = \underline{\hspace{2cm}}$

b. $3 + 10 = \underline{\hspace{2cm}}$

c. $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 13$

d. $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 17$

7. There are 8 crabs on the beach.
Then 5 of the crabs go into the ocean.
How many crabs are on the beach now?
Show your thinking using drawings, numbers, or words.

8. A princess has 10 dresses.
Some of them are pink and the rest are blue.
How many pink dresses does the princess have?
Then how many blue dresses does the princess have?
Show your thinking using drawings, numbers, or words.

9. a. Clare has 7 flowers.

Noah gives Clare 1 more flower.

How many flowers does Clare have now?

Show your thinking using drawings, numbers, or words.

b. Han has 7 flowers.

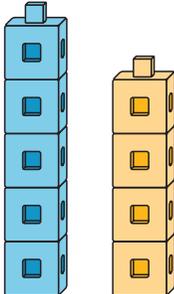
He gives Elena 1 flower.

How many flowers does Han have now?

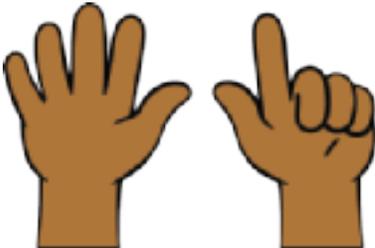
Show your thinking using drawings, numbers, or words.

10. Write an expression for each picture.

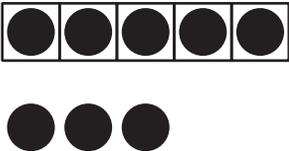
a.



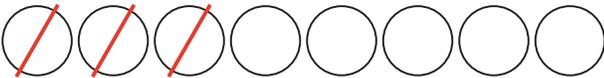
b.



c.



d.



11. Roll a connecting cube on the number mat.
This is your target number.

Take turns trying to make the target number.
You can use the numbers 0, 1, 2, 3, 4, and 5 and you can add
or subtract.

When you cannot think of any other ways to make the
number, roll the number cube to get a different target
number.

12. Build a shape with pattern blocks or with geoblocks.

Describe your shape.

How many blocks did you use to build your shape?

Write and solve a story problem about your shape.

13. Partner 1:

Choose a card

Give clues to your partner (without saying the number!) to help them guess the number.

You can give several clues.

Partner 2:

Listen to the clues.

Guess your partner's number.

Switch roles so Partner 2 chooses a card and gives clues.

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Assessment Answer Keys

Check Your Readiness A, B, C and D
End-of-Course Assessment and Resources

Assessment Answer Keys

Assessment: Section A Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- Count and compare groups of objects and images.
- Represent and write numbers up to 20.
 - Count, read, and write numbers up to 20.
 - Use numbers and their knowledge of the count sequence to compare groups of objects.
 - Use their knowledge of the count sequence to find how many after one is added or taken away from a given number.

Assessment: Section B Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- Represent and write quantities and numbers up to 20.
 - Count, read, and write numbers up to 20.
 - Use objects, drawings, numbers, words, and expressions or equations to represent quantities up to 20.

Assessment: Section C Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- Fluently add and subtract within 5.
- Addition strategies
 - Count all to find the sum.
 - Use their knowledge of the count sequence to find certain sums.
 - Know certain sums.
- Subtraction strategies
 - Represent all, then cross off or remove to find the difference.
 - Use their knowledge of the count sequence to find certain differences.
 - Know certain differences.

Assessment: Section D Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- Use understanding of 10 to work with numbers to 20.
 - Given a number, find how many more are needed to make 10.
 - Use 10 as a benchmark to estimate and count.
 - Use 10 as a benchmark to compose and decompose numbers in different ways.
 - Relate equations to compositions and decompositions of numbers.

Assessment: End-of-Course Assessment and Resources

Teacher Instructions

The items here focus on major work of the grade, fluencies of the grade, and also include at least one in-depth problem that provides a context where students apply key ideas they have learned over the year. The items included here can be used prior to the final unit to focus remaining time in the year or to assess student understanding at the end of the year. It is not recommended that these resources be used all at once.

Give students access to 10-frames, connecting cubes or two-color counters, pattern blocks, and geoblocks. Students also need number cards and number mats for one activity (Instructional masters are provided).

