



Core Knowledge[®] MATHEMATICS

Numbers 1-10



Teacher Guide



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Numbers 1-10
Teacher Guide
Core Knowledge Mathematics™

Numbers 1-10

Table of Contents

Introduction	i
Unit Overview	1
Section Overview	2
Center Overview	11
Lessons Plans and Student Task Statements:	
Section A: Lessons 1–6 Count and Compare Groups	
of Objects	30
Section B: Lessons 7–11 Count and Compare Groups	
of Images	86
Section C: Lessons 12–16 Connect Quantities	
and Numbers	139
Section D: Lessons 17–22 Compare Numbers	184
Teacher Resources	235

Family Support Materials

Assessments

Instructional Masters

Unit 2: Numbers 1-10

At a Glance

Unit 2 is estimated to be completed in 23-24 days including 2 days for assessment.

This unit is divided into four sections including 21 lessons and 1 optional lesson.

- Section A—Count and Compare Groups of Objects (Lessons 1-6)
- Section B—Count and Compare Groups of Images (Lessons 7-11)
- Section C—Connect Quantities and Numbers (Lessons 12-16)
- Section D—Compare Numbers (Lessons 17-22)

On pages 7-10 of this Teacher Guide is a chart that identifies the section each lesson belongs in and the materials needed for each lesson.

This unit uses eleven student centers.

- Math Fingers
- Pattern Blocks
- Picture Books
- Shake and Spill
- Number Race
- Less Same More
- Math Stories
- Connecting Cubes
- Bingo
- Geoblocks
- Math Libs

Unit 2: Numbers 1–10

Unit Learning Goals

- Students answer “how many” questions, count out, and compare groups within 10. Students write a number to represent how many.

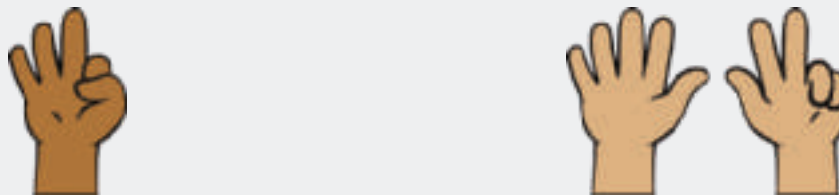
In this unit, students continue to develop counting concepts and skills, including comparing, while learning to write numbers.

Previously, students answered “how many” and “are there enough” questions and counted groups of up to 10 objects. They also learned the structures and routines for activities and centers.

Here, students rely on familiar activity structures to build their counting skills and concepts. First, they count and compare the number of objects, and then do the same with groups of images. The images are given in different arrangements—in lines, arrays, number cube patterns, on 5-frames—to help students connect different representations to the same number.

Use of fingers and 5-frames to represent numbers are emphasized and encouraged because they can help students see the structure of numbers 6–10 as $5 + n$. (Ten-frames will be introduced in a later unit.) Fingers are also helpful for counting and are always available.

In these materials, quantities represented with fingers are shown, from students’ perspective, to start with the left pinky. Numbers 6–10 continue with the thumb on the right hand. When demonstrating numbers on fingers for students, begin with the right pinky so that students see the fingers being held up from left to right.



Students can represent numbers with their fingers in any way, as long as they show the correct number of fingers. It may be helpful to students to hold their fingers down on the table or on their lap to represent 8 and 9.

To compare the number of objects or images, students start by using terms such as “fewer” and “more.” Later, when comparing written numbers, the term “less” is introduced. In general, “less” is used to compare numerals, and “fewer” is used to compare groups of objects. Students may use these terms interchangeably at first, but will develop proficiency with the distinction over time.

Section A: Count and Compare Groups of Objects

Standards Alignments

Addressing K.CC, K.CC.A.1, K.CC.A.3, K.CC.B.4, K.CC.B.4.b, K.CC.B.5, K.CC.C.6

Section Learning Goals


- Connect quantities with spoken number words.
- Count and compare up to 10 objects and know the number remains the same regardless of the arrangement of the objects.

In this section, students count to answer “how many” questions and develop their understanding of the connection between quantities and spoken number words.

Students are encouraged to use their fingers to count. They may also continue to use any tools and resources from earlier work, such as counting mats and 5-frames, as well as bring objects from home to count. As students count and rearrange objects, students notice that the arrangement of objects does not affect the number of objects (conservation of number). They will continue to build this understanding over time.

Students also develop their comparison skills. They start with quantities that are very different and can be compared visually, such as 7 and 2, and relate the comparisons to the terms “more” and “fewer,” which may be new. (Students do not need to produce grammatically accurate language, but the teacher should use “fewer” or “less” as appropriate in context.)

Display and write the number associated with a quantity whenever possible. Students will begin recognizing, representing, and writing numbers in the second half of the unit.

 PLC: Lesson 4, Activity 2, Introduce Shake and Spill: Which Is More?

Section B: Count and Compare Groups of Images

Standards Alignments

Addressing K.CC.B, K.CC.B.4, K.CC.B.4.b, K.CC.B.5, K.CC.C.6

Building Towards K.CC.C.6

Section Learning Goals

- Connect quantities with spoken number words.
- Count and compare up to 10 images in organized arrangements and know the number remains the same regardless of the order in which the images are counted.

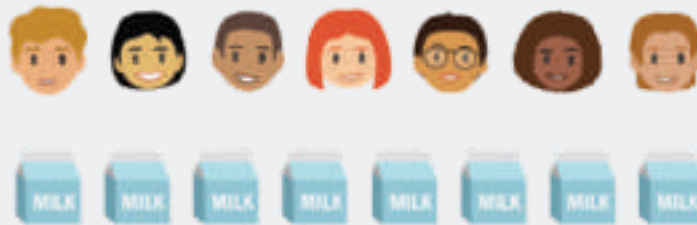
Students begin this section by counting images for the first time. This can be more challenging, as images cannot be rearranged, and students may not have limited experience with keeping track of counted items.

Students encounter groups of images in lines, arrays, 5-frames, number cube arrangements, and on fingers. They may be able to determine the cardinality of some groups of images without counting (subitize), which is a valid way to answer “how many” questions.

Images arranged on 5-frames and images of fingers allow students to work with the structure of “5 and some more.” Repeated experience with this structure can help students see that they can count on from 5 to determine how many images there are.

Here, students also answer “are there enough” questions.

“Are there enough cartons of milk for each student? How do you know?”



👤 ↔ 👤 PLC: Lesson 9, Activity 2, More and Fewer with 5-frames and Fingers

Section C: Connect Quantities and Numbers

Standards Alignments

Addressing K.CC, K.CC.A.3, K.CC.B.4, K.CC.B.5, K.CC.C.6
 Building Towards K.CC, K.CC.A.3, K.CC.B.4.c

Section Learning Goals

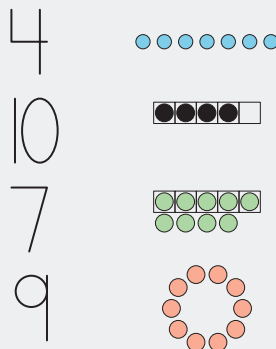
- Connect quantities with spoken number words and written numbers.
- Understand the relationship between number and quantity.

Previously, students counted and made connections between quantities and spoken number words. In this section, students write numbers to represent quantities. To develop students' familiarity with written numbers, consider providing a reference sheet with numbers and quantities in 5-frames.

Students also explore new counting tasks: counting images arranged in a circle, and counting objects or drawing images to represent given numbers. Images arranged in a circle are harder to quantify than those in lines, arrays, or frames because there is no defined starting or stopping point. It requires students to develop a method to keep track of which images they have counted.

Creating or drawing a collection with a specified number of items is also more demanding as students need to keep track of the number they are representing and how many they have already counted. In many activities, students have opportunities to look for and make use of structure to help them with the tasks at hand (MP7).

"Draw a line from each number to the group of dots that it matches."



 PLC: Lesson 14, Activity 1, Toppings on Pizza

Section D: Compare Numbers

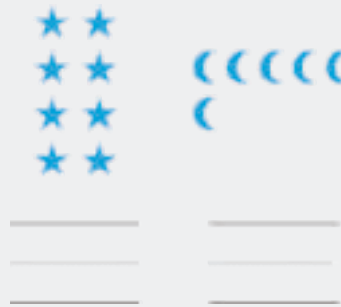
Standards Alignments

Addressing K.CC.A.3, K.CC.B.4, K.CC.B.4.c, K.CC.B.5, K.CC.C.6, K.CC.C.7
 Building Towards K.CC.C.7

Section Learning Goals

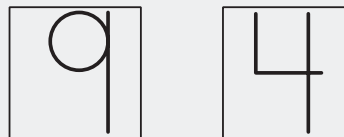
- Compare written numbers 1–10.

In this section, students develop their capacity to compare written numbers. As they count, students can see that the numbers get larger and that there is 1 more each time. Here, they determine “1 more” and “1 less” than a given number or group of objects, strengthening their understanding of the relationships between numbers and the foundation for comparing numbers.



Students may compare written numbers in several ways:

- Create representations of each number and use the representations to compare.
- Use number sense (for instance, that 10 is a “big” number) or mental images of numbers (for instance, 4 relates to 4 fingers).
- Use the knowledge of the count sequence: that numbers that come later in the count sequence are greater.



Students who use number sense or mental images may be able to easily compare some numbers but not others. For instance, they may know that 9 is close to 10 or all the fingers in two hands and 4 is associated with fingers in one hand, so 9 is more than 4.

Throughout the Unit

Students are introduced to the Choral Count routine in this unit. They also continue to develop the routines already introduced.

During centers, students trace and write numbers. Number writing practice can also happen during other parts of the day, such as during writing or handwriting activities. Crayons, colored pencils, markers, glue sticks, and paint brushes with water can be used to trace and write numbers to increase student engagement. Reversals are common when students begin writing numbers, so the emphasis is on writing a number that is recognizable to others with practice.

Students are introduced to new centers that support the work of this unit. Centers to revisit from previous units are also suggested in each section. Feel free to incorporate other centers that have been previously introduced based on student need and interest.

In Activity 3, students participate in centers and often the activity synthesis focuses on habits of how students work in centers. Teachers may choose to complete the lesson synthesis, which is focused on the learning goal of the lesson, after Activity 2, before students transition to working in centers.

Materials Needed

LESSON	GATHER	COPY
A.1	<ul style="list-style-type: none"> Materials from previous centers 	<ul style="list-style-type: none"> Math Fingers Cards (groups of 2)
A.2	<ul style="list-style-type: none"> 5-frames Connecting cubes Cups Materials from previous centers Two-color counters 	<ul style="list-style-type: none"> none
A.3	<ul style="list-style-type: none"> Bags (brown paper) Colored pencils, crayons, or markers Connecting cubes Counters Materials from a previous activity Materials from previous centers Pattern blocks 	<ul style="list-style-type: none"> Number Mat 1-10 (groups of 2) Number Race Stage 1 Recording Sheet for Tracing (groups of 1)
A.4	<ul style="list-style-type: none"> Connecting cubes Counters Cups Materials from previous centers Two-color counters 	<ul style="list-style-type: none"> none
A.5	<ul style="list-style-type: none"> Collections of objects Connecting cubes Materials from previous centers 	<ul style="list-style-type: none"> Less, Same, More Mat (groups of 2) Math Fingers Cards (groups of 2)

A.6	<ul style="list-style-type: none"> ● Bags (brown paper) ● Connecting cubes ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
B.7	<ul style="list-style-type: none"> ● Chart paper ● Counters ● Materials from previous centers 	<ul style="list-style-type: none"> ● Images in Stations (groups of 30) ● Math Stories Stage 1 and 4 Pictures (groups of 8)
B.8	<ul style="list-style-type: none"> ● Materials from previous centers 	<ul style="list-style-type: none"> ● Questions About Us Chart (groups of 30)
B.9	<ul style="list-style-type: none"> ● Counters ● Materials from a previous activity ● Materials from previous centers 	<ul style="list-style-type: none"> ● Questions About Us Chart (groups of 30) ● Compare 5-frame Cards (groups of 1) ● Bingo Stage 1 Cards (groups of 4) ● Bingo Stages 1-3 Gameboard (groups of 4)
B.10	<ul style="list-style-type: none"> ● Materials from a previous lesson ● Materials from previous centers 	<ul style="list-style-type: none"> ● Questions About Us Chart (groups of 30) ● Image Cards Grade K (groups of 2) ● Less, Same, More Mat (groups of 2)
B.11	<ul style="list-style-type: none"> ● Materials from previous centers ● Sheet protectors 	<ul style="list-style-type: none"> ● Questions About Us Chart (groups of 30) ● Image Cards Grade K (groups of 2) ● Less, Same, More Mat (groups of 2)
C.12	<ul style="list-style-type: none"> ● Bags (brown paper) ● Collections of objects ● Colored pencils, crayons, or markers ● Connecting cubes ● Materials from previous centers 	<ul style="list-style-type: none"> ● Reference Sheet Numbers (1–10) with 5-Frames (groups of 2) ● Number Mat 1-10 (groups of 2) ● Number Race Stage 1 Recording Sheet for Writing (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"> ● Reference Sheet Numbers (1–10) with 5-Frames (groups of 2) ● Circle Cards (groups of 2) ● Sort By Number Mat 1-10 (groups of 2)

C.14	<ul style="list-style-type: none"> ● Chart paper ● Connecting cubes ● Counters ● Geoblocks ● Materials from previous centers ● Number cards 0–10 ● Pattern blocks 	<ul style="list-style-type: none"> ● Number Cards (0-10) (groups of 2) ● Reference Sheet Numbers (1–10) with 5-Frames (groups of 2) ● Bingo Stages 1-3 Gameboard (groups of 4)
C.15	<ul style="list-style-type: none"> ● Chart paper ● Connecting cubes ● Materials from previous centers 	<ul style="list-style-type: none"> ● Math Libs Scenes (groups of 2) ● Number Mat 1-10 (groups of 2)
C.16	<ul style="list-style-type: none"> ● Bags (brown paper) ● Collections of objects ● Materials from previous centers ● Sticky notes 	<ul style="list-style-type: none"> ● Math Stories Stage 1 Recording Sheet (groups of 2) ● Math Stories Stage 1 and 4 Pictures (groups of 8)
D.17	<ul style="list-style-type: none"> ● Connecting cubes ● Materials from a previous activity ● Materials from previous centers ● Number cards 0–10 	<ul style="list-style-type: none"> ● none
D.18	<ul style="list-style-type: none"> ● Connecting cubes ● Materials from previous centers ● Number cards 0–10 	<ul style="list-style-type: none"> ● none
D.19	<ul style="list-style-type: none"> ● Materials from previous centers 	<ul style="list-style-type: none"> ● Less, Same, More Mat (groups of 2) ● Number and Image Cards (groups of 2)

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- | | | |
|------|---|---|
| D.20 | <ul style="list-style-type: none">● Chart paper● Colored pencils, crayons, or markers● Connecting cubes or counters● Materials from previous centers | <ul style="list-style-type: none">● none |
| D.21 | <ul style="list-style-type: none">● Connecting cubes or counters● Materials from previous centers | <ul style="list-style-type: none">● Number Mat 1-10 (groups of 2) |
| D.22 | <ul style="list-style-type: none">● Colored pencils or crayons | <ul style="list-style-type: none">● Pizza Orders (groups of 1) |

Center: Math Fingers (K)

Stage 1: Show and Say

Activities

- Kindergarten.2.A1.3 (addressing)
- Kindergarten.2.A2.3 (addressing)
- Kindergarten.2.A3.3 (addressing)
- Kindergarten.2.A4.3 (addressing)
- Kindergarten.2.A5.3 (addressing)
- Kindergarten.2.A6.3 (addressing)
- Kindergarten.2.C12.3 (addressing)
- Kindergarten.2.C13.3 (addressing)
- Kindergarten.2.C14.3 (addressing)
- Kindergarten.2.C15.3 (addressing)
- Kindergarten.2.C16.3 (addressing)

Stage Narrative

Students choose a card. One partner shows the same number of fingers as the card and the other partner says the number of fingers shown.