Problem 1

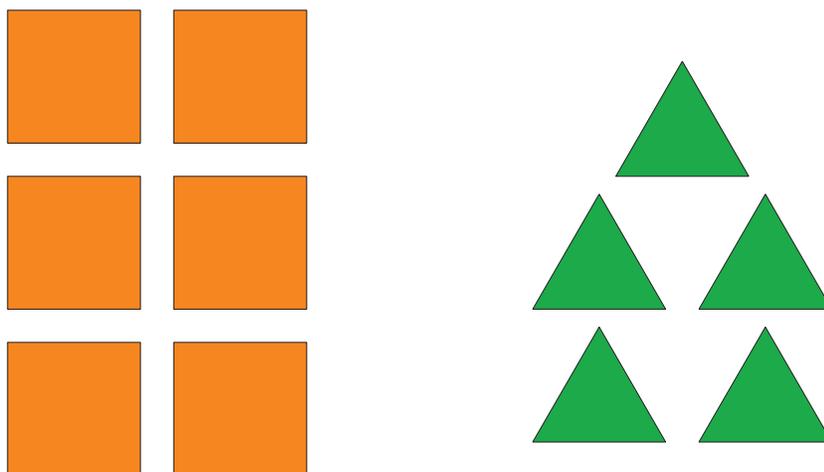
Standards Alignments

Addressing K.C.C.6

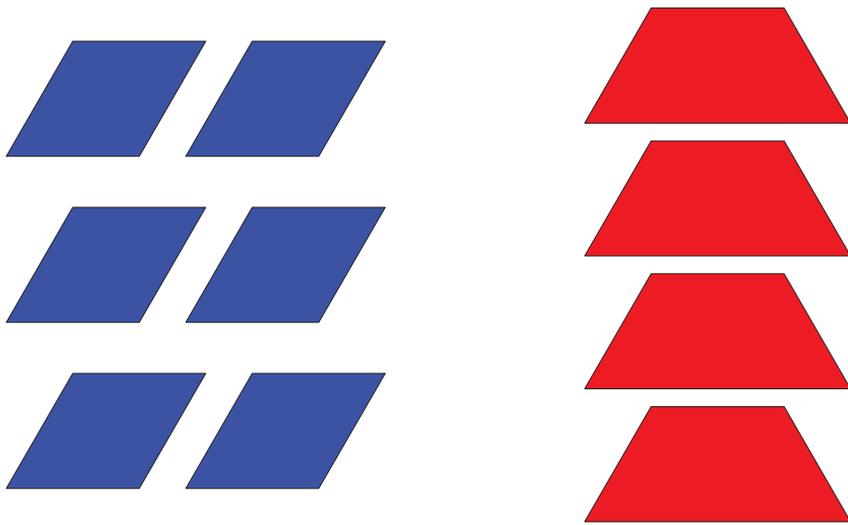
Narrative

Students compare sets of pattern blocks and decide, in one case, which group has more things and, in the other case, which group has fewer things. The objects are images of pattern blocks but the students do not need to identify the shapes in order to answer the questions.

- a. Circle the group that has fewer things.



- b. Circle the group that has more things.



Solution

- a. triangles
- b. rhombuses

Problem 2

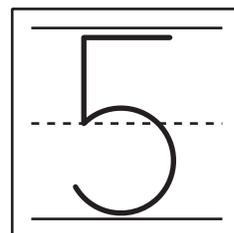
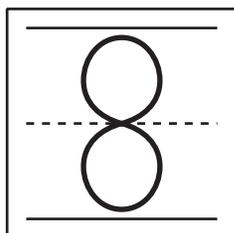
Standards Alignments

Addressing K.CC.C.7

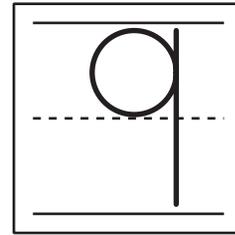
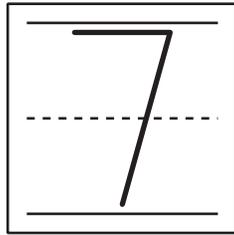
Narrative

Students identify which single-digit number is greater or less. Other items will assess students' ability to write numbers that represent quantities in pictures and in stories.

- a. Circle the number that is more.



b. Circle the number that is less.



Solution

- a. 8
- b. 7

Problem 3

Standards Alignments

Addressing K.OA.A.4

Narrative

Students find the number that makes 10 with a given number. They should have access to a 10-frame for this problem.

Write the number that makes 10 with each number.

- a. 9 _____
- b. 5 _____
- c. 2 _____

Solution

- a. 1
- b. 5
- c. 8

Problem 4

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5

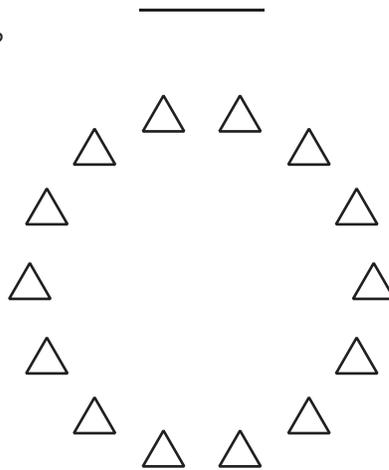
Narrative

Students count objects in a line, in a circle, and arranged in a 10-frame. They write a number to show the result of their count. Students may lose track of the dots in a line and the triangles in a circle if they do not count carefully. An incorrect result on either of these problems could mean the student needs to be more careful or that they are having trouble counting.

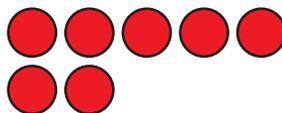
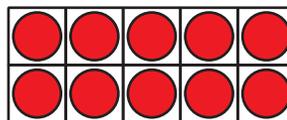
- a. How many dots are there?



- b. How many triangles are there?



- c. How many counters are there?



Solution

- a. 11
- b. 14
- c. 17

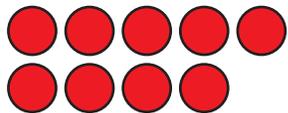
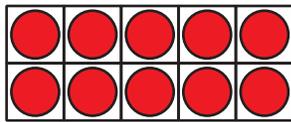
Problem 5

Standards Alignments

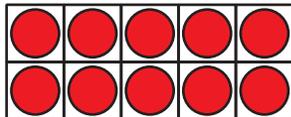
Addressing K.NBT.A.1

Draw a line from each picture to the expression it matches.

A.

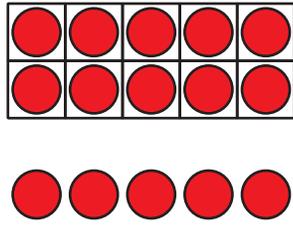


B.



C.

- 1. $10 + 4$
- 2. $10 + 5$
- 3. $10 + 9$



Solution

- A: 3
- B: 1
- C: 2

Problem 6

Standards Alignments

Addressing K.NBT.A.1

Narrative

Students evaluate and write expressions for teen numbers. For the decomposition questions, students are likely to write the numbers as 10 and some more but there are many correct responses. For example, they could write $13 + 0 = 13$ or $12 + 1 = 13$ and so on.

Write numbers to make each equation true.

- a. $10 + 6 = \underline{\hspace{2cm}}$
- b. $3 + 10 = \underline{\hspace{2cm}}$
- c. $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 13$
- d. $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 17$

Solution

- a. 16
- b. 13
- c. Sample response: $10 + 3$ or $3 + 10$
- d. Sample response: $10 + 7$ or $7 + 10$

Problem 7

Standards Alignments

Addressing K.O.A.A.1, K.O.A.A.2

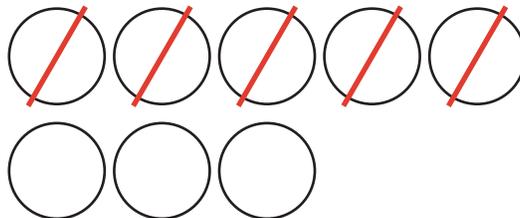
Narrative

Students solve a Take Away, Result Unknown story problem. They may draw a picture as in the provided solution or they may write an equation or explain their reasoning in words.

There are 8 crabs on the beach.
 Then 5 of the crabs go into the ocean.
 How many crabs are on the beach now?
 Show your thinking using drawings, numbers, or words.

Solution

There are 3 crabs on the beach now.
 Sample representation:



Problem 8

Standards Alignments

Addressing K.O.A.A.2, K.O.A.A.4

Narrative

Students solve a Put Together/Take Apart, Both Addends Unknown story problem in one way. They may draw a picture, or write an equation, or they may explain their reasoning in words. The answers of 10 and 0 are mathematically acceptable although they do not fit the description of the story which indicates that some of the dresses are pink and some are blue.

Both Addends Unknown problems are conditional in nature, that is, the answer to the second question depends on the answer to the first. This type of language is difficult for students and so the language used here is identical to what they saw in the lessons with this problem type. If

students struggle with this problem type, we recommend doing this in a personal interview in order to make sure the student understands the question.

A princess has 10 dresses.
Some of them are pink and the rest are blue.
How many pink dresses does the princess have?
Then how many blue dresses does the princess have?
Show your thinking using drawings, numbers, or words.

Solution

Sample response: The princess has 2 pink dresses. Then she has 8 blue dresses because 2 and 8 make 10.

Problem 9

Standards Alignments

Addressing K.CC.B.4.c, K.OA.A.2

Narrative

Students solve an Add To, Result Unknown and a Take From, Result Unknown story problem with the same context. In the first problem they need to add 1 to 7 and in the second problem they need to take 1 away from 7. Students may solve the problems in a variety of ways including drawing a picture or writing an equation. The problem is designed to suggest using the count sequence since in each case the answer is 1 away from the given number.

- a. Clare has 7 flowers.
Noah gives Clare 1 more flower.
How many flowers does Clare have now?
Show your thinking using drawings, numbers, or words.
- b. Han has 7 flowers.
He gives Elena 1 flower.
How many flowers does Han have now?
Show your thinking using drawings, numbers, or words.

Solution

- a. 8. I just counted one more from 7.

- b. 6, because 6 comes right before 7.

Problem 10

Standards Alignments

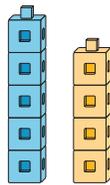
Addressing K.OA.A.1

Narrative

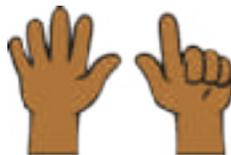
Students write expressions to represent several familiar representations they have seen during the year. Students might just write a number that is the result of the operation or calculation. These students may know what the corresponding expression is and may have misunderstood the intent of the question.

Write an expression for each picture.

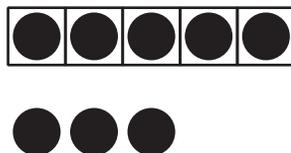
a.



b.



c.



d.



Solution

- a. $5 + 4$ or $4 + 5$
- b. $5 + 2$ or $2 + 5$
- c. $5 + 3$ or $3 + 5$
- d. $8 - 3$

Problem 11

Standards Alignments

Addressing K.OA.A.5

Narrative

This is a game for two students that gives the teacher an opportunity to observe them working on facts within 5. Students try to make the target number using addition or subtraction and numbers chosen from 0, 1, 2, 3, 4, and 5. Students may

- use facts that they know
- look for patterns
- build on or use a previous expression

Students may repeat a way that has already been said without realizing it. This is not a problem as the goal is for them to quickly identify sums and differences within 5. The game can be played by students individually, if desired.

This activity requires a number mat.

Roll a connecting cube on the number mat.

This is your target number.

Take turns trying to make the target number.