Standards Alignments

Addressing K.CC

Materials to Copy

Math Fingers Cards (groups of 2)

Stage 2: Fewer or More

Activities

- Kindergarten.2.A5.2 (addressing)
- Kindergarten.2.A5.3 (addressing)
- Kindergarten.2.A6.3 (addressing)
- Kindergarten.2.C13.3 (addressing)
- Kindergarten.2.C14.3 (addressing)
- Kindergarten.2.C15.3 (addressing)
- Kindergarten.2.C16.3 (addressing)

Stage Narrative

Students choose a card. One partner uses their fingers to show a quantity that is fewer than the fingers on the card. The other partner uses their fingers to show a quantity that is more.

Standards Alignments

Addressing K.C.C.6

Materials to Copy

Math Fingers Cards (groups of 2)

Center: Pattern Blocks (K)

Stage 1: Explore

Activities

- Kindergarten.2.A1.3 (supporting)
- Kindergarten.2.A2.3 (supporting)
- Kindergarten.2.A3.3 (supporting)
- Kindergarten.2.A4.3 (supporting)
- Kindergarten.2.A5.3 (supporting)
- Kindergarten.2.A6.3 (supporting)

Stage Narrative

Students have free exploration time with pattern blocks.

Standards Alignments

Addressing K.CC.B, K.G, K.MD.B.3

Materials to Gather

Pattern blocks

Stage 2: Puzzles

Activities

- Kindergarten.2.A1.3 (supporting)
- Kindergarten.2.A2.3 (supporting)
- Kindergarten.2.A3.3 (supporting)
- Kindergarten.2.A4.3 (supporting)
- Kindergarten.2.A5.3 (supporting)
- Kindergarten.2.A6.3 (supporting)

Stage Narrative

Students use pattern blocks to fill in puzzles where the edges of each shape do not touch.

Standards Alignments

Addressing K.G

Materials to Gather

Pattern blocks

Materials to Copy

Pattern Blocks Stage 2 Mat (groups of 2)

Stage 3: Get and Build

Activities

- Kindergarten.2.A1.3 (supporting)
- Kindergarten.2.A2.3 (supporting)
- Kindergarten.2.A3.3 (supporting)
- Kindergarten.2.A4.3 (supporting)
- Kindergarten.2.A5.3 (supporting)
- Kindergarten.2.A6.3 (supporting)

Stage Narrative

Students use a specified number of each pattern block to build a creation of their choice.

Standards Alignments

Addressing K.CC, K.CC.B.4, K.G.B

Materials to Gather

Pattern blocks

Materials to Copy

Pattern Blocks Stage 3 Directions (groups of 2)

Center: Picture Books (K–5)

Stage 1: Explore

Activities

- Kindergarten.2.A1.3 (supporting)
- Kindergarten.2.A2.3 (supporting)
- Kindergarten.2.A3.3 (supporting)
- Kindergarten.2.A4.3 (supporting)
- Kindergarten.2.A5.3 (supporting)
- Kindergarten.2.A6.3 (supporting)

Stage Narrative

Students look at picture books and identify groups of objects. They may recognize small quantities or count to figure out how many.

Standards Alignments

Addressing K.CC.B.4

Materials to Gather

Picture books

Additional Information

Each group of 2 needs at least one picture book that shows groups with different numbers of objects throughout the book.

Stage 2: Create

Activities

- Kindergarten.2.A1.3 (supporting)
- Kindergarten.2.A2.3 (supporting)
- Kindergarten.2.A3.3 (supporting)
- Kindergarten.2.A4.3 (supporting)
- Kindergarten.2.A5.3 (supporting)
- Kindergarten.2.A6.3 (supporting)

Stage Narrative

Students create their own picture book representing different numbers.

Standards Alignments

Addressing K.CC.B.4

Materials to Gather

Colored pencils or crayons

Materials to Copy

Picture Books Stage 2 Recording Sheet (groups of 1)

Center: Shake and Spill (K–2)

Stage 1: Count

Activities

- Kindergarten.2.A2.2 (addressing)
- Kindergarten.2.A2.3 (addressing)
- Kindergarten.2.A3.3 (addressing)
- Kindergarten.2.A4.3 (addressing)
- Kindergarten.2.A5.3 (addressing)
- Kindergarten.2.A6.3 (addressing)

Stage Narrative

Students decide together how many counters to use (up to 10). They take turns shaking and spilling the counters. Both partners count the counters. Then, they choose a different number of counters and repeat.

Students may choose to use the 5-frame to organize the counters.

Standards Alignments

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

Materials to Gather

5-frames, Cups, Two-color counters

Additional Information

Each group of 2 needs a cup and 10 two-color counters.

Stage 2: Which Is More?

Activities

- Kindergarten.2.A4.2 (addressing)
- Kindergarten.2.A4.3 (addressing)
- Kindergarten.2.A5.3 (addressing)
- Kindergarten.2.A6.3 (addressing)

Stage Narrative

Students decide together how many counters to use (up to 10). They take turns shaking and spilling the counters. They compare the number of red and yellow counters and describe their comparisons using the language “more than,” “fewer than,” and “the same as.”

Students may choose to use the 5-frame to organize the counters.

Standards Alignments

Addressing K.C.C.6

Materials to Gather

5-frames, Cups, Two-color counters

Additional Information

Each group of 2 needs a cup and 10 two-color counters.

Center: Number Race (K–1)

Stage 1: Numbers to 10

Activities

- Kindergarten.2.A3.3 (addressing)
- Kindergarten.2.A4.3 (addressing)
- Kindergarten.2.A5.3 (addressing)
- Kindergarten.2.A6.3 (addressing)
- Kindergarten.2.B7.3 (addressing)
- Kindergarten.2.B8.3 (addressing)
- Kindergarten.2.B9.3 (addressing)
- Kindergarten.2.B10.3 (addressing)
- Kindergarten.2.B11.3 (addressing)
- Kindergarten.2.C12.3 (addressing)
- Kindergarten.2.C13.3 (addressing)
- Kindergarten.2.C14.3 (addressing)
- Kindergarten.2.C15.3 (addressing)
- Kindergarten.2.C16.3 (addressing)
- Kindergarten.2.D17.3 (addressing)
- Kindergarten.2.D18.3 (addressing)
- Kindergarten.2.D19.3 (addressing)
- Kindergarten.2.D20.3 (addressing)
- Kindergarten.2.D21.3 (addressing)

Stage Narrative

Students take turns rolling a connecting cube onto a number mat and write the number (1–10) they land on, on the recording sheet. Students may want to use colored pencils to write the numbers.

Variation:

Students may use the introduction master that allows them to trace each number to support their number writing skills.

Standards Alignments

Addressing K.CC.A.3

Materials to Gather

Colored pencils, crayons, or markers, Connecting cubes

Materials to Copy

Number Mat 1-10 (groups of 2), Number Race Stage 1 Recording Sheet for Tracing (groups of 1), Number Race Stage 1 Recording Sheet for Writing (groups of 1)

Additional Information

Each group of 2 needs 1 connecting cube.

Center: Less Same More (K)

Stage 1: Groups of Objects

Activities

- Kindergarten.2.A5.1 (addressing)
- Kindergarten.2.A5.3 (addressing)
- Kindergarten.2.A6.3 (addressing)
- Kindergarten.2.B10.3 (addressing)
- Kindergarten.2.B11.3 (addressing)
- Kindergarten.2.D19.3 (addressing)
- Kindergarten.2.D20.3 (addressing)
- Kindergarten.2.D21.3 (addressing)

Stage Narrative

Students choose a collection of objects and place the objects in the box at the top of the mat. They complete the mat to show groups that have fewer, the same, or more objects than the original amount.

Standards Alignments

Addressing K.CC.C.6

Materials to Gather

Collections of objects, Connecting cubes

Materials to Copy

Less, Same, More Mat (groups of 2)

Additional Information

Give at least 2 collections of between 2 and 9 objects per group of 2.

Stage 2: Images

Activities

- Kindergarten.2.B10.2 (addressing)
- Kindergarten.2.B10.3 (addressing)
- Kindergarten.2.B11.3 (addressing)
- Kindergarten.2.D19.3 (addressing)
- Kindergarten.2.D20.3 (addressing)
- Kindergarten.2.D21.3 (addressing)

Stage Narrative

Students choose a card with an image and place it in the box at the top of the mat. They continue choosing cards and place them on the mat based on whether they show fewer, the same, or more images than the original amount.

Standards Alignments

Addressing K.CC.C.6

Materials to Copy

Image Cards Grade K (groups of 2), Less, Same, More Mat (groups of 2)

Stage 3: Drawings

Activities

- Kindergarten.2.B11.2 (addressing)
- Kindergarten.2.B11.3 (addressing)
- Kindergarten.2.D19.3 (addressing)
- Kindergarten.2.D20.3 (addressing)
- Kindergarten.2.D21.3 (addressing)

Stage Narrative

Students choose a card with an image and place it in the box at the top of the mat. They complete the mat by drawing to show groups that have fewer, the same, or more images than the original amount.

Standards Alignments

Addressing K.CC.C.6

Materials to Copy

Image Cards Grade K (groups of 2), Less, Same, More Mat (groups of 2)

Stage 4: Numbers and Images

Activities

- Kindergarten.2.D19.2 (addressing)
- Kindergarten.2.D19.3 (addressing)
- Kindergarten.2.D20.3 (addressing)
- Kindergarten.2.D21.3 (addressing)

Stage Narrative

Students use cards that have a number and an image. Students choose a card and place it at the top of the mat. They continue choosing cards and determining whether each shows less, the same, or more than the original amount.

Standards Alignments

Addressing K.CC.C.6, K.CC.C.7

Materials to Copy

Less, Same, More Mat (groups of 2), Number and Image Cards (groups of 2)

Center: Math Stories (K–2)

Stage 1: How Many?

Activities

- Kindergarten.2.B7.3 (addressing)
- Kindergarten.2.B8.3 (addressing)
- Kindergarten.2.B9.3 (addressing)
- Kindergarten.2.B10.3 (addressing)
- Kindergarten.2.B11.3 (addressing)
- Kindergarten.2.C16.1 (addressing)
- Kindergarten.2.C16.3 (addressing)
- Kindergarten.2.D17.3 (addressing)
- Kindergarten.2.D18.3 (addressing)

Stage Narrative

Students ask and answer “how many” questions about pictures and represent the quantity with a number.

Variation:

Pages of picture books can also be offered to help students generate stories.

Standards Alignments

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

Materials to Copy

Math Stories Stage 1 and 4 Pictures (groups of 8),
Math Stories Stage 1 Recording Sheet (groups of 2)

Center: Connecting Cubes (K)

Stage 1: Explore

Activities

- Kindergarten.2.B7.3 (supporting)
- Kindergarten.2.B8.3 (supporting)
- Kindergarten.2.B9.3 (supporting)
- Kindergarten.2.B10.3 (supporting)
- Kindergarten.2.B11.3 (supporting)

Stage Narrative

Students have free exploration time with connecting cubes.

Standards Alignments

Addressing K.CC.B, K.G.B, K.MD

Materials to Gather

Connecting cubes

Stage 2: Build to Match

Activities

- Kindergarten.2.B7.3 (supporting)
- Kindergarten.2.B8.3 (supporting)
- Kindergarten.2.B9.3 (supporting)
- Kindergarten.2.B10.3 (supporting)
- Kindergarten.2.B11.3 (supporting)

Stage Narrative

Students look at images of objects made of connecting cubes and build an object to match.

Standards Alignments

Addressing K.CC.B

Materials to Gather

Connecting cubes

Materials to Copy

Connecting Cubes Stage 2 Cards (groups of 2)

Stage 3: Get and Build

Activities

- Kindergarten.2.B7.3 (supporting)
- Kindergarten.2.B8.3 (supporting)
- Kindergarten.2.B9.3 (supporting)
- Kindergarten.2.B10.3 (supporting)
- Kindergarten.2.B11.3 (supporting)

Stage Narrative

Students use a specified number of each color of connecting cubes to build an object of their choice.

Standards Alignments

Addressing K.CC, K.CC.B.4, K.G.B

Materials to Gather

Connecting cubes

Materials to Copy

Connecting Cubes Stage 3 Directions (groups of 2)

Center: Bingo (K)

Stage 1: Images

Activities

- Kindergarten.2.B9.3 (addressing)
- Kindergarten.2.B10.3 (addressing)
- Kindergarten.2.B11.3 (addressing)
- Kindergarten.2.C15.3 (addressing)
- Kindergarten.2.C16.3 (addressing)

Stage Narrative

One student chooses a card with an image and all students in the group can place a counter on their gameboard over a group that has the same number of images.

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

Materials to Gather

Counters

Materials to Copy

Bingo Stage 1 Cards (groups of 4), Bingo Stages 1-3 Gameboard (groups of 4)

Stage 2: Images and Numbers

Activities

- Kindergarten.2.C14.3 (addressing)
- Kindergarten.2.C15.3 (addressing)
- Kindergarten.2.C16.3 (addressing)

Stage Narrative

One student chooses a number card and all students in the group can place a counter on their gameboard over a group that has that number of images.

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

Materials to Gather

Counters, Number cards 0–10

Materials to Copy

Bingo Stages 1-3 Gameboard (groups of 4)

Center: Geoblocks (K-1)

Stage 1: Explore

Activities

- Kindergarten.2.C12.3 (supporting)
- Kindergarten.2.C13.3 (supporting)
- Kindergarten.2.C14.3 (supporting)
- Kindergarten.2.C15.3 (supporting)
- Kindergarten.2.C16.3 (supporting)

Stage Narrative

Students have free exploration time with geoblocks.

Standards Alignments

Addressing K.G

Materials to Gather

Geoblocks

Stage 2: Build to Match

Activities

- Kindergarten.2.C12.3 (supporting)
- Kindergarten.2.C13.3 (supporting)
- Kindergarten.2.C14.3 (supporting)
- Kindergarten.2.C15.3 (supporting)
- Kindergarten.2.C16.3 (supporting)

Stage Narrative

Students use solid shapes to build objects pictured on cards.

Standards Alignments

Addressing K.G

Materials to Gather

Geoblocks, Solid shapes

Materials to Copy

Geoblocks Stage 2 (groups of 8)

Center: Math Libs (K)

Stage 1: Draw 1–10

Activities

- Kindergarten.2.C15.2 (addressing)
- Kindergarten.2.C15.3 (addressing)
- Kindergarten.2.C16.3 (addressing)
- Kindergarten.2.D17.3 (addressing)
- Kindergarten.2.D18.3 (addressing)
- Kindergarten.2.D19.3 (addressing)
- Kindergarten.2.D20.3 (addressing)
- Kindergarten.2.D21.3 (addressing)

Stage Narrative

Students roll a cube onto a number mat and write the number in the space provided next to one of the images. They draw a scene with the appropriate number of that image. Students repeat until each image has a number next to it and all of the images have been drawn in the scene.

Standards Alignments

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

Materials to Gather

Connecting cubes

Materials to Copy

Math Libs Scenes (groups of 2), Number Mat 1-10 (groups of 2)

Additional Information

Give 1 connecting cube per group of 2.

Section A: Count and Compare Groups of Objects

Lesson 1: Fingers as a Math Tool

Standards Alignments

Addressing K.CC, K.CC.A.1, K.CC.B.4

Teacher-facing Learning Goals

- Recognize and name groups of 1–10 fingers without counting.
- Show the number of fingers for a spoken number name.

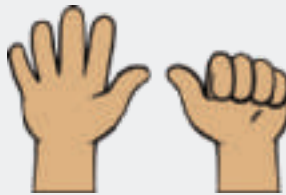
Student-facing Learning Goals

- Let's show numbers with our fingers.

Lesson Purpose

The purpose of this lesson is for students to recognize, name, and show quantities with their fingers.

Fingers are helpful for representing quantities because they are familiar and always available to students. Sometimes students may be embarrassed about using their fingers. Students should be encouraged to use their fingers whenever they find them helpful. In upcoming lessons, students may find using their fingers helpful when comparing quantities. In later units, students may find using their fingers helpful with topics such as counting on and addition and subtraction. The structure of fingers also encourages students to notice how numbers are related to 5 and 10. The kindergarten materials always show quantities beginning with the left pinky. Numbers 6–10 continue with the thumb on the right hand.



When demonstrating this, begin with the right pinky and palms facing out, so that students see the fingers raising from left to right. When students raise their fingers in this way, their palms will be facing out. While this is the way the curriculum presents quantities on fingers for consistency, any way that students choose or are able to represent quantities on their fingers should be accepted.