You can use the numbers 0, 1, 2, 3, 4, and 5 and you can add or subtract.

When you cannot think of any other ways to make the number, roll the number cube to get a different target number.

Solution

Sample response for 4: $5 - 1, 4 + 0, 4 - 0, 3 + 1, 2 + 2$

Sample response for 3: $5 - 2, 4 - 1, 3 + 0, 3 - 0, 2 + 1$

Problem 12

Standards Alignments

Addressing K.CC.B.5, K.G.B.6, K.OA.A.2

Narrative

Students build and describe a shape. They can choose a two-dimensional shape which they will build using pattern blocks or a three dimensional shape for which they would use geoblocks.

This activity requires geoblocks or pattern blocks.

Build a shape with pattern blocks or with geoblocks.

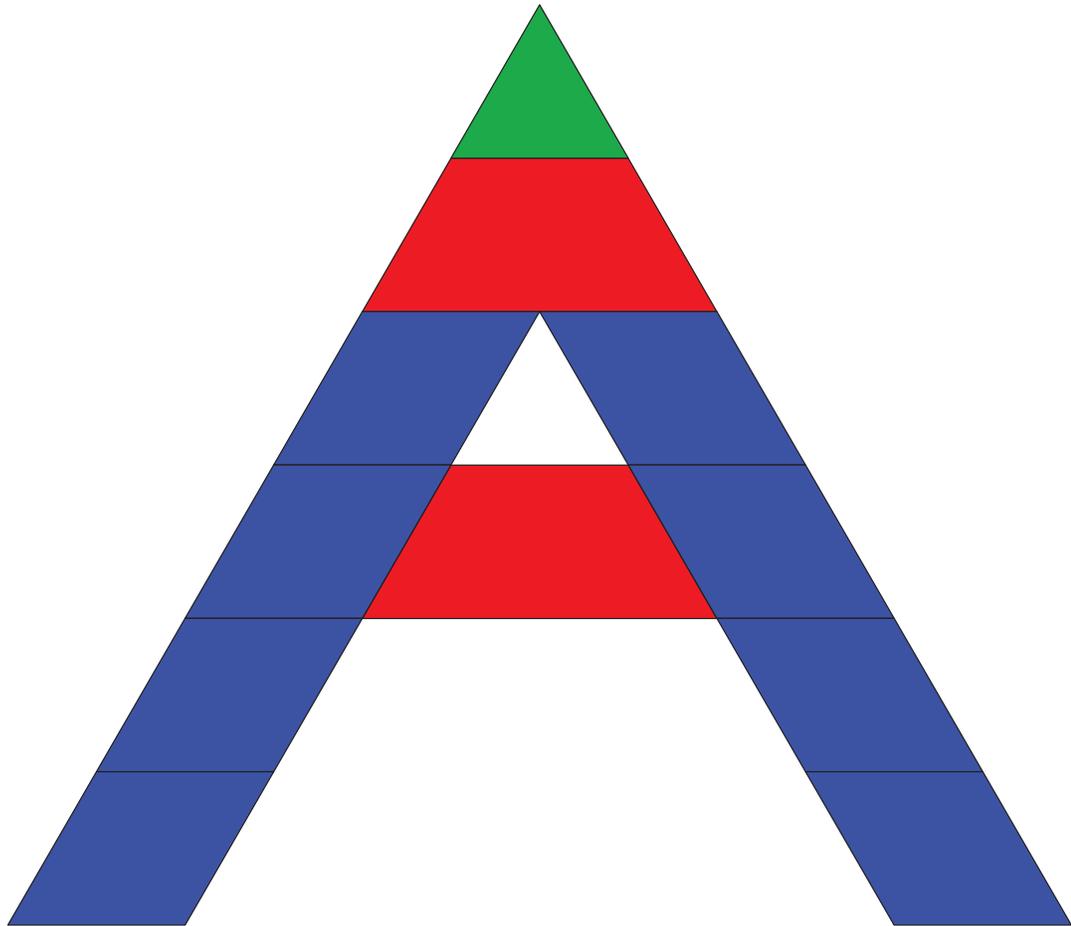
Describe your shape.

How many blocks did you use to build your shape?

Write and solve a story problem about your shape.

Solution

a.



Sample response:

I made an A for my name. I used 11 pattern blocks altogether. I used rhombuses to make the sides and then put in trapezoids and a triangle at the top to finish the letter.

- b. Sample response: How many rhombuses and trapezoids are there in the shape?
- c. There are 8 rhombuses and 2 trapezoids. That's 10 shapes altogether.

Problem 13

Standards Alignments

Addressing K.NBT.A.1, K.OA.A

Narrative

Students give clues to their partner to help them guess a number. The numbers are 1 through 20 and the game gives both partners a chance to develop arithmetic skills. For example, for the number 8 a student might say:

- I'm one full hand and 3 more fingers on another hand.
- I'm 2 short of a full 10-frame.

Students may also give several clues. For example, for the number 17, they could say:

- I'm 10 and some more.
- I'm more than 3 hands of fingers.
- I'm 3 hands and 2 more fingers.

Only the last of these clues is needed but the communication practice and guesses that the partner makes all develop important number sense.

This activity requires number cards 1 through 20 or 0 through 20.

Partner 1:

Choose a card

Give clues to your partner (without saying the number!) to help them guess the number.

You can give several clues.

Partner 2:

Listen to the clues.

Guess your partner's number.