Access for:** Students with Disabilities**

- Representation (Activity 2)

 English Learners

- MLR8 (Activity 2)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3

Lesson Timeline

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

Materials to Copy

- Math Fingers Cards (groups of 2): Activity 3

Teacher Reflection Question

When do your students feel successful in math?
How do you know?

Cool-down (to be completed at the end of the lesson) 0 min

Unit 2, Section A Checkpoint

Standards Alignments

Addressing K.CC.B.4

Student-facing Task Statement

Lesson observations

Student Responses

- Say one number for each object.
- Answer how many without counting again.

- Use the structure of 5 (in 5-frames or fingers) to count on from 5 to tell how many.

Begin Lesson

Warm-up

🕒 10 min

Choral Count: Fingers and Counting

Standards Alignments

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

The purpose of this warm-up is for students to practice the verbal count sequence to 10 and show quantities with their fingers.

Instructional Routines

Choral Count

Student Responses

Students count to 10 and put up 1 finger for each number.

Launch

- “Let’s count to 10.”
- Count to 10 as a class.

Activity

- “As I count to 10, put up 1 finger for each number.”
- Count to 10 as students put up their fingers.
- Demonstrate counting to 10, putting up 1 finger for each number.
- “Now let’s count to 10 with our fingers. Each time you say a number, put up 1 finger.”
- Count to 10 as a class using fingers 2–3 times.

Synthesis

- “As you count and put up your fingers, I will write the numbers.”
- Write numbers 1–10 as students count and put up their fingers.

Activity 1

🕒 10 min

How Many Fingers?

Standards Alignments

Addressing K.CC

The purpose of this activity is for students to recognize and name quantities 1–10 represented on fingers. Students may count to determine how many fingers are held up in this activity. With repeated experience, students begin to recognize quantities represented with fingers without counting (MP7, MP8).

Student Responses

Students determine how many fingers their partner is holding up.

Launch

- Groups of 2
- Hold up 3 fingers.
- “How many fingers am I holding up?”
- 30 seconds: quiet think time
- Share responses.
- Repeat with 6 fingers.
- “Take turns playing with your partner. One partner holds up some fingers. The other partner figures out how many fingers they are holding up.”

Activity

- 5 minutes: partner work time

Synthesis

- Hold up 2 fingers.
- “How do you know how many fingers I am holding up?” (I can just see that there are 2.)
- Hold up 5 fingers.
- “How do you know how many fingers I am holding up?” (I know that there are 5 fingers on a hand.)
- “In the next activity, we will practice showing a given number with our fingers.”

Activity 2

🕒 10 min

Show Some Fingers

Standards Alignments

Addressing K.CC

The purpose of this activity is for students to show quantities 1–10 with fingers. Students may count each finger to show the given amount or may automatically know how many fingers to hold up.

Access for English Learners

MLR8 Discussion Supports. Invite students to chorally repeat numbers in unison 1–2 times. Use gestures to emphasize connections between the displayed numeral and the number of fingers.
Advances: Speaking, Representing

Access for Students with Disabilities

Representation: Access for Perception. Synthesis: Students might need support when they see the hands being mirrored as they show their partner or their teacher shows them their hands. Use your hand to show students that the hand gestures are the same number of fingers.
Supports accessibility for: Visual-Spatial Processing

Student-facing Task Statement

1

3

5

4

6

8

10

9

2

7

Student Responses

Students hold up the given number of fingers.

Launch

- Groups of 2

Activity

- “When I say a number, hold up that many fingers. Then check with your partner to see if you are holding up the same number of fingers.”
- Write or display “1”.
- “Hold up 1 finger.”
- 30 seconds: independent work time
- “Check with your partner to see if you are holding up the same number of fingers.”
- 1 minute: partner discussion
- Repeat the steps with the rest of the numbers. Write or display and say each number from the student workbook.

Synthesis

- “Show a number using only one hand.”
- “Show a number using two hands.”
- “Which numbers can you show on one hand?” (I can show 3 on one hand with 3 fingers. I can hold up 5 fingers.)
- “Which numbers do you need two hands to show?” (I need two hands to show 10 fingers. There are only 5 fingers on my hand so I need the other hand to show more than 5.)

Activity 3

⌚ 25 min

Introduce Math Fingers, Show and Say

Standards Alignments

Addressing K.CC

The purpose of this activity is for students to learn stage 1 of the Math Fingers center. Students hold up the number of fingers shown on a card and their partner determines how many fingers they are holding up. While students may put up fingers in any order, demonstrate by raising fingers starting with the right pinky with palms facing out towards students. Students may count the fingers or recognize the quantity without counting. Students may also count on from 5 to determine how many fingers when 6–10 fingers are displayed. When students connect the number shown on the card to the number of fingers they hold up, they reason abstractly and quantitatively (MP2).

After they participate in the center, students choose from any stage of previously introduced centers.

- Pattern Blocks
- Picture Books

Students will choose from these centers throughout the section. Keep materials from these centers organized to use each day.

Materials to Gather

Materials from previous centers

Materials to Copy

Math Fingers Cards (groups of 2)

Required Preparation

- Gather materials from:
 - Pattern Blocks, Stages 1-3
 - Picture Books, Stages 1 and 2

Student-facing Task Statement

Choose a center.

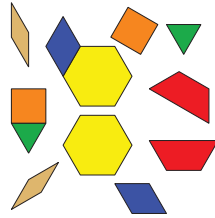
Math Fingers



Launch

- Groups of 2
- Display a card.
- “Hold up your fingers like you see on the card.”
- 30 seconds: independent work time
- “How many fingers are you holding up?”

Pattern Blocks



Picture Books



Activity

- Give each group of students a set of cards.
- “Flip over one card and put it in between you and your partner. Decide who will go first.”
- “One partner will hold up their fingers like the fingers on the card. The other partner will figure out and say how many fingers their partner is holding up. Take turns playing with your partner.”
- 4 minutes: partner work time
- “Now you can choose another center. You can also continue playing Math Fingers.”
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 10 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- “Today we learned a new center using our fingers and cards. What can you do to take care of the cards to make sure that we can use them to play the game again?” (We can make sure we don’t bend them. We can make sure we put them all back when we are done.)

Lesson Synthesis

⌚ 5 min

“Today we used our fingers as math tools to show numbers. Tell your partner which number was your favorite to show using your fingers and why it was your favorite.”

Lesson 2: Count and Arrange

Standards Alignments

Addressing K.CC, K.CC.A.1, K.CC.B.4, K.CC.B.4.b, K.CC.B.5

Teacher-facing Learning Goals

- Count groups of up to 10 objects.
- Understand that the arrangement of objects does not change the number of objects.

Student-facing Learning Goals

- Let's figure out how many objects we have.

Lesson Purpose

The purpose of this lesson is for students to count objects and notice that the arrangement of a group of objects does not change the number of objects.

Students count the same group of objects in different arrangements several times throughout the lesson. It is important that students repeatedly experience counting the same group of objects in different arrangements to learn that the arrangement does not change the quantity. This understanding develops over time and it is not necessary for all students to articulate at the end of this lesson. Students may continue to recount the same group of objects that has been rearranged until they are confident that the quantity remains the same. This concept will be revisited in future lessons and units.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- 5-frames: Activity 1, Activity 2
- Connecting cubes: Activity 1
- Cups: Activity 2

- Materials from previous centers: Activity 3
- Two-color counters: Activity 2

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

What was the best question you asked students today? Why would you consider it the best based on what students said or did?

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

🕒 0 min

Unit 2, Section A Checkpoint

Standards Alignments

Addressing K.CC.B.4

Student-facing Task Statement

Lesson observations

Student Responses

- Say one number for each object.
- Answer how many without counting again.
- Answer how many about a group that has been rearranged without counting again.
- Use the structure of 5 (in 5-frames or fingers) to count on from 5 to tell how many.

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

Warm-up

🕒 10 min

Choral Count: Fingers and Numbers

Standards Alignments

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

The purpose of this warm-up is for students to practice the verbal count sequence to 10 and show quantities with their fingers.

Instructional Routines

Choral Count

Student Responses

Students count to 10 and put up 1 finger for each number.

Launch

- Groups of 2
- “As I count to 10, put up 1 finger as I say each number.”
- Count to 10 as students put up their fingers.

Activity

- “Now let’s count to 10 with our fingers. Each time you say a number, put up 1 finger.”
- Count to 10 as a class using fingers 2–3 times.
- “As you count and put up your fingers, I will write the numbers.”
- Write numbers 1–10 as students count and put up their fingers.

Synthesis

- “Work with your partner to count to 10. One partner says the numbers from 1 to 10 while the other partner puts up their fingers.”
- Switch roles.

Activity 1

🕒 10 min

Count, Rearrange, Count

Standards Alignments

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

The purpose of this activity is for students to notice that the arrangement of a group of objects does not change the number of objects. Students grab a handful of connecting cubes and count to see how many they have. They then rearrange the connecting cubes using a 5-frame and discover that although the connecting cubes are arranged differently, the number of connecting cubes stays the same. This understanding develops over time with repeated experience working with quantities in many different arrangements. Students may continue to recount the objects in this and future lessons until they understand and are confident that the number of objects remains the same when they are rearranged.

🌐 Access for English Learners

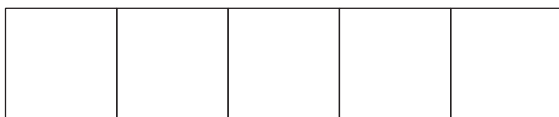
MLR8 Discussion Supports. Synthesis: Invite students to use gestures as they count their collections aloud.

Advances: Speaking, Representing

Materials to Gather

5-frames, Connecting cubes

Student-facing Task Statement



Student Responses

Students count and rearrange the connecting cubes. Students may count the connecting cubes again or know that the quantity is the same without recounting.

Launch

- Groups of 2
- Give each group of students connecting cubes.
- “We are going to play a game with our connecting cubes and 5-frame.”
- “One person will grab a handful of connecting cubes and figure out and tell their partner how many there are.”
- “Then the other partner will organize the connecting cubes using the 5-frame, and figure out and tell their partner how many

there are.”

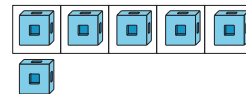
- “Take turns playing with your partner.”

Activity

- 5 minutes: partner work time
- Monitor for students who notice that the number of objects is the same after they are rearranged.

Synthesis

- Display 6 connecting cubes.
- “How can I figure out how many connecting cubes there are?” (You can count them. You can put them in a line and count them.)
- Demonstrate or invite a student to demonstrate counting the connecting cubes.
- “Tell your partner how many connecting cubes there are.” (There are 6 connecting cubes.)
- Rearrange the connecting cubes on the 5-frame, putting each cube in a square and one cube under the 5-frame, as pictured:



- “How can I figure out how many connecting cubes there are?” (There are still 6, you just moved them around. You can count them.)
- Invite a student to explain how they know that there are still 6 connecting cubes without counting them again.
- If needed, invite a student to count the connecting cubes.
- “There are still 6 connecting cubes. We moved them around, but there are still the same number of connecting cubes.”

Activity 2

🕒 10 min

Introduce Shake and Spill, Count

Standards Alignments

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

The purpose of this activity is for students to learn stage 1 of the Shake and Spill center. Students shake and spill 6–10 counters. Because the counters will be scattered when they are spilled, students will likely rearrange the counters to make them easier to count. Both partners count the counters, which allows them to confirm that they have counted accurately. As students shake and spill the same number of counters multiple times, they notice that the number stays the same each time. After multiple rounds, students may not need to recount the counters to state how many there are. When students notice a pattern or repetitive action in computation, they look for and express regularity in repeated reasoning (MP8).

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Check for understanding by inviting students to rephrase game directions in their own words. Be sure unused counters are removed from the area so there is no confusion when counting counters after the “spill.”

Supports accessibility for: Memory, Organization

Materials to Gather

5-frames, Cups, Two-color counters

Required Preparation

- Each group of 2 needs 10 two-color counters and 1 cup.

Student Responses

Students shake, spill, and count the counters. Students may count the counters again after they are spilled or know that the quantity is the same without recounting.

Launch

- Groups of 2
- Give each group 1 cup and 10 two-color counters. Give students access to 5-frames.
- “We are going to learn a new center called Shake and Spill. Let's play a round together.”

- “Choose who will go first and start with all of the counters in the cup. Shake the cup and spill the counters on the table.”
- 30 seconds: partner work time
- “Take turns figuring out how many counters there are. When you know how many counters there are, tell your partner and see if you both agree.”
- 1 minute: partner work time
- “Put the counters back into the cup, shake them and spill them again. Take turns figuring out how many counters there are and share with your partner.”
- 1 minute: partner work time
- “Now you can take turns playing with your partner. Take some of the counters out of the cup and put them away so that you are using a different number of counters this time. Remember to spill the counters, figure out how many there are, spill the counters again, and figure out how many there are.”

Activity

- 5 minutes: partner work time

Synthesis

- Display 7 counters.
- “Han counted 7 counters. Han’s partner put the same counters back in the cup and shook them up. He spilled them out and counted them. How many counters do you think Han’s partner counted?” (7. They are the same 7 counters even if they look different.)
- If needed, demonstrate or invite a student to place the 7 counters in a cup, spill them, and count them.

Advancing Student Thinking

If students count some counters more than one time or do not count some counters, consider asking:

- “Which counters have you counted already? How do you know?”
- “How can you keep track of the counters that you've counted so that you count each counter one time?”

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 counting concepts.

Students choose from any stage of previously introduced centers.

- Shake and Spill
- Math Fingers
- Pattern Blocks
- Picture Books

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Shake and Spill, Stage 1
 - Math Fingers, Stage 1
 - Pattern Blocks, Stages 1-3
 - Picture Books, Stages 1 and 2

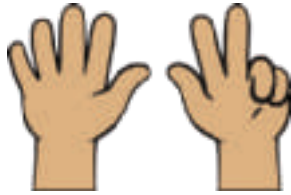
Student-facing Task Statement

Choose a center.

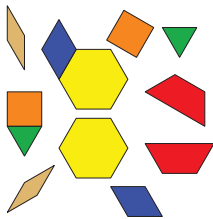
Shake and Spill



Math Fingers



Pattern Blocks



Picture Books



Launch

- “Today we are going to choose from centers we have already learned. You can also choose to keep playing Shake and Spill.”
- 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

- “While you played Shake and Spill, did you and your partner get the same number when you both counted the counters? Why or why not?” (We got the same number. We both counted all of the counters one time.)

Lesson Synthesis

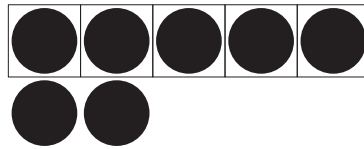
🕒 5 min

Display 7 objects in a line.

“How many objects are there?”

Invite a student to count the objects or point to each object as the class counts.

Arrange the same 7 objects on a 5-frame, with the 2 additional objects arranged under the 5-frame, as show in this image:



“How can we figure out how many objects there are?” (There are still 7 because they are the same objects. We can count them.)

Invite a student to count the objects or point to each object as the class counts.

“There are still 7 objects. We rearranged the objects, but there are still 7.”

Lesson 3: Groups that Look Very Different

Standards Alignments

Addressing K.CC, K.CC.A.1, K.CC.A.3, K.CC.B.5, K.CC.C.6

Teacher-facing Learning Goals

- Compare groups of up to 10 objects.
- Identify and create groups that have more or fewer with very different quantities.

Student-facing Learning Goals

- Let's figure out if there are more green triangles or more orange squares.

Lesson Purpose

The purpose of this lesson is for students to compare groups of objects with very different quantities.

Since this is the first activity where students compare the number of objects in groups, the numbers selected allow students to visually determine which groups have more objects and which groups have fewer. Students are introduced to the language “**more**” and “**fewer**”, however they are not required to produce this language until a future lesson. As you ask students to compare quantities, vary between using “fewer” and “more”. Because “more” occurs regularly in everyday speech, students may be comfortable with “more” initially, but need many chances to hear “fewer” to describe the number of objects in groups. In this lesson, students can compare groups of objects without counting, but are asked to count to answer “how many” questions. This continues to give students practice counting up to 10 objects and begins working toward counting to compare.

Access for:

Students with Disabilities

- Engagement (Activity 3)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Bags (brown paper): Activity 1
- Colored pencils, crayons, or markers: Activity 3

Materials to Copy

- Number Mat 1-10 (groups of 2): Activity 3
- Number Race Stage 1 Recording Sheet for Tracing (groups of 1): Activity 3

- Connecting cubes: Activity 1, Activity 3
- Counters: Activity 2
- Materials from a previous activity: Activity 2
- Materials from previous centers: Activity 3
- Pattern blocks: 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

Who got to do math today in class and how do you know? Identify the norms or routines that allowed those students to engage in mathematics. How can you adjust these norms and routines so all students do math tomorrow?

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

 0 min

Unit 2, Section A Checkpoint

Standards Alignments

Addressing K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Say one number for each object.
- Answer how many without counting again.
- Answer how many about a group that has been rearranged without counting again.
- Use the structure of 5 (in 5-frames or fingers) to count on from 5 to tell how many.
- Compare the number of objects in groups.
- Make groups with more, fewer, or the same number of objects than a given group.

Begin Lesson

Warm-up

🕒 10 min

Choral Count: Represent with Fingers and Numbers

Standards Alignments

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

The purpose of this warm-up is for students to practice the verbal count sequence to 10 and show quantities on their fingers.

Instructional Routines

Choral Count

Student Responses

Students count to 10 and put up 1 finger for each number.

Launch

- “Count to 10 with your fingers. Each time you say a number, put up 1 finger.”
- Count to 10 as a class using fingers.

Activity

- “As you count and put up your fingers, I will write the numbers.”
- Write numbers 1–10 as students count and put up their fingers.

Synthesis

- Point to “3” and say “Hold up 3 fingers.”
- Repeat with 5, 6, and 10.

Activity 1

🕒 10 min

More or Fewer Pattern Blocks

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to compare the number of objects in groups with very different quantities. Because the quantities are very different, students should be able to visually tell which group has more objects. Students may also match or count each group to compare.

Access for English Learners

MLR8 Discussion Supports. To support the transfer of new vocabulary to long term memory, invite students to chorally repeat these words in unison 1–2 times: more and fewer.

Advances: Listening, Speaking

Materials to Gather

Bags (brown paper), Connecting cubes,
Pattern blocks

Required Preparation

- Each group of 2 needs a bag with 8 to 10 green triangle pattern blocks and 1 to 3 orange square pattern blocks.
- 6 connecting cubes and 2 pattern blocks needed for display.
- 8 orange square pattern blocks and 2 green triangle pattern blocks needed for display.

Student Responses

Sample response:

- There are fewer orange squares. I can see that there are only 2 squares and there are a lot of triangles.

Launch

- Groups of 2
- Display a group of 6 connecting cubes and a group of 2 pattern blocks.
- “What do you notice? What do you wonder?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- “We noticed that there are more connecting cubes than pattern blocks. That means there are fewer pattern blocks than connecting cubes. We are going to continue looking at groups of objects to see which

group has more and which has fewer.”

Activity

- Give each group of students a bag of pattern blocks.
- “Take the pattern blocks out of your bag. Are there more orange squares or green triangles?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- “How do you know if there are more orange squares or more green triangles?”
- Share responses.
- “Figure out and tell your partner how many orange squares you have. Then figure out how many green triangles you have.”
- 2 minutes: partner work time
- “Switch your bag of objects with another group.”
- Repeat the steps above, asking “Are there fewer...?” instead of “Are there more...?”

Synthesis

- Display 8 orange square pattern blocks and 2 green triangle pattern blocks.
- “Are there fewer orange squares or green triangles? How do you know?” (There are fewer green triangles. We can just see that there are a lot of orange squares and only 2 green triangles.)
- “There are fewer green triangles than orange squares. How many green triangles are there?”
- Demonstrate or invite a student to demonstrate moving or touching each triangle as the class counts.
- Repeat the steps with the orange squares.
- “There are **more** orange squares than green triangles. 8 is more than 2. There are

fewer green triangles than orange squares.
2 is **less** than 8.”

Activity 2

🕒 10 min

Create Groups with More and Fewer

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to make groups with more or fewer objects than a given group of objects. When asking students to make a group that has more objects than the given group, the given group will have very few objects. Similarly, when asking them to make a group that has fewer objects than the given group, the given group will have many objects. This should allow students to create and compare the groups visually. In a future lesson, students will create groups with more or fewer objects than a given group when the quantities are closer, where it will be helpful for students to match or count the objects in each group.

Materials to Gather

Counters, Materials from a previous activity

Required Preparation

- Each group of 2 needs a bag of green triangle and orange square pattern blocks from the previous activity.

Launch

- Groups of 2
- Give each group of students a bag of 8–10 green triangle pattern blocks and a bag of 1–3 orange square pattern blocks.

Activity

- “Make a group with counters that has more

than the group of orange squares.”

- 30 seconds: quiet think time
- 1 minute: partner work time
- “Figure out and tell your partner how many counters you have. Then figure out and tell your partner how many orange squares you have.”
- 2 minutes: partner work time
- “Make a group with counters that has fewer than the group of green triangles.”
- 30 seconds: quiet think time
- 1 minute: partner work time
- “Figure out and tell your partner how many counters you have. Then figure out and tell your partner how many green triangles you have.”
- 2 minutes: partner work time

Synthesis

- Invite 2–3 students to share the groups of counters that they made that have fewer than the green triangles.
- “What is the same about the groups they made? What is different?” (They all made groups with different numbers of counters. They all have fewer than the green triangles.)

Activity 3

🕒 25 min

Introduce Number Race, Numbers 1–10

Standards Alignments

Addressing K.CC.A.3

The purpose of this activity is for students to learn stage 1 of the Number Race center. Students practice recognizing and writing numbers as they roll a connecting cube onto the mat and trace the number that it lands on. If students do not yet recognize each number, they can match the symbol on the number mat to the symbol on the recording sheet. Students continue rolling and tracing until one number "wins" (all of the numbers in the column are traced). After students have traced all of one number, they can finish tracing the rest of the numbers. Students can use different colors or writing utensils during this center. In a future variation of this center, students will write the numbers instead of tracing them.

After they participate in the center, students choose from any stage of previously introduced centers.

- Shake and Spill
- Math Fingers
- Pattern Blocks
- Picture Books

Access for Students with Disabilities

Engagement: Provide Access by Recruiting Interest. Use visible timers or audible alerts to help students anticipate and prepare to transition between center activities.

Supports accessibility for: Social-Emotional Functioning, Organization

Materials to Gather

Colored pencils, crayons, or markers,
Connecting cubes, Materials from previous centers

Materials to Copy

Number Mat 1-10 (groups of 2), Number Race Stage 1 Recording Sheet for Tracing (groups of 1)

Required Preparation

- Each group of 2 needs 1 connecting cube.
- Gather materials from:
 - Shake and Spill, Stage 1
 - Math Fingers, Stage 1
 - Pattern Blocks, Stages 1-3
 - Picture Books, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Launch

- Groups of 2

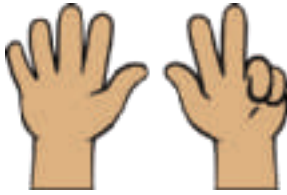
Number Race



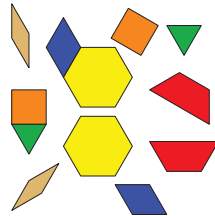
Shake and Spill



Math Fingers



Pattern Blocks



Picture Books



- Give each student a recording sheet. Give each group of 2 students a number mat and a connecting cube. Give students access to colored pencils, crayons, or markers.
- “We are going to learn a new center called Number Race. Let’s play a round together.”
- “I am going to roll the cube onto the number mat. Which number did the cube land on?”
- 30 seconds: quiet think time
- Share responses.
- “Now I find that number on the recording sheet and trace the number at the bottom.”
- Demonstrate tracing the number the cube landed on.
- “Take turns with your partner. During each turn, roll the cube and trace the number on the recording sheet. Play until you’ve traced all of one number. That number is the winner.”

Activity

- 5 minutes: partner work time
- “Now you can choose another center. You can also continue playing Number Race.”
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 10 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- “When you played in centers with a partner, how did you decide who gets to go first? What would you do if you wanted to go first but your partner wanted to go first too?”

Lesson Synthesis

🕒 5 min

“Today we compared the number of objects in groups. We figured out which group had more objects and which group had fewer objects.”

Display 10 red counters and 3 yellow counters.

“Are there fewer yellow counters or red counters? How do you know?”

“We can just see that there are a lot of red counters and only a few yellow counters. There are fewer yellow counters than red counters. There are more red counters than yellow counters.”

“Let's figure out how many red counters there are.”

Point to each red counter as students count or invite a student to count.

“There are 10 red counters.”

Repeat the steps with the yellow counters.

“There are 3 yellow counters.”

“There are fewer yellow counters than red counters. 10 is more than 3. 3 is less than 10.”

Lesson 4: Groups that Look Alike

Standards Alignments

Addressing K.CC, K.CC.C.6

Teacher-facing Learning Goals

- Identify groups that have more, fewer, or the same number of objects than another group.

Student-facing Learning Goals

- Let's find groups that have more, fewer, or the same number.

Lesson Purpose

The purpose of this lesson is for students to compare groups of objects that are close in quantity.

In a previous lesson, students identified groups that had more or fewer objects than a given group. The number of objects in the groups made it easy to compare the groups visually. For example, students could tell by looking that a group of two cubes was fewer than a group of nine cubes. In this lesson, students compare groups of objects that are closer in quantity. Students also practice using the words “fewer”, “more”, and “the same” in sentences that compare quantities (MP6). For example, students hear and repeat statements such as, “There are fewer red counters than yellow counters.”

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1
- Counters: Activity 1
- Cups: Activity 2
- Materials from previous centers: Activity 3
- Two-color counters: 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

What evidence have students given that they understand the comparison language of more and fewer?

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

🕒 0 min

Unit 2, Section A Checkpoint

Standards Alignments

Addressing K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Compare the number of objects in groups.

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

🕒 10 min

How Many Do You See: Fingers on One Hand

Standards Alignments

Addressing K.CC

The purpose of this How Many Do You See is for students to identify quantities represented with

fingers. In this warm-up, students represent quantities with their fingers and work toward recognizing quantities presented on fingers without having to count. Students have an opportunity to notice and make use of structure because each hand has 5 fingers (MP7).

Instructional Routines

How Many Do You See?

Student Responses

Sample responses:

- 2: I can see 2 fingers.
- 3: We just added one more finger so it is 3.
- 5: I know we have 5 fingers on one hand.

Launch

- Groups of 2
- "How many do you see? How do you see them?"
- Display 2 fingers.



- 30 seconds: quiet think time

Activity

- "Discuss your thinking with your partner."
- 30 seconds: partner discussion
- Share responses.
- "Use your fingers to show how many there are."
- Repeat with 3 fingers and then 5 fingers.



Synthesis

- “Work with your partner. One person show 3 with your fingers. One person show 5 with your fingers.”
- “Who is holding up more fingers? How do you know?” (The person who is holding up 5 is holding up more. They have all their fingers up and the other partner still has some fingers down. 5 is more than 3.)
- “5 is more than 3.”

Activity 1

🕒 10 min

Which Has More?

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to identify the group of objects that has more. This activity begins with a version of the Act it Out routine and builds on the student's work in the previous unit of answering “are there enough” questions. Students passed out, or matched up objects to determine if there were enough. Students build on this idea to help them determine which group has more objects.

The context of family mealtimes that is introduced in this activity will be revisited throughout the unit. Acting it out gives students an opportunity to make sense of a context (MP1). As students share about the tools that they use when eating with their families, record and save their responses to refer to and add to in future lessons. Consider reading picture books about family mealtimes. Some suggestions include:

Full, Full, Full of Love by Trish Cooke

Bee-Bim Bop! by Linda Sue Park

Yoko by Rosemary Wells

The Little Red Hen (Makes a Pizza) by Philomen Sturges

Rice & Rocks by Sandra L. Richards



MLR8 Discussion Supports. As students act out the scenario, listen for and clarify any questions about the context.

Access for English Learners

Advances: Speaking, Representing

Materials to Gather

Connecting cubes, Counters

Student-facing Task Statement

Priya and her family are sitting down at the table for dinner.

There are 4 people sitting at the table.

There are 6 spoons.

Are there enough spoons for each person to get one?



Student Responses

There are enough spoons for each person to get one. There are more spoons than people.

Sample responses:

- I pretended to give each person one spoon and there were some spoons left over.
- I matched up the spoons and people. There are more spoons.
- There are 6 spoons and 4 people. 6 is more than 4.

Launch

- Groups of 2
- Give each group of students access to connecting cubes and two-color counters.
- “We have been learning about different tools that we use at home and in our classroom. What kind of tools do you use when you eat at home?” (Spoons, forks, chopsticks, plates, bowls, napkins, cups, straws)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.
- “We use many different tools when we eat.”
- Display and read the story.
- “What is the story about?” (A family eating dinner, Priya’s family, spoons for dinner)
- 30 seconds: quiet think time
- Share responses.
- Read the story again.
- “How can you act out this story?” (We can pretend we are sitting at the table and pretend to hand out spoons. We can use the cubes to show the people and the counters to show the spoons. We can draw a picture.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.

Activity

- “Act out the story with your partner.”
- 3 minutes: partner work time
- “Are there more people or spoons? How do you know?” (There are more spoons than people. Each person gets one spoon and then there are some more spoons.)
- 2 minutes: partner work time
- Monitor for students who matched one spoon to each person to see if there were enough spoons and which there was more of.

Synthesis

- Invite students who acted out giving one spoon to each person to share.
- “They matched the spoons and the people. We can see that each person has a spoon and then there are extra spoons. There are more spoons than people.”

Activity 2

 15 min

Introduce Shake and Spill: Which Is More?

  PLC Activity

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to learn stage 2 of the Shake and Spill center. As students shake and spill their counters multiple times, they have the chance to compare two groups of objects that have very different quantities as well as groups of objects with very similar quantities. Students can compare the number of objects in the groups visually or by lining up and matching, as they did in the previous activity. Students may also count and use their knowledge of the count sequence to compare (“There are 7 red and 5 yellow counters. I know that 7 is more than 5.”). Students hear and repeat full comparison statements such as, “There are fewer red

counters than yellow counters.” In making comparisons, students have a reason to use language precisely (MP6).

Access for Students with Disabilities

Representation: Internalize Comprehension. Begin by asking, “Does this activity remind anyone of something we played before?” Connect this to the Shake and Spill center they played previously and ask students to point out what is different about this version of Shake and Spill.

Supports accessibility for: Social-Emotional Functioning

Materials to Gather

Cups, Two-color counters

Required Preparation

- Each group of 2 needs 10 two-color counters and 1 cup.

Student Responses

Sample responses:

- There is only 1 red and so many yellow so I know there are more yellow than red.
- There are 4 red and 6 yellow so there are more yellow.
- I matched them up and saw that there were more red counters than yellow counters.

Launch

- Groups of 2
- Give each group 1 cup and 10 counters.
- “We are going to learn a new way to play the Shake and Spill center. It is called Shake and Spill, Which Is More? Let’s play a round together.”
- “First we shake the counters in the cup and spill them out onto the table. Then we find out which color there are more of and which there are fewer of. You can also see if there are the same number of red and yellow counters.”
- Shake and spill 10 counters.
- “How can we figure out if there are more red or yellow counters?” (We can match up the red ones and the yellow ones and see which is more. We can count them.)
- 30 seconds: quiet think time
- Share responses.
- Demonstrate or invite a student to demonstrate students’ ideas.

- Invite students to chorally repeat these phrases in unison 1-2 times:
 - “There are more red counters than yellow counters.”
 - “There are fewer yellow counters than red counters.”
- “Now you will play with your partner. Take turns shaking and spilling the counters. Then work together to figure out and say which color there are more of and which color there are fewer of.”

Activity

- 8 minutes: partner work time

Synthesis

- Display 5 red counters and 7 yellow counters.
- “How can we figure out if there are fewer red or yellow counters?” (We can line them up and match them. We can count them.)
- Invite students to share how to compare the number of counters.
- “There are fewer red counters than yellow counters. There are more yellow counters than red counters.”