Switch roles so Partner 2 chooses a card and gives clues.

Solution

Sample response:

Partner 1 selects the card 13.

Clue 1: I'm 10 and some more. (Guess: 16)

Clue 2: I'm 3 more than 10. (Guess: 13)

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Lesson
Cool Downs

Lesson 3: Count to Add and Subtract

Cool Down: Get off the Bus

9 students were on the bus.

Then 1 student got off the bus.

How many students are on the bus now?

Show your thinking using objects, drawings, numbers, or words.

Lesson 7: Create Number Books (Part 2)

Cool Down: Classroom Number Page

Choose 1 object in our classroom.

Create a number book page about the object.

Include a number, a drawing, and letters, a word, or words.



Lesson 15: Addition and Subtraction Expressions within 5

Cool Down: Addition and Subtraction Expressions

Find the value of each expression.

- $2 + 3$

- $4 - 1$

- $5 - 3$

Lesson 18: All the Ways to Make 10

Cool Down: Find 2 Solutions

There are 10 birds on the wire.

Some of the birds are red.

The rest of the birds are blue.

How many of the birds are red?

Then how many of the birds are blue?

Show your thinking using objects, drawings, words, or numbers.

Find more than 1 solution to the problem.

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Instructional
Masters

Instructional Masters for Putting It All Together

address	title	students written per copy	on?	students requires cutting?	card stock recommended?	color paper recommended?
Activity Kindergarten.8.5.2	Number Clues	2	no	yes	no	no
Activity Kindergarten.8.4.1	Number Mat 1-20	2	no	no	no	no
Activity Kindergarten.8.5.1	Number Cards 1-20	4	no	yes	no	no
Assessment Kindergarten.8	Number Cards 1-20	4	no	yes	no	no
Assessment Kindergarten.8	Checkpoint	0	yes	no	no	no
Activity Kindergarten.8.13.1	Domino Cards	2	no	yes	no	no
Activity Kindergarten.8.13.1	Sorting Chart 1-5	2	no	no	no	no
Activity Kindergarten.8.14.2	Sorting Chart 1-5	2	no	no	no	no
Assessment Kindergarten.8	Checkpoint	0	yes	no	no	no
Assessment Kindergarten.8	Checkpoint	0	yes	no	no	no
Activity Kindergarten.8.14.2	Expression Cards	2	no	yes	no	no
Activity Kindergarten.8.16.1	Shake and Spill Stage 4 Recording Sheet Kindergarten	1	yes	no	no	no

Activity Kindergarten.8.7.1	Number Book	1	yes	no	yes	no
Activity Kindergarten.8.4.2	One More, One Less Mat	2	no	no	no	no
Assessment Kindergarten.8	Checkpoint	0	yes	no	no	no
Activity Kindergarten.8.8.1	Find Someone Who Recording Sheet	1	yes	no	no	no
Activity Kindergarten.8.12.1	Dot Image Cards	1	no	yes	no	no
Assessment Kindergarten.8	Number Mat 1-10	2	no	no	no	no

Number Clues

Number Clues

Set A

- 1 more than 12
- 1 less than 10
- 1 more than 19
- 1 less than 17

Number Clues

Set B

- 1 less than 16
- 1 more than 7
- 1 less than 6
- 1 more than 15

Number Clues

Set C

- 1 more than 0
- 1 less than 20
- 1 more than 19
- 1 less than 7

Number Clues

Set D

- 1 less than 16
- 1 less than 10
- 1 less than 14
- 1 more than 5

Number Clues

Set E

- 1 more than 12
- 1 less than 20
- 1 less than 6
- 1 more than 9

Number Clues

Set F

- 1 more than 0
- 1 more than 7
- 1 less than 14
- 1 less than 11

14	16	9	2	13
1	8	20	15	17
4	12	19	6	3
7	5	10	18	11

Number Cards 1-20

Number Cards 1-20

1

Number Cards 1-20

2

Number Cards 1-20

3

Number Cards 1-20

4

Number Cards 1-20

5

Number Cards 1-20

6

Number Cards 1-20

7

Number Cards 1-20

8

Number Cards 1-20

9

Number Cards 1-20

10

Number Cards 1-20

Number Cards 1-20

11

Number Cards 1-20

12

Number Cards 1-20

13

Number Cards 1-20

14

Number Cards 1-20

15

Number Cards 1-20

16

Number Cards 1-20

17

Number Cards 1-20

18

Number Cards 1-20

19

Number Cards 1-20

20

Number Cards 1-20

Number Cards 1-20

1

Number Cards 1-20

2

Number Cards 1-20

3

Number Cards 1-20

4

Number Cards 1-20

5

Number Cards 1-20

6

Number Cards 1-20

7

Number Cards 1-20

8

Number Cards 1-20

9

Number Cards 1-20

10

Number Cards 1-20

Number Cards 1-20

11

Number Cards 1-20

12

Number Cards 1-20

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Number Cards 1-20

17

Number Cards 1-20

18

Number Cards 1-20

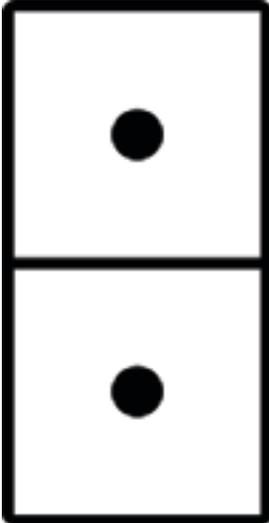
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Number Cards 1-20