Advancing Student Thinking

If students compare the number of counters while the counters are still scattered, consider asking:

- “How can you arrange the counters to make it easier to see which color there are more of?”

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 counting concepts. Students choose from any stage of previously introduced centers.

- Number Race
- Shake and Spill
- Math Fingers
- Pattern Blocks
- Picture Books

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Number Race, Stage 1
 - Shake and Spill, Stages 1 and 2
 - Math Fingers, Stage 1
 - Pattern Blocks, Stages 1-3
 - Picture Books, Stages 1 and 2

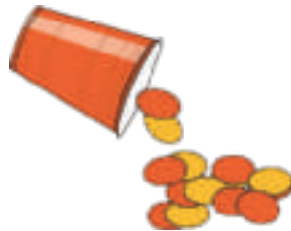
Student-facing Task Statement

Choose a center.

Number Race



Shake and Spill



Math Fingers

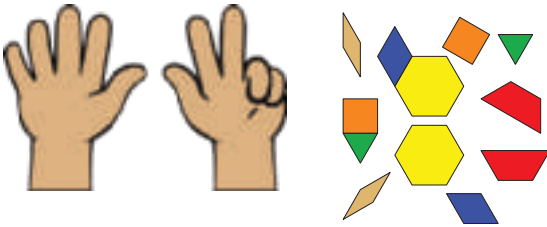
Pattern Blocks

Launch

- “Today we are going to choose from centers we have already learned. You can also choose to keep playing Shake and Spill.”
- 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



Picture Books



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

Synthesis

- Display 5 red counter and 5 yellow counters, lined up and matched.
- "Mai and Clare spilled their counters. Are there more red counters or yellow counters?" (There are the same number of red and yellow counters.)
- Invite students to chorally repeat this phrase in unison 1-2 times:
 - "There are the same number of red and yellow counters."

Lesson Synthesis

🕒 5 min

"Today we saw that sometimes we can figure out which group has more things by looking, but sometimes we cannot. If you can't tell which group has more objects by looking, what can you do?" (You can line them up and match them. You can count them.)

Lesson 5: Make Groups of More, Fewer, or the Same

Standards Alignments

Addressing K.CC, K.CC.C.6

Teacher-facing Learning Goals

- Make groups that have more, fewer, or the same number of objects than another group.

Student-facing Learning Goals

- Let's make groups of objects that have more, fewer, or the same number of objects as another group.

Lesson Purpose

The purpose of this lesson is for students to make groups that have more, fewer, or the same number of objects as another group.

Students build on their work of identifying groups that have more, fewer, or the same number of objects as another group. Students learn stages of two centers where they make groups with more, fewer, or the same number as a given group with objects and fingers. Students continue to practice using comparison language during the activities.

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

- Collections of objects: Activity 1
- Connecting cubes: Activity 1
- Materials from previous centers: Activity 3

Materials to Copy

- Less, Same, More Mat (groups of 2): Activity 1
- Math Fingers Cards (groups of 2): Activity 2

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

How did the work of the previous lesson lay the foundation for students to be successful in the

Activity 1	15 min	first activity of this lesson?
Activity 2	15 min	
Activity 3	15 min	
Lesson Synthesis	5 min	

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

🕒 0 min

Unit 2, Section A Checkpoint

Standards Alignments

Addressing K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Compare the number of objects in groups.
- Use “more,” “fewer,” and “the same number” to describe comparisons.
- Make groups with more, fewer, or the same number of objects than a given group.

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

Warm-up

🕒 10 min

How Many Do You See: Fingers on Two Hands

Standards Alignments

Addressing K.CC

The purpose of this How Many Do You See is for students to begin recognizing quantities represented on fingers without having to count. In this warm-up, students see numbers greater than 5, requiring 2

hands to represent. Students show the number with their fingers before answering, “How many do you see?” At this point, some students may still need to count, however with repeated exposure to quantities represented with fingers, they will begin to recognize numbers 1–10. As students make use of the structure of 5 fingers on each hand (MP7), they look for and express regularity in repeated reasoning through subitizing (MP8).

Instructional Routines

How Many Do You See?

Student Responses

Sample responses:

- 5: I know we have 5 fingers on each hand.
- 6: I counted 1, 2, 3, 4, 5, and 6.
- 7: I know one hand is 5 and then 6 and 7.

Launch

- Groups of 2.
- “How many do you see? How do you see them?”
- Display 5 fingers.



Activity

- “Discuss your thinking with your partner.”
- 30 seconds: partner discussion
- Share responses.
- “Use your fingers to show how many there are.”
- Repeat with 6 fingers and 7 fingers.



Synthesis

- “Work with your partner. One person show 6 with your fingers. One person show 7 with your fingers.”
- “Who is holding up fewer fingers? How do you know?” (The person with 6 fingers up is holding up fewer fingers. There is only 1 finger up on the extra hand.)
- “6 is less than 7.”

Activity 1

🕒 15 min

Introduce Less, Same, More, Groups of Objects

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to learn stage 1 of the Less, Same, More center. Students make groups that have fewer, the same, and more objects than a given group. Students choose a collection of objects and place all the objects at the top of the mat. They then make new groups that have fewer, the same, or more objects. To minimize the number of collections needed, have groups trade collections.

🕒 Access for Students with Disabilities

Representation: Internalize Comprehension. Invite students to identify which box would be most useful to start with first. If students are unsure, suggest they start with the “Same” box so that they can match the objects with the box at the top.

Supports accessibility for: Organization, Social-Emotional Functioning

Materials to Gather

Collections of objects, Connecting cubes

Materials to Copy

Less, Same, More Mat (groups of 2)

Required Preparation

- Each group of 2 needs at least 2 collections of between 2 and 9 objects.

Launch

- Groups of 2
- Give each group a mat and access to collections of between 2–9 objects and connecting cubes.
- “Choose a group of objects and place them in the box at the top of the mat.”
- “Use cubes to make a new group of objects for each box below. Make a group that has fewer objects, a group that has the same number of objects, and a group that has more objects.”
- “Discuss with your partner how you know each group has more, fewer, or the same number of objects.”

Activity

- 10 minutes: partner work time
- Monitor for students who make different groups that have fewer objects than the given group. For example, if the given group has 7 objects, look for students who made different groups with fewer than 7 objects.

Synthesis

- Display the mat with 7 cubes in the top box.
- Invite two previously identified students to demonstrate how they made groups with fewer objects.
- “Did both students make groups that have fewer than 7 objects?”
- “Let’s use the word fewer to describe the groups they made.”
 - “5 cubes is fewer than 7 cubes.”
 - “3 red cubes is fewer than 7 blue cubes.”
- “If I needed to make a group with the same number of objects as this group of 7 objects, what should I do?” (You should take out 7

cubes.)

Activity 2

🕒 15 min

Introduce Math Fingers, Fewer or More

Standards Alignments

Addressing K.C.C.6

The purpose of this activity is for students to learn stage 2 of the Math Fingers center. Students choose a card and one partner shows more fingers than the card while the other partner shows fewer fingers than the card. Students may count the fingers or recognize the quantity without counting. Students may also count on from 5 to determine how many fingers there are when 6–10 fingers are displayed.

🌐 Access for English Learners

MLR8 Discussion Supports. Students who are working toward verbal output will benefit from additional opportunities to speak. Invite students to repeat their partner’s statement. For example, “You are showing 8 fingers. 8 fingers is more than 4 fingers.”

Advances: Listening, Speaking, Representing

Materials to Copy

Math Fingers Cards (groups of 2)

Launch

- Groups of 2
- Give each group of students a set of cards.
- “We are going to learn a new way to play the Math Fingers center. Let’s play a round together.”
- Invite a student to act as the partner to demonstrate.
- “First we choose a card.”

- Flip over and display a card.
- “One partner shows fewer fingers than the fingers on the card. The other partner shows more fingers than the fingers on the card.”
- Show more fingers than the fingers on the card. Invite the student to show fewer fingers than the fingers on the card.
- “Then you tell your partner how many fingers you are holding up. Tell them if there are more or fewer than the fingers on the card.”
- Demonstrate how to share with your partner.
 - “I am showing 8 fingers. 8 fingers is more than 4 fingers.”
 - “I am showing 2 fingers. 2 fingers is fewer than 4 fingers.”
- “When both partners agree that you showed a number that is more and a number that is fewer than the number on the card, choose a new card and take turns showing more fingers and fewer fingers.”

Activity

- 7 minutes: partner work time

Synthesis

- Hold up 5 fingers.
 - “Show fewer fingers than I am holding up. Share with your partner. Did you both hold up the same number of fingers?” (No, my partner held up three fingers and I held up one finger. We both held up fewer fingers.)
 - “Show the same number of fingers that I am holding up. Share with your partner. Did you both hold up the same number of fingers?” (Yes, we both held up 5 fingers.)
-

Activity 3

🕒 15 min

Center: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and counting concepts. Students choose from any stage of previously introduced centers.

- Less, Same, More
- Number Race
- Shake and Spill
- Math Fingers
- Pattern Blocks
- Picture Books

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Less, Same, More, Stage 1
 - Number Race, Stage 1
 - Shake and Spill, Stages 1 and 2
 - Math Fingers, Stages 1 and 2
 - Pattern Blocks, Stages 1-3
 - Picture Books, Stages 1 and 2

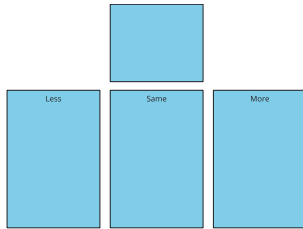
Student-facing Task Statement

Choose a center.

Less, Same, More Shake and Spill

Launch

- “Today we are going to choose from centers we have already learned. You can also choose to keep playing Less, Same, More or Math Fingers.”
- Display the center choices in the student book.
- “Think about what you would like to do



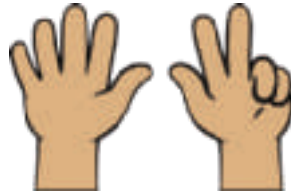
Number Race



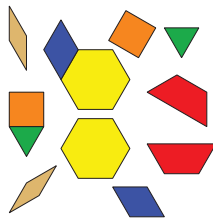
Math Fingers



Pattern Blocks



Picture Books



first.”

- 30 seconds: quiet think time

Activity

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

Synthesis

- “Today we played Math Fingers. How did you figure out how many fingers were on each card?” (I counted them. I could just see that there were 5 because all of the fingers on one hand were up.)

Lesson Synthesis

🕒 5 min

“Today we made groups that had more, fewer, or the same number of objects as a given group. We also learned two new centers. How did your partner help you today during center time? How did you help your partner?”

Lesson 6: Use More, Fewer, or the Same Number to Describe Groups

Standards Alignments

Addressing K.CC, K.CC.C.6

Teacher-facing Learning Goals

- Compare groups of up to 10 objects.
- Use “more”, “fewer”, and “the same number” to describe comparisons.

Student-facing Learning Goals

- Let’s use “more”, “fewer”, and “the same number” to describe groups.

Lesson Purpose

The purpose of this lesson is for students to use comparison language to describe the number of objects in groups.

In previous lessons, students identified and made groups with more, fewer, or the same number of objects as another group. They heard and made sense of comparison statements such as “There are more orange squares than green triangles.” In this lesson, students repeat and produce comparison language to describe the number of objects in groups.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Bags (brown paper): Activity 1
- 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	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

Students shared their thinking multiple times in this lesson. What have you noticed about the language students use? What support can you offer to students who struggle to communicate their ideas orally?

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

🕒 0 min

Unit 2, Section A Checkpoint

Standards Alignments

Addressing K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Compare the number of objects in groups.
- Use “more,” “fewer,” and “the same number” to describe comparisons.
- Make groups with more, fewer, or the same number of objects than a given group.

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

🕒 10 min

How Many Do You See: Fingers 1–10

Standards Alignments

Addressing K.CC

The purpose of this How Many Do You See is for students to recognize quantities represented with fingers without having to count. In this warm-up, students see numbers represented by the teacher. Students may show the number with their fingers before answering, “How many do you see?” if it is helpful. At this point, some students may recognize numbers 1–10 represented with fingers and some may still need to count.

Instructional Routines

How Many Do You See?

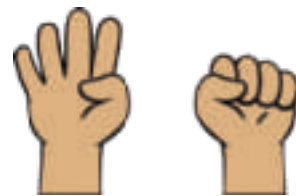
Student Responses

Sample responses:

- 4: I can tell by looking.
- 8: I counted the 5 on one hand and 6, 7, 8.
- 10: I know we have 10 fingers altogether.

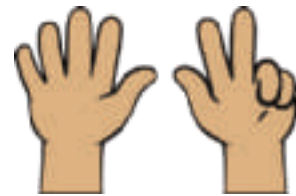
Launch

- Groups of 2
- “How many do you see? How do you see them?”
- Display 4 fingers.



Activity

- “Discuss your thinking with your partner.”
- 30 seconds: partner discussion
- Share responses.
- Repeat with 8 fingers and 10 fingers.



Synthesis

- "Show 8 fingers."
- "Now show more than 8 fingers."
- "How many fingers are you showing now?" (9, 10)
- "Show 8 fingers again."
- "Now show fewer than 8 fingers."
- "How many fingers are you showing now?" (1, 2, 3, 4, 5, 6, or 7)

Activity 1

🕒 10 min

Match Bags to Comparison Statements

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to consider different comparison statements and find the group of objects that matches each statement. This activity gives students more experience with comparison language that they will be asked to produce in the next activity.

Other red and blue materials, such as pattern blocks, can be used if needed to create all the bags.

Materials to Gather

Bags (brown paper), Connecting cubes

Required Preparation

- Each group needs three bags of 10 or fewer cubes:
 - Bag 1: fewer red cubes than blue cubes
 - Bag 2: more red cubes than blue cubes
 - Bag 3: the same number of red and blue cubes

Student Responses

Students identify the bags that match each

Launch

- Groups of 3

statement.

- Give each group 3 bags of cubes.
- "I am going to read a statement to you about the cubes. Your job is to find the bag of cubes that matches the statement."
- "In this bag, there are more red cubes than blue cubes."

Activity

- 1 minute: small-group work time
- Share response.
- "How did you know that bag matched the statement?" (We lined up the red cubes and the blue cubes and saw more red. We counted the red cubes and the blue cubes.)
- "Let's all say, 'There are more red cubes than blue cubes.'"
- Repeat for the next 2 statements:
 - "There are fewer red cubes than blue cubes."
 - "There are the same number of red cubes and blue cubes."

Synthesis

- Display 4 red cubes and 5 blue cubes.
- "Finish this sentence. There are more ___ cubes than ___ cubes."

Activity 2

🕒 15 min

Cube Tower Walk and Talk

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to have multiple opportunities to compare groups of objects and describe their comparisons using the language “more,” “fewer,” and “the same number.” In making comparisons, students have a reason to use language precisely (MP6). When students compare the number of cubes in the towers, they may need to work at a surface so that they can line up and match the cubes in each tower. This activity can also be adapted to happen at tables or desks, with students moving seats to switch partners.

Access for English Learners

MLR8 Discussion Supports. To provide all students with opportunities to practice, invite students to chorally repeat phrases that include “more,” “fewer,” and “the same number,” in unison multiple times.

Advances: Listening, Speaking

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Check for understanding by inviting 1–2 students to rephrase directions in their own words.

Supports accessibility for: Memory, Organization

Materials to Gather

Connecting cubes

Student Responses

Students compare cube towers using comparison language.

Launch

- Give students access to connecting cubes.
- “Take a handful of cubes and put them together into a tower.”
- “You are going to walk around the room with your cube tower. When you hear the signal, find a partner.”
- “Figure out whose tower has more cubes and whose tower has fewer cubes. Use statements like ‘You have more cubes than I do.’, ‘I have fewer cubes than you.’, or ‘We have the same number of cubes.’”
- “When I give the signal, find a new partner and figure out whose tower has more cubes and whose tower has fewer cubes.”

Activity

- 10 minutes: whole-class work time
- Give the signal to find a new partner at least 3 times.

Synthesis

- Invite two students to come to the front of the room with their cube towers.
- “How can we use ‘more,’ ‘fewer,’ or ‘the same number’ to talk about these towers?”

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 counting concepts. Students choose from any stage of previously introduced centers.

- Less, Same, More
- Number Race
- Shake and Spill
- Math Fingers
- Pattern Blocks
- Picture Books

Materials to Gather

Materials from previous centers

Required Preparation

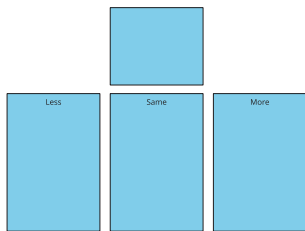
- Gather materials from:
 - Less, Same, More, Stages 1
 - Number Race, Stage 1

- Shake and Spill, Stages 1 and 2
- Math Fingers, Stages 1 and 2
- Pattern Blocks, Stages 1-3
- Picture Books, Stages 1 and 2

Student-facing Task Statement

Choose a center.

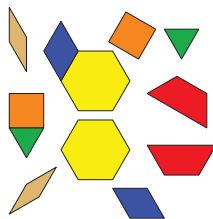
Less, Same, More



Number Race



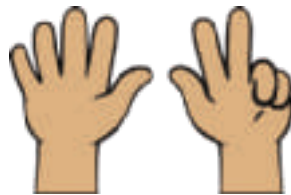
Pattern Blocks



Shake and Spill



Math Fingers



Picture Books



Launch

- “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

- “Why is it important to put our center materials away neatly?” (So we will know where everything is next time we work in these centers.)

Lesson Synthesis

🕒 5 min

“Today we used ‘more,’ ‘fewer,’ and ‘the same number’ to describe and compare the number of objects in different groups.”

Call some students up to the front of the room in order to make a group of 6 students and another group of 9 students.

“How can we use ‘more,’ ‘fewer,’ or ‘the same number’ to describe the number of students in these

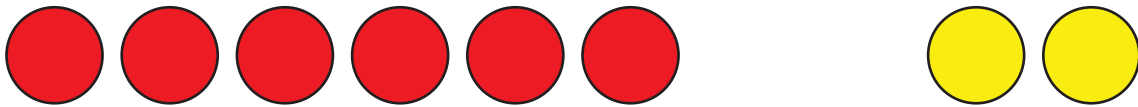
groups?"

Student Section Summary

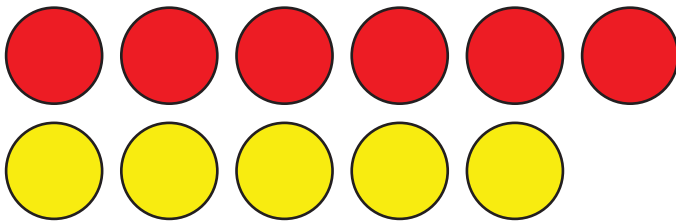
In this section, we counted many groups of objects.

We also figured out which groups had more objects and which groups had fewer objects.

Sometimes we could tell, just by looking, that there were more red counters than yellow counters.



Sometimes we lined up and matched the objects to see if there were fewer red counters or yellow counters.



There are fewer yellow counters than red counters.

Section B: Count and Compare Groups of Images

Lesson 7: Count Images in Different Arrangements

Standards Alignments

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

Teacher-facing Learning Goals

- Count organized groups of up to 10 images.
- Understand that the order counted does not change the number of images.

Student-facing Learning Goals

- Let's figure out how many images there are.

Lesson Purpose

The purpose of this lesson is for students to count groups of up to 10 images and understand that the order counted does not change the number of images.

Students count and keep track of images in organized arrangements, such as in lines, arrays, on 5-frames, in dot cube arrangements, and on fingers. As students count and observe their peers counting, they notice that if you count a group of images in a different order, the number stays the same as long as you count each image one time. This understanding develops over time and it is not necessary for all students to articulate at the end of this lesson.

The second activity is an optional activity that provides support in keeping track of which images have been counted. In the lesson synthesis, students practice saying the verbal count sequence to 20. Add variety to the counting by adding movement. For example, students can count as they clap, stomp their feet, or jump.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

- Chart paper: Warm-up
- Counters: Activity 2
- Materials from previous centers: Activity 3

Materials to Copy

- Images in Stations (groups of 30): Activity 1
- Math Stories Stage 1 and 4 Pictures (groups of 8): 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

In an upcoming section, students will count images organized in circles. What do you notice in their work from today's lesson that you might leverage in that future lesson?

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

🕒 0 min

Unit 2, Section B Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Say one number for each object.
- Answer how many without counting again.
- Use the structure of 5 (in 5-frames or fingers) to count on from 5 to tell how many.

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

Warm-up

 10 min

Questions About Us: Dogs or Cats? (Part 1)

Standards Alignments

Addressing K.CC.B

The purpose of this warm-up is for students to experience a new version of the Questions About Us routine. Students consider concepts of number in a familiar context. Students stand up to indicate if they prefer dogs or cats. Because all students are standing, it is difficult to determine how many students prefer dogs and how many prefer cats. Students think of ways to organize the groups of students to make them easier to count. The purpose of the synthesis is for students to think of ways they can record how many students chose cats and dogs.

As students learn the routine, they will work with the same context for multiple days. Because this is the first time that students are participating in this version of the Questions About Us routine, the warm-up begins with students brainstorming questions that they could ask to learn more about their classmates. Record and save these responses to refer and add to in future lessons. Consider adjusting the questions to better reflect students' interests and experiences.

Instructional Routines

Questions About Us

Materials to Gather

Chart paper

Student Responses

Sample responses:

- We can have all the people who chose cats stand on one side and all the people who chose dogs stand on the other side.
- We can have the people who chose cats to stand up and then count them.

Launch

- Groups of 2
- “We have been learning all about our classroom and our classmates. What are some questions that you can ask to learn more about your classmates?” (What is your favorite color? Do you play soccer? How many brothers and sisters do you have?)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.
- “Which animal do you like better: dogs or cats?”
- 30 seconds: quiet think time

- “Stand up if you like dogs better.”
- “Stand up if you like cats better.”

Activity

- “How many people like cats better?” (We can’t tell. Everyone is mixed up.)
- 30 seconds: quiet think time
- Share responses.
- “What can we do to make it easier to figure out how many people like cats better and how many people like dogs better?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Choose and demonstrate 2 methods that students suggested.

Synthesis

- Display a blank piece of chart paper.
- “What could we draw or write to show how many people like dogs better?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.

Activity 1

🕒 15 min

Images in Stations

Standards Alignments

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

The purpose of this activity is for students to count groups of up to 10 images and notice that the order counted does not change the number of images. This understanding develops over time

with repeated experiences counting objects and groups of images in different arrangements (MP8).

Set up stations for students to work at around the classroom. Stations can be set up at tables or desks. Place one image card at each station. Consider developing a sound to signal to students that it is time to transition to the next station.

Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the question “How did you count?” This gives both students an opportunity to produce language.

Advances: Conversing

Materials to Copy

Images in Stations (groups of 30)

Required Preparation

- Cut out images from the introduction master.

Student Responses

Students count each group of images:

- 7 fingers
- 8 dots arranged on a 5-frame
- 6 dots arranged in a group of 5 and 1 more dot
- 10 dots in an array
- 9 dots arranged on a 5-frame
- 5 dots in a line
- 8 dots in an array
- 6 fingers

Launch

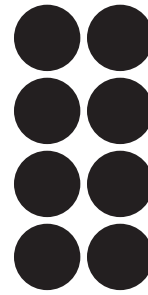
- Groups of 4
- Place one card at each station.
- “At each station, there is a card with dots or fingers on it. Take turns figuring out how many things are on the card. Show your group how you figured out how many things are on the card. When I give the signal, move to the next station.”

Activity

- 10 minutes: small-group work time
- Monitor for students who count the same group of images in a different order.

Synthesis

- Display the card with 8 dots in an array:



- “How would you figure out how many dots there are?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Invite two students to demonstrate counting the dots, with one student counting across the rows and one student counting down each column.
- “There are 8 dots. Even if we count the dots in a different order, there are still 8 dots.”

Advancing Student Thinking

If students count some images more than one time or do not count some images, consider asking:

- “Which things have you counted already? How do you know?”
- “Can you show me with your finger how you are going to count them?”

Activity 2 (optional)

🕒 10 min

Count Images

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to keep track of the images that they have counted. This activity is optional because it is an opportunity for extra practice that not all students may need. It gives students a chance to practice accurately counting groups of 1–10 images. Counting images can be more challenging because students are not able to move the images to help them keep track of which images they have counted. Students place one object on each image to keep track of which images have been counted.

This activity can be used with a small group or the whole class. Students who do not need this optional activity may benefit from additional time working in centers. Some students may benefit from working on the concepts in this optional activity more than one time.

Access for Students with Disabilities

Representation: Internalize Comprehension. Synthesis: In addition to the examples used in the synthesis, students might benefit from seeing what a non-example of using counters to count each dot looks like. This non-example will reinforce how covering each dot with a counter helps keep track of the dots that were already counted.

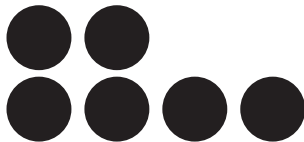
Supports accessibility for: Conceptual Processing

Materials to Gather

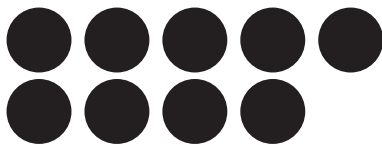
Counters

Student-facing Task Statement

1.



2.



Student Responses

Students say 1 number as they place a counter on each dot.

Launch

- Groups of 2
- Display the first image and 6 counters.
- “What do you notice? What do you wonder?” (There are dots and counters. The dots and counters look like the same shape. The counters and dots are both circles.)
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Give students access to counters.
- “How many dots are there? You can use the counters to help you.”

Activity

- 1 minute: independent work time

- Monitor for students who place a counter on top of each dot as they count.
- “Show your partner how you figured out how many dots there are.”
- 1 minute: partner discussion

Synthesis

- Invite previously identified students to demonstrate placing one counter on each dot as they count. If no student did this, ask, “How can I use the counters to help me keep track of which dots I’ve counted?”
- “How many dots are there in the next group? Use the counters to help you keep track of which dots you’ve counted.”
- 1 minute: independent work time

Activity 3

🕒 20 min

Introduce Math Stories, How Many?

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to learn stage 1 in the Math Stories center. Students work with a partner to count groups of images in different arrangements. For example, students can ask, “How many basketballs are there?”, “How many kids are there?” or “How many shoes are there?” In a future variation of this center, students will record how many images they counted with a written number.

After they participate in the center, students choose from any stage of previously introduced centers.

- Connecting Cubes
- Number Race

Students will choose from these centers throughout the section. Keep materials from these

centers organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Connecting Cubes, Stages 1-3
 - Number Race, Stage 1

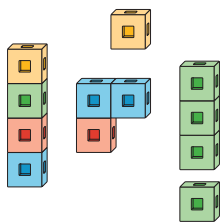
Student-facing Task Statement

Choose a center.

Math Stories



Connecting Cubes



Number Race



Materials to Copy

Math Stories Stage 1 and 4 Pictures (groups of 8)

Launch

- Groups of 2
- Display a picture card from the Math Stories introduction master.
- “We are going to learn a new center called Math Stories. You are going to take turns asking your partner ‘how many’ questions about these pictures.”
- “Think of 1 ‘how many’ question you can ask about this picture.”
- 30 seconds: quiet think time
- Share and record responses.

Activity

- “When you work in this center, you will take turns with a partner. One partner will ask ‘how many’ and the other partner will figure out how many there are. Once you agree on how many there are, take turns asking ‘how many’ questions and figuring out how many there are.”
- 5 minutes: partner work time
- “Now you can choose another center. You can also continue playing Math Stories.”
- Display the center choices in the student

book.

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- Display image from the Math Stories introduction master.



- “How many birds are in the picture? Tell your partner how you could figure it out.”

Lesson Synthesis

🕒 5 min

Draw 7 dots as pictured, with a gap after the first 4 dots or display image:



“How would you figure out how many dots there are? Which dot would you count first? Which dot would you count next?”

Invite students to demonstrate counting the dots in different orders.

“There are 7 dots. We can count the dots in different ways as long as we count each dot one time and keep track of which dots we’ve counted.”

“Let’s practice counting to 20.”

Demonstrate counting to 20. Count to 20 as a class 1–2 times.

Lesson 8: Compare Matching Images

Standards Alignments

Addressing K.CC.B, K.CC.B.5, K.CC.C.6

Teacher-facing Learning Goals

- Count and compare groups of up to 10 images.
- Identify groups that have more or fewer images than a given group.

Student-facing Learning Goals

- Let's figure out what we have more and fewer of.

Lesson Purpose

The purpose of this lesson is for students to compare groups of up to 10 images.

In the previous lesson, students counted images lines, arrays, dot cube arrangements, on 5-frames, and on fingers. While counting is not required to determine which group has more images in this lesson, students continue to practice counting and keeping track of images in organized arrangements. In the first activity, the images are arranged in lines and matched, so the comparison is visually obvious. In the second activity, students need to match or count the images to compare. "Are there enough" questions are asked to prompt students to consider matching the images that go together.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3

Materials to Copy

- Questions About Us Chart (groups of 30): Warm-up

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

Revisit the norms you established as a class about doing mathematics. Which norms are

Activity 1	10 min	working and which might need revision? Are there any norms you or your students might want to add?
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 2, Section B Checkpoint

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Say one number for each object.
- Answer how many without counting again.
- Compare the number of images in groups.
- Use “more,” “fewer,” and “the same number” to describe comparisons.

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

Warm-up

🕒 10 min

Questions About Us: Dogs or Cats? (Part 2)

Standards Alignments

Addressing K.CC.B

The purpose of this warm-up is for students to experience a new part of the Questions About Us routine. Students consider concepts of number in a familiar context. This warm-up focuses on cardinality, or knowing that the last number tells us how many, and keeping track of which images have been counted. In the activity, students share methods for counting the images. After counting the group of images as a class or inviting a student to demonstrate how to count the images, ask students, “How many students chose cats?” to confirm that students know that the last number tells us how many.

The images included in the Questions About Us Chart introduction master K.2.B are examples of what to display for the Questions About Us warm-ups in Section B. In order to create a display that will be visible to the whole class, print and cut out enough 5-frames so that there is a square for each student in the class. For example, if there are 23 students in the class, cut out four 5-frames and 3 squares out of a fifth 5-frame. Consider laminating the display and using a dry erase marker to write the two choices and record students' responses. If available, the provided images can also be enlarged.

Instructional Routines

Questions About Us

Student Responses

Sample responses:

- We can count each person.
- We can count each dot.
- We can cross off the dots as we count them.

Materials to Copy

Questions About Us Chart (groups of 30)

Launch

- Groups of 2
- Display Questions About Us Chart.
- “Which animal do you like better: dogs or cats?”
- 30 seconds: quiet think time
- Record each student's choice with a circle in a 5-frame.

Activity

- “How can we figure out how many students like cats better?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students like cats better?”

- “How can we figure out how many students like dogs better?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students like dogs better?”

Synthesis

- Count how many students chose cats again. After counting 10 dots, pause and ask, “How many dots have I counted?” and “Which dots have I already counted? Which dots do I still need to count?”

Activity 1

🕒 10 min

Are There Enough?

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to compare groups of images that are lined up. Students compare which group has more or fewer images.

🌐 Access for English Learners

MLR8 Discussion Supports. Synthesis: To support the transfer of new vocabulary to long term memory, invite students to chorally repeat these words in unison 1–2 times: “more” and “fewer.”
Advances: Listening, Speaking

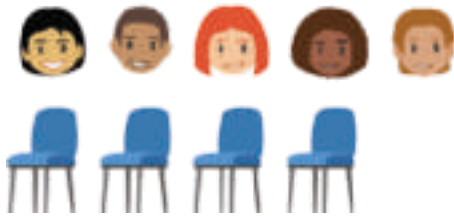
Student-facing Task Statement

Launch

- Groups of 2
- Display the image from the student book:



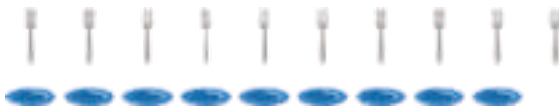
1.



2.



3.



4.



Student Responses

Sample responses:

1. There are not enough chairs for each person. There are more people than chairs.
2. There are enough spoons for each bowl.