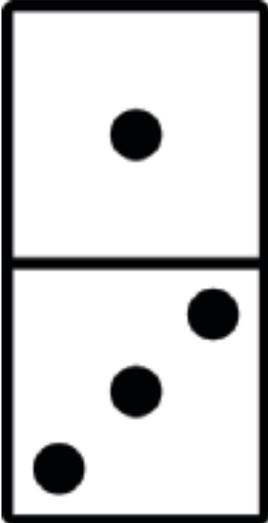
20

Domino Cards

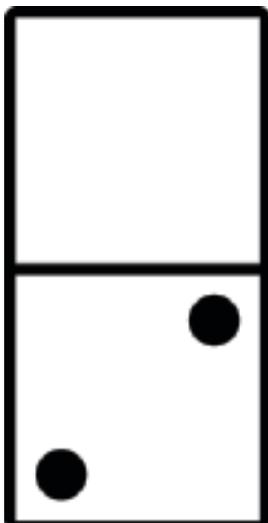
Domino Cards



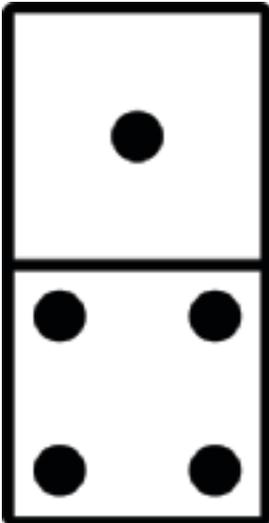
Domino Cards



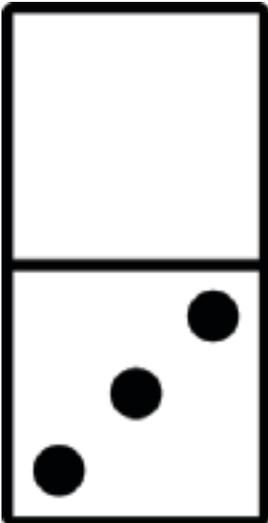
Domino Cards



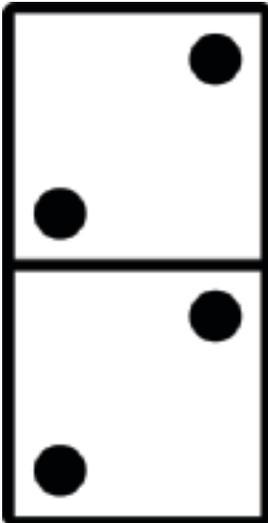
Domino Cards



Domino Cards

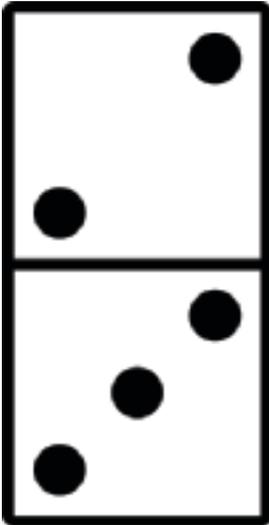


Domino Cards

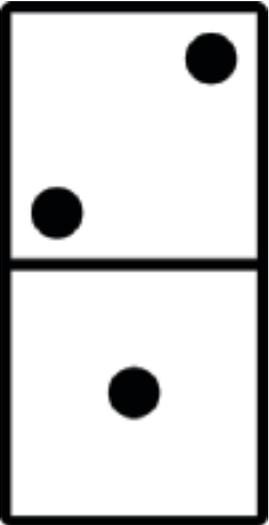


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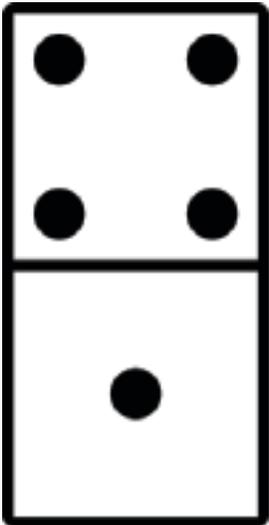
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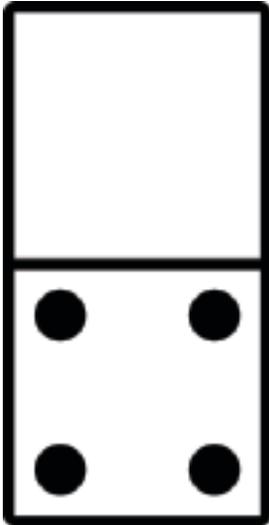
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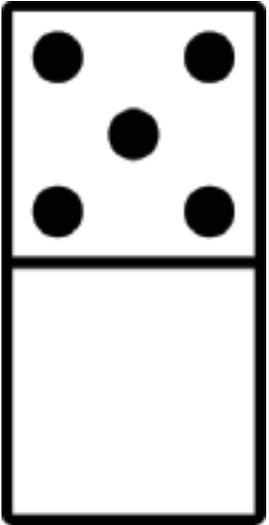
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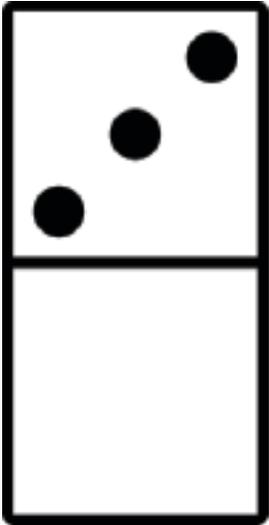
Domino Cards