- “What do you notice? What do you wonder?” (There are people and apples. There are 6 people. How many apples are there? Are there enough apples for each person to get one?)
- “Have you ever helped to set the table for a meal or pass out a snack? What did you do?”

Activity

- “Are there enough chairs for each person? How do you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- “Are there more chairs or people? How do you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- “There are more people than chairs.”
- “How many people are there? How many chairs are there?”
- 1 minute: independent work time
- Share responses.
- “5 people is more than 4 chairs.”
- Repeat the steps with each group of images. Switch between asking students “Are there more ____ or ____?” and “Are there fewer ____ or ____?”

- There are fewer bowls than spoons.
3. There are enough forks for each plate. There are more forks than plates.
 4. There are not enough straws for each cup. There are fewer straws than cups.

Activity 2

🕒 10 min

Comparing Images That Aren't Matched

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to compare groups of images. The images are organized in lines, but the objects are not directly matched, which requires students to match or count the images to compare. Students are asked “Are there enough?” before they compare to encourage them to think about matching the images. In the activity synthesis, drawing lines to match the images is highlighted. Matching the images helps students relate the comparisons to the situation they just worked with where the images were already matched (MP7).

🕒 Access for Students with Disabilities

Representation: Internalize Comprehension. Students might need support understanding the difference between the activity they did prior to this one. Begin by telling students that this activity looks similar to the activity they previously did; however, they might notice that the images line up differently here. If time permits, invite students to plan a strategy for how they will determine if there are enough of each item.

Supports accessibility for: Conceptual Processing, Organization

Student-facing Task Statement

- 1.

Launch

- Groups of 2
- Display the student page.
- “How are these pictures different from the ones we worked with in the first activity?”



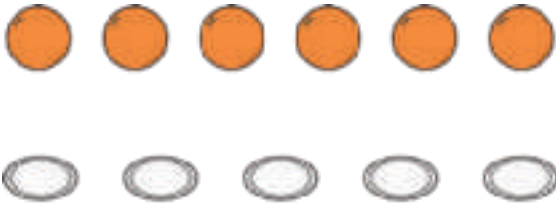
2.



3.



4.



Student Responses

1. There are enough cartons of milk for each student. There are more cartons of milk than students.



2. There are enough apples for each plate to get one. There are fewer plates than apples.



(There are different pictures. The pictures aren't matched up.)

Activity

- "Are there enough cartons of milk for each student? How do you know?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- "Are there more students or cartons of milk? How do you know?"
- 30 seconds: independent work time
- 30 seconds: partner discussion
- "There are more cartons of milk than students."
- "How many students are there? How many cartons of milk are there?"
- 1 minute: independent work time
- "8 cartons of milk is more than 7 students."
- Repeat the steps with each group of images. Switch between asking students "Are there more ____ or ____?" and "Are there fewer ____ or ____?"
- Monitor for students who draw lines to match each image.

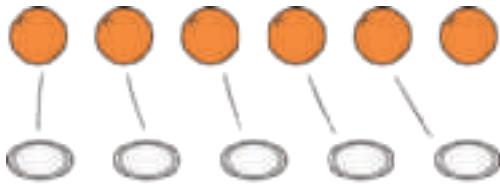
Synthesis

- Invite a previously identified student to share how they drew lines to match.

3. There are not enough napkins for each student to get one. There are more students than napkins.



4. There are enough oranges for one to go on each plate. There are fewer plates than oranges.



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 counting concepts.

Students choose from any stage of previously introduced centers.

- Math Stories
- Connecting Cubes
- Number Race

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Math Stories, Stage 1

- Connecting Cubes, Stages 1-3
- Number Race, Stage 1

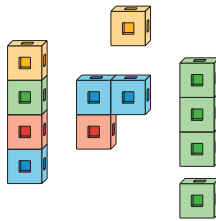
Student-facing Task Statement

Choose a center.

Math Stories



Connecting Cubes



Number Race



Launch

- "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

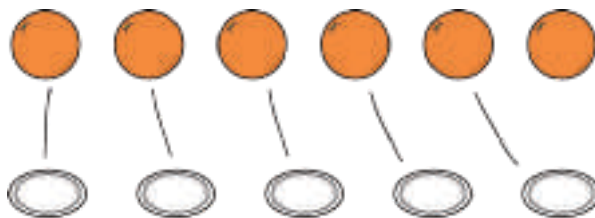
Synthesis

- "If I hold up 5 fingers, how many fingers would you need to hold up to show fewer fingers?"

Lesson Synthesis

🕒 5 min

Display sample student work from problem 4 in the second activity or display this image:



"Tell your partner about the oranges and plates using 'more.'" (There are more oranges than plates.)

"Tell your partner about the oranges and plates using 'fewer.'" (There are fewer plates than oranges.)

Lesson 9: More, Fewer, or the Same

Standards Alignments

Addressing K.CC.B, K.CC.B.5, K.CC.C.6

Teacher-facing Learning Goals

- Count and compare groups of up to 10 images.
- Identify groups that have more, fewer, or the same number of images as a given group.

Student-facing Learning Goals

- Let's figure out if there are more, fewer, or the same number of images.

Lesson Purpose

The purpose of this lesson is for students to identify groups that have more, less, or the same number as a given group of images.

In previous lessons, students compared the number of images in groups. In some cases, students could visually determine which had more, and sometimes they matched the images in each group to compare them. In this lesson, the groups of images are presented in different arrangements and on separate cards, so matching to compare is more difficult. Students continue their work with counting images by determining how many dots are arranged on the 5-frames. Students may also recognize how many dots there are without counting (subitize) or count on from 5 to figure out how many dots there are. In the first activity, students compare groups of images on 5-frames, which encourages them to use the arrangement to help them compare. In the second activity, students compare groups of objects on 5-frames and fingers, which both have a structure of 5 and some more.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

- Counters: Activity 3

Materials to Copy

- Questions About Us Chart (groups of 30):

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

Warm-up

- Compare 5-frame Cards (groups of 1): Activity 1
- Bingo Stage 1 Cards (groups of 4): Activity 3
- Bingo Stages 1-3 Gameboard (groups of 4): 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

Reflect on your experience with the Act It Out routine in the curriculum. What moves or questions have improved the learning for each or your students during this routine? What improvements would you make next time?

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

 0 min

Unit 2, Section B Checkpoint

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Say one number for each object.
- Answer how many without counting again.
- Use the structure of 5 (in 5-frames or fingers) to count on from 5 to tell how many.
- Compare the number of images in groups.
- Use “more,” “fewer,” and “the same number” to describe comparisons.
- Make groups with more, fewer, or the same number of images than a given group.

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

Warm-up

🕒 10 min

Questions About Us: Apples or Bananas? (Part 1)

Standards Alignments

Addressing K.CC.B

The purpose of this warm-up is for students to consider concepts of number in a familiar context. Students compare groups of images in the synthesis. Save the completed chart to use in future lessons.

Instructional Routines

Questions About Us

Student Responses

Sample responses:

- More students chose apples. I can just see that there are more dots for the apples.
- More students chose apples. 12 students chose apples and 8 students chose bananas. Twelve is more than 8.

Materials to Copy

Questions About Us Chart (groups of 30)

Launch

- Groups of 2
- Display the Questions About Us Chart.
- “Which fruit do you like better: apples or bananas?”
- 30 seconds: quiet think time
- Record each student's choice with a circle in a 5-frame.

Activity

- “How can we figure out how many students like apples better?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students like apples better?”

- “How can we figure out how many students like bananas better?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students like bananas better?”

Synthesis

- “Did more students choose apples or bananas? How do you know?”

Activity 1

🕒 15 min

Compare 5-frame Cards

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to count and compare groups of up to 10 images arranged on 5-frames. Because the images are on separate cards, it is more difficult for students to match to compare the images. Students may use the arrangement of the images to help them to compare (MP7). For example, when looking at 2 groups of images on 5-frames, students may notice that one 5-frame is full and the other 5-frame has 2 extra dots under the 5-frame. Students will use the same set of cards in the next activity.

🌐 Access for English Learners

MLR8 Discussion Supports. Make sure students can explain how they know which card has more. Invite groups to rehearse what they will say when they share with the whole class.

Advances: Speaking, Conversing

Materials to Copy

Compare 5-frame Cards (groups of 1)

Required Preparation

- Cut out the introduction master to create a set of cards for each student.

Student Responses

Students determine which card has more dots.

Launch

- Groups of 2
- Give each student a set of cards.
- Display two cards:

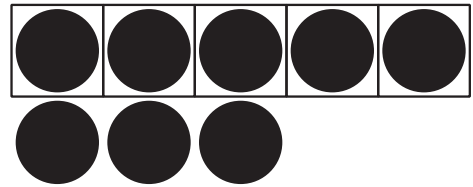


- “What do you notice? What do you wonder?”
- 30 seconds: quiet think time
- Share responses.
- “You are going to learn a new game called Compare Cards. You and your partner are each going to flip over a card, figure out how many dots are on your card, and figure out whose card has more dots.”

Activity

- Display two cards:

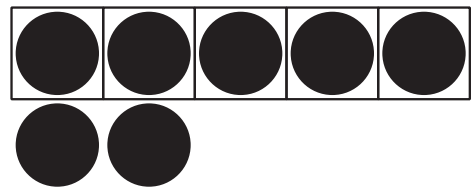




- “Which card has more dots?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- “This card has more dots. The person whose card has more dots gets to keep both cards and put them in a pile.”
- “It’s your turn to play. Count to 3 and then you and your partner both flip over 1 card. Figure out how many dots are on your card. Work together to figure out whose card has more dots. If both cards have the same number of dots, put both cards to the side.”
- 6 minutes: partner work time

Synthesis

- Display two cards:



- “Which card has more dots? How do you know?” (This card has more dots because they both have a full 5-frame, but this one has extra dots underneath.)
- 30 seconds: quiet think time
- Share responses.

- “This card with 7 dots has more dots than this card with 5 dots. This card with 5 dots has fewer dots than this card with 7 dots.”
- “Sometimes we can use the arrangement to help us figure out which group has more. The 5-frame is the same on both of them, but 1 card has some more dots in the bottom row.”

Activity 2

🕒 10 min

More and Fewer with 5-frames and Fingers

👤 ↔ 👤 PLC Activity

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to compare groups of dots arranged on 5-frames and fingers. Students use the 5-frame cards from the previous activity in partners and show a number of fingers that is more than, fewer than, and the same number as the number of dots on the 5-frame. The activity synthesis highlights the connection between the 5 structure of fingers and 5-frames.

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to verbalize their strategy for showing more or fewer on their fingers before they begin. If students don't mention a starting point of showing the number of dots on their fingers first, remind students that they can start there if it is helpful.

Supports accessibility for: Conceptual Processing, Visual-Spatial Processing

Materials to Gather

Materials from a previous activity

Student Responses

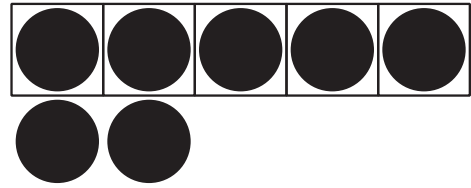
Students show more, fewer, and the same

Launch

- Groups of 2

number on their fingers.

- Give each group of students a set of cards.
- Display a card with 7 dots on a 5-frame:



- "Show how many dots there are on this card on your fingers."
- "There are 7 dots on the 5-frame and we held up 7 fingers. We are holding up the same number of fingers."
- "We are going to use our fingers to show the same number as, more, and fewer than the dots."
- "Use your fingers to show more."
- "Use your fingers to show fewer."

Activity

- "Take turns flipping over a card. Figure out how many dots there are and show more on your fingers. Then your partner shows fewer on their fingers. Last, you and your partner both show the same number with your fingers."
- 5 minutes: partner work time

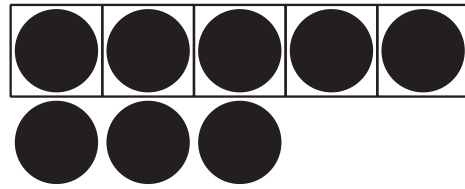
Synthesis

- Display card:



"How many hands do you need to use to show fewer fingers? How do you know?" (1 hand. The 5-frame is full, so there are 5 dots. 1 hand has 5 fingers, so we need fewer fingers than that.)

- Display card:



- “How many hands do you need to use to show more fingers? How do you know?” (2 hands. We can show 5 on 1 hand, but then we need more fingers.)

Activity 3

🕒 20 min

Introduce Bingo, Images

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to learn stage 1 of the Bingo center. Students identify groups that have the same number of images. The images are presented in a variety of arrangements, such as in lines, arrays, dot cube arrangements, and on finger and 5-frames. Students may recognize the number of images without counting (subitize) or may count the images.

After they participate in the center, students choose from any stage of previously introduced centers.

- Math Stories
- Connecting Cubes
- Number Race

Materials to Gather

Counters, Materials from previous centers

Materials to Copy

Bingo Stage 1 Cards (groups of 4), Bingo Stages 1-3 Gameboard (groups of 4)

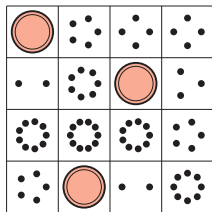
Required Preparation

- Gather materials from:
 - Math Stories, Stage 1
 - Connecting Cubes, Stages 1-3
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

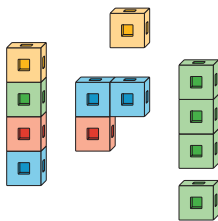
Bingo



Math Stories



Connecting Cubes



Number Race



Launch

- Groups of 4
- Give each group of students counters, a set of cards, and four gameboards.
- “Today we are going to learn a new center called Bingo.”
- Display these three cards:



- “Which two cards have the same number of things?” (There are 3 dots and 3 fingers. They both show 3. They show the same number.)
- “In this center you are going to find groups that have the same number of things.”
- Flip and display a card.
- “Put a counter on the square if it has the same number of things as this card.”
- 30 seconds: independent work time

- “Now I’m going to leave this card face-up in the middle. It is the next person’s turn to flip over another card.”

Activity

- “Take turns flipping over the cards in the deck and putting a counter in a square. The game ends when someone has 4 counters in a row.”
- 5 minutes: small-group work time
- “Now you can choose another center. You can also continue playing Bingo.”
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 8 minutes: center work time
- If time, invite students to choose another center.

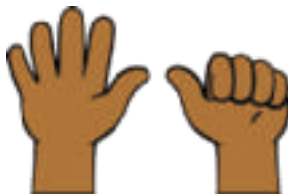
Synthesis

- “How was your partner or group able to help you when something was challenging during centers today?”

Lesson Synthesis

🕒 5 min

Display cards:



“Diego and Lin flipped over these cards while they were playing. Diego said, ‘There are more fingers than dots.’ Lin said, ‘There are fewer dots than fingers.’ Who do you agree with? Why?” (They are both right. There are 6 fingers and 4 dots, so there are more fingers and fewer dots.)

"Let's practice counting to 20."

Demonstrate counting to 20. Count to 20 as a class 1-2 times.

Lesson 10: Find More or Fewer

Standards Alignments

Addressing K.CC.B, K.CC.B.5, K.CC.C.6

Teacher-facing Learning Goals

- Count and compare groups of up to 10 images.
- Use “more”, “fewer”, and “the same number” to describe comparisons.

Student-facing Learning Goals

- Let’s compare groups of images using the words “more,” “fewer,” or “the same number.”

Lesson Purpose

The purpose of this lesson is for students to compare the number of images in groups and use “fewer”, “more”, and “the same number” to describe their relative size.

Students compare groups of images in a way that makes sense to them. Because the images are presented in different arrangements, it is more difficult to match or use the arrangement to compare, and students may need to count to compare. Students may compare groups of 5 and 8 images by counting the group of 5 images and then counting 5 images within the group of 8 and noticing that there are still more images that are left to count, so 8 is more than 5. Students may also count 5 images and 8 images and use their knowledge of the count sequence to compare (“8 dots is more than 5 dots because 8 comes after 5 when we count”). These methods of comparing are discussed in the syntheses. In the lesson synthesis, students look at an image of 4 circled dots within a group of 7 dots. They may notice that since there are 4 and some more inside of 7, 7 is more than 4. Students will continue to have opportunities to think about this idea in the following lessons as well as in later units.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

- Materials from a previous lesson: Warm-up

Materials to Copy

- Questions About Us Chart (groups of 30):

- Materials from previous centers: Activity 3

Warm-up

- Image Cards Grade K (groups of 2): Activity 2
- Less, Same, More Mat (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

What question do you wish you had asked today? When and why should you have asked it?