Domino Cards



Domino Cards



Sorting Chart 1-5

1

2

3

	4
	5

Sorting Chart 1-5

1

2

3

	4
	5

Expression Cards

Expression Cards K.8

$$2 + 1$$

Expression Cards K.8

$$4 - 1$$

Expression Cards K.8

$$2 + 3$$

Expression Cards K.8

$$4 - 2$$

Expression Cards K.8

$$2 + 0$$

Expression Cards K.8

$$5 - 3$$

Expression Cards K.8

$$0 + 5$$

Expression Cards K.8

$$3 - 1$$

Expression Cards

Expression Cards K.8

$$2 + 2$$

Expression Cards K.8

$$5 - 1$$

Expression Cards K.8

$$4 + 1$$

Expression Cards K.8

$$3 - 0$$

Expression Cards K.8

$$1 + 4$$

Expression Cards K.8

$$1 + 3$$

Expression Cards K.8

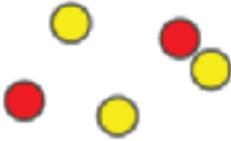
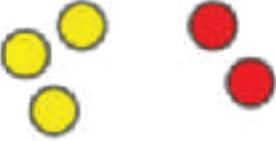
$$4 - 0$$

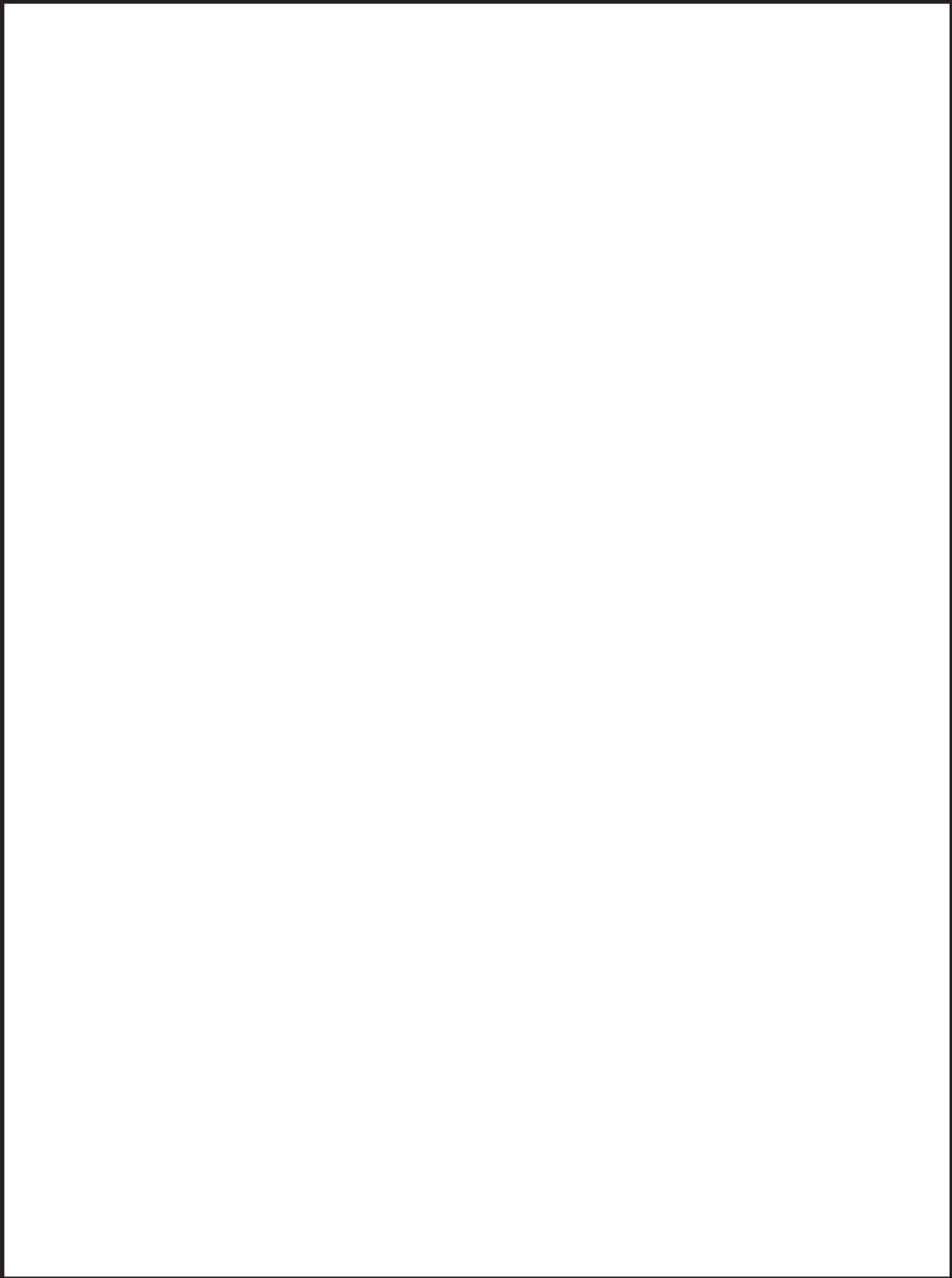
Expression Cards K.8

$$1 + 2$$

Shake and Spill Stage 4 Recording Sheet Kindergarten



<p>total counters</p> 	<p>expression</p> 
<p>5</p>	<p>3 + 2</p> <p>_____ + _____</p>
	<p>_____ + _____</p>
	<p>_____ + _____</p>
	<p>_____ + _____</p>
	<p>_____ + _____</p>
	<p>_____ + _____</p>



A large, empty rectangular box with a thin black border occupies most of the page. Near the bottom edge of this box, there is a single horizontal line that spans across most of the width, likely intended as a baseline for writing or drawing.

A large, empty rectangular box with a thin black border occupies most of the page. Near the bottom edge of this box, there is a single horizontal line that spans across most of the width, leaving small gaps on either side. This line is positioned approximately one-fifth of the way up from the bottom edge of the box.

A large, empty rectangular box with a thin black border occupies most of the page. Near the bottom edge of this box, there is a single horizontal line that spans across most of the width, leaving small gaps at both ends. This line is positioned approximately one-fifth of the way up from the bottom border of the box.

A large empty rectangular box with a thin black border, occupying most of the page. Near the bottom edge of the box, there is a single horizontal line extending across most of the width, likely serving as a baseline for writing or a guide for a drawing.

A large, empty rectangular box with a thin black border occupies most of the page. Near the bottom edge of this box, there is a single horizontal line that spans across most of the width, likely intended as a space for writing or drawing.

A large, empty rectangular box with a thin black border occupies most of the page. Near the bottom edge of this box, there is a single horizontal line that spans across most of the width, likely serving as a baseline for writing or a guide for a drawing.

1 more

1 less

Find Someone Who Recording Sheet

1. Find someone who has more than 5 letters in their first name.

2. Find someone who has less than 5 letters in their first name.

3. Find someone who is taller than you.

4. Find someone who knows what number is 1 less than 18.

5. Find someone who has 0 pockets.

Find Someone Who Recording Sheet

6. Find someone who has more than 2 pockets.

7. Find someone who can count to 70.

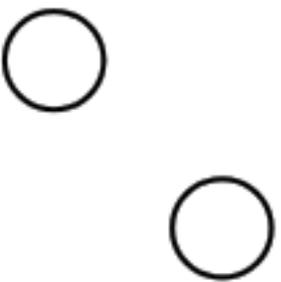
8. Find someone who knows 2 numbers that go together to make 10.

9. Find someone who has a shape on their shirt.

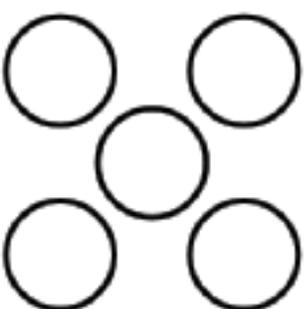
10. Find someone who has more than 1 brother or sister.

Dot Image Cards

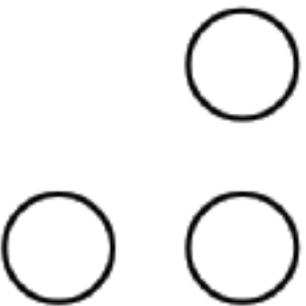
Dot Image Cards



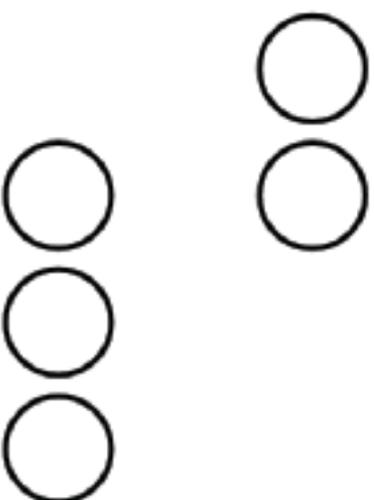
Dot Image Cards



Dot Image Cards

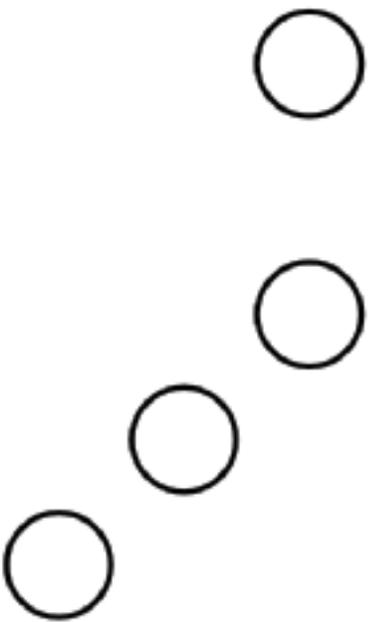


Dot Image Cards

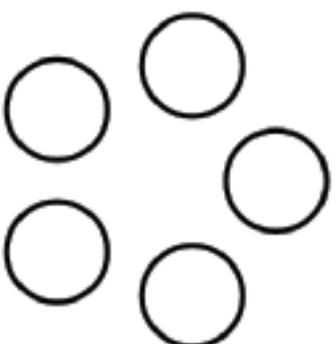


Dot Image Cards

Dot Image Cards



Dot Image Cards



Dot Image Cards

2	7	9	1	8
3	4	10	5	6

Credits

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