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

 0 min

Unit 2, Section B Checkpoint

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Use the structure of 5 (in 5-frames or fingers) to count on from 5 to tell how many.
- Compare the number of images in groups.
- Use “more,” “fewer,” and “the same number” to describe comparisons.

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

Warm-up

 10 min

Questions About Us: Apples or Bananas? (Part 2)

Standards Alignments

Addressing K.CC.B

The purpose of this warm-up is for students to consider concepts of number in a familiar context. The synthesis focuses on knowing that one more is the next counting number.

Instructional Routines

Questions About Us

Materials to Gather

Materials from a previous lesson

Materials to Copy

Questions About Us Chart (groups of 30)

Required Preparation

Gather the completed Questions About Us: Apples or Bananas chart from a previous lesson.

Student Responses

Sample responses:

- 9 students chose bananas now. First there were 8 students who chose bananas. 9 is 1 more than 8.
- I counted 8 dots and then pretended to count 1 more dot. 9 students chose bananas now.

Launch

- Groups of 2
- Display the completed Questions About Us chart from a previous lesson.
- “What do the circles represent?”

Activity

- “How can we figure out how many students like apples better?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students like apples better?”
- “How can we figure out how many students like bananas better?”
- 30 seconds: quiet think time

- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students like bananas better?”

Synthesis

- “1 student forgot to vote. They chose bananas. How many people chose bananas now?”

Activity 1

🕒 10 min

Circle More, Circle Fewer

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to find groups that have more images than a given group. Students can compare in any way that makes sense to them. Students describe the comparisons using “more”, “fewer”, or “the same number.” In the synthesis, students use mathematical vocabulary precisely to discuss how different ways of counting can help to compare the number of images in groups (MP6).

🕒 Access for Students with Disabilities

Representation: Internalize Comprehension. Students might need support when they see that they have to make sense of 6 images for each prompt. Provide students the option of looking at one line of images at a time (3 images at a time rather than 6).

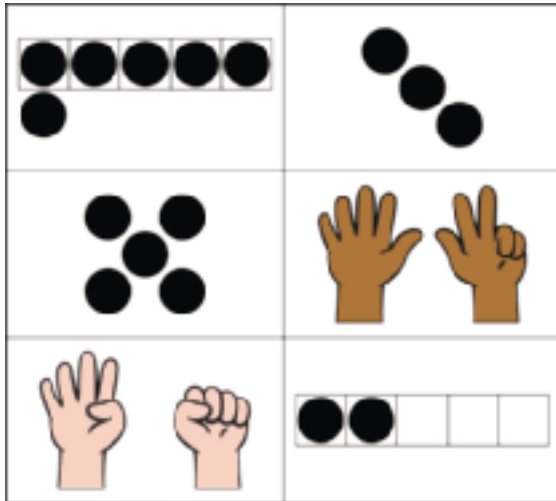
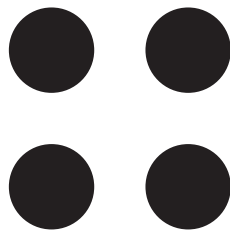
Supports accessibility for: Attention, Organization

Student-facing Task Statement

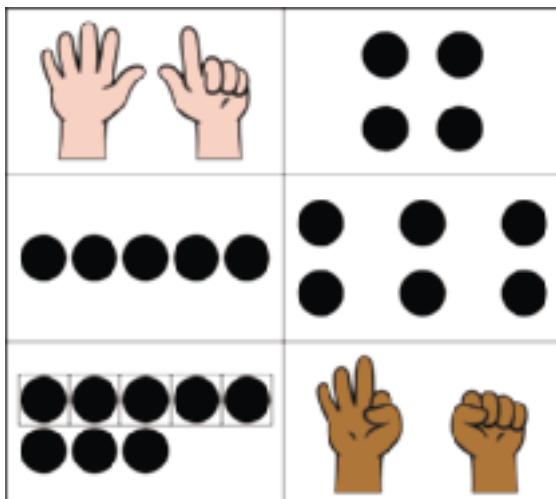
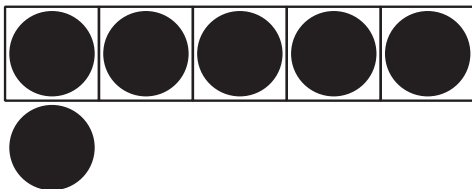
1.

Launch

- Groups of 2
- Display the image at the top of the student book.



2.



- "How many dots are there?" (4)
- 30 seconds: quiet think time
- Share responses.
- "Look at the groups below. Circle the 3 groups that show more than 4. For each group that you circle, tell your partner a statement using 'more' and a statement using 'fewer'."

Activity

- 3 minutes: partner work time
- Monitor for students who count to help them find groups of images that show more.
- "Look at the groups below. Circle the three groups that show fewer than 6. For each group that you circle, tell your partner a statement using 'more' and a statement using 'fewer'."
- 3 minutes: partner work time

Synthesis

- Display 6 dots in a 5-frame.
- "How many dots are there?" (6)
- "How do you know this shows more than 4?" (I counted 4 and there were more left over. 6 comes after 4 when we count so it is more.)
- Invite students to chorally repeat these words or phrases in unison 1-2 times:
 - "6 is more than 4."
 - "4 is less than 6."
- "Are there any groups that show the same number of things? Which ones?" (There are 6 dots on the 5-frame and 6 dots. There are 4 dots and 4 fingers.)

Student Responses

1. Students circle groups of 6, 5, and 8.
2. Students circle groups of 4, 5, and 3.

Activity 2

🕒 15 min

Introduce Less, Same, More, Images

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to learn stage 2 of the Less, Same, More center. Students compare groups of images in different arrangements. The activity synthesis highlights that numbers that are fewer than 5 come before 5 in the count sequence and numbers that are more than 5 come after 5 in the count sequence. This idea will be revisited in future sections and units. Students need repeated experiences comparing groups of objects, images, and numbers to be able to notice, articulate, and use the connection between the counting sequence and comparing the size of numbers (MP7, MP8).

The recording sheet is printed in the student book for this activity. There is a introduction master available for students to use during centers in future activities and lessons.

Access for English Learners

MLR8 Discussion Supports. Remind students to use comparison language such as “fewer than,” “the same number as,” or “more than.”

Advances: Listening, Speaking

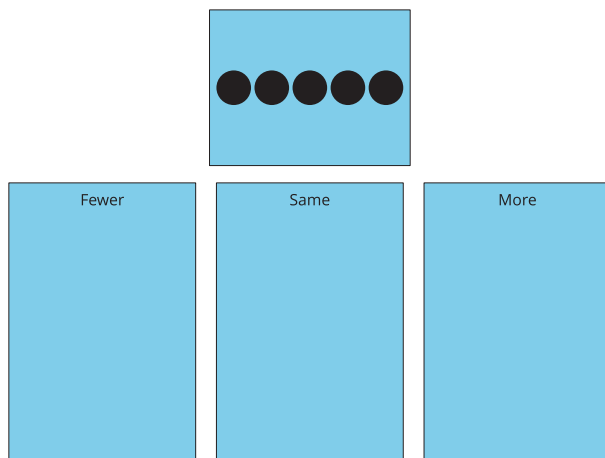
Materials to Copy

Image Cards Grade K (groups of 2), Less, Same, More Mat (groups of 2)

Required Preparation

- Create a T-chart labeled “Fewer than 5” and “More than 5”.

Student-facing Task Statement



Student Responses

Students place images of 1, 2, 3, and 4 on the left.

Students place images of 5 in the middle.

Students place images of 6, 7, 8, 9, and 10 on the right.

Launch

- Groups of 2
- Give each group of students a set of cards.
- “We are going to learn a new way to play the Less, Same, More center.”
- Display the student page.
- “How many dots are in the box?” (5)
- 30 seconds: quiet think time
- Share responses.
- Display an image card.
- “How many dots are there?”
- 30 seconds: quiet think time.
- Share responses.
- “Are there fewer, the same, or more than 5? How do you know?”
- Point to each part of the mat as you explain: “If it shows fewer than 5, put the card on the left. If it shows the same number, put the card in the middle. If it shows more, put the card on the right.”
- “Choose a card, figure out how many things are on the card, and figure out if the image shows fewer, the same, or more than 5 images.”

Activity

- 7 minutes: partner work time

Synthesis

- Display t-chart labeled ‘Fewer than 5’ on the left and ‘More than 5’ on the right.
- “Choose a card that shows fewer than 5. How many things are on your card?”
- 30 seconds: partner work time
- Share responses.
- Write the numbers on the left side of the t-chart as students share.

- Repeat for cards that show more than 5.
- Read the numbers on each side of the chart.
- “What do you notice? What do you wonder?” (It sounds like you are counting. The numbers you say before 5 are all together on one side and the numbers you say after 5 are on the other side.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice counting and comparing groups of objects and images.

Students choose from any stage of previously introduced centers.

- Less, Same, More
- Bingo
- Math Stories
- Connecting Cubes
- Number Race

Materials to Gather

Materials from previous centers

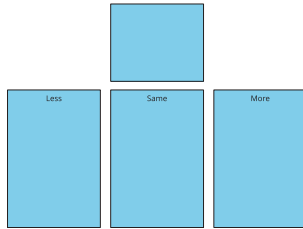
Required Preparation

- Gather materials from:
 - Less, Same, More, Stages 1 and 2
 - Bingo, Stage 1
 - Math Stories, Stage 1
 - Connecting Cubes, Stages 1-3
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

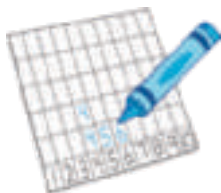
Less, Same, More



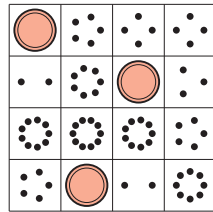
Math Stories



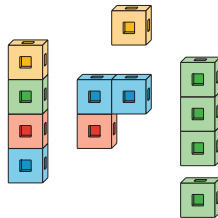
Number Race



Bingo



Connecting Cubes



Launch

- “Today we are going to choose from centers we have already learned. You can also keep playing Less, Same, More. Instead of always having 5 dots at the top, you can choose another card to put at the top. So if you put a card with 7 dots at the top, you would figure out if each card has more, the same number, or fewer than 7.”
- 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

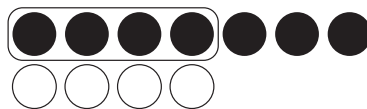
Synthesis

- “Which center was challenging for you today? What made it challenging?”

Lesson Synthesis

🕒 5 min

Draw the image for all students to see.



“Today we counted and compared the number of things in groups. How does this picture help you see that 7 is more than 4?” (I can see that 7 has 4 and then some more.)

"Let's practice counting to 20."

Demonstrate counting to 20. Count to 20 as a class 1-2 times.

Lesson 11: Create Groups of Images

Standards Alignments

Addressing K.CC.B, K.CC.C.6
 Building Towards K.CC.C.6

Teacher-facing Learning Goals

- Create groups that have more, fewer, or the same number of images as a given group.
- Use “more”, “fewer”, and “the same number” to describe comparisons.

Student-facing Learning Goals

- Let’s make groups that have more, fewer, or the same number of images.

Lesson Purpose

The purpose of this lesson is for students to create groups of images with more, fewer, or the same number of images as a given group.

Throughout the lesson students have multiple opportunities to create groups and use the language “more”, “fewer”, or “the same number.” In the lesson synthesis, students explain the strategies they use for comparing and creating groups of images.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3
- Sheet protectors: Activity 2

Materials to Copy

- Questions About Us Chart (groups of 30): Warm-up
- Image Cards Grade K (groups of 2): Activity 2

- Less, Same, More Mat (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

In a future section, students will compare written numbers 1–10. What strategies do you anticipate students will use to compare written numbers? How are these strategies the same and different from the strategies students have used to compare the number of images in groups in this section?

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

🕒 0 min

Unit 2, Section B Checkpoint

Standards Alignments

Addressing K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Use “more,” “fewer,” and “the same number” to describe comparisons.
- Make groups with more, fewer, or the same number of images than a given group.

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

Warm-up

🕒 10 min

Questions About Us: Slide or Swings?

Standards Alignments

Addressing K.CC.B

The purpose of this warm-up is for students to consider concepts of number in a familiar context. Students compare groups of images in the synthesis. Adjust the context to better reflect students' interests and experiences as needed. For example, the question can be adjusted to ask students to choose between two types of playground equipment that are available at school or in the community where students live. A question can also be chosen from the list that students generated in a previous lesson.

Instructional Routines

Questions About Us

Student Responses

Sample responses:

- Fewer people chose the swings. 6 people chose the swings and 10 people chose the slide. 6 is less than 10.

Materials to Copy

Questions About Us Chart (groups of 30)

Launch

- Groups of 2
- Display the Questions About Us Chart.
- "Would you rather play on the slide or on the swings?"
- 30 seconds: quiet think time
- Record each student's choice with a circle in a 5-frame.

Activity

- "How can we figure out how many students would rather play on the slide?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- "How many students would rather play on the slide?"
- If needed, ask, "How can we figure out how many students would rather play on the

swings?”

- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students would rather play on the swings?”

Synthesis

- “Did fewer people choose the swings or the slide? How do you know?”

Activity 1

🕒 10 min

Draw Groups of Images

Standards Alignments

Building Towards K.CC.C.6

The purpose of this activity is for students to draw groups of images that have more, fewer, or the same number of images as a group drawn by their partner. Students use comparison language as they describe the group their partner should draw. The synthesis builds on an idea introduced in the previous lesson. Students see that when creating a group that is more than another group, you first have to make the same amount and then add more (MP8).

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Check for understanding by inviting 1–2 students to rephrase directions in their own words. If time permits, invite students to share the “moves” they will make when it is their turn.

Supports accessibility for: Memory, Organization







Student-facing Task Statement

my group	my partner's group

my group	my partner's group

Student Responses

Sample response:

my group	my partner's group
	
	
	

Launch

- Groups of 2
- "You are going to draw a group of things. Then show your group to your partner and say one of the sentences."
 - "Draw a group that has more things than my group."
 - "Draw a group that has fewer things than my group."
 - "Draw a group that has the same number of things as my group."
- "Your partner will draw a group next to yours, tell you how many things are in the group, and say a sentence using 'more', 'fewer', or 'the same number'."
- "Switch roles and repeat."

Activity

- 5 minutes: partner work time

Synthesis

- Display 4 circles.
- "I need to draw a group of things that has more than this group."
- Draw 2 circles.
- "Does this group have more things? How can you tell?" (No, I know 2 is less than 4.)
- Draw 2 more circles.
- "Does this group have more things? How can you tell?" (No, they both have 4 circles so they are the same.)
- Draw 1 more circle.
- "Does this group have more things? How can you tell?" (Yes, because they both have 4, but your group has 1 more.)
- "What if I drew another circle?" (You would still have more. You could keep drawing as many circles as you want and you will

always have more than 4.)

Advancing Student Thinking

If students draw a group that doesn't match the direction their partner gave them, consider asking:

- “Tell me about the directions that your partner gave you.”
- “Can you draw a group that has the same number of things? How can you change this group so that it has more/fewer things?”

Activity 2

🕒 15 min

Introduce Less, Same, More, Drawings

Standards Alignments

Addressing K.CC.C.6

The purpose of this activity is for students to learn stage 3 of the Less, Same, More center. Students draw groups that have more, fewer, or the same number of images as a given group. Consider using a sheet protector or laminating the mats for students to use with dry erase markers. Otherwise, make multiple copies of the mats for each group.

🌐 Access for English Learners

MLR8 Discussion Supports. If necessary, invite students to repeat their reasoning to describe their comparison to a partner using mathematical language: “Can you say that again using the words more/fewer/the same?”

Advances: Listening, Speaking

Materials to Gather

Sheet protectors

Materials to Copy

Image Cards Grade K (groups of 2), Less, Same, More Mat (groups of 2)

Required Preparation

- Each group of 2 needs a set of cards from the introduction master.

Launch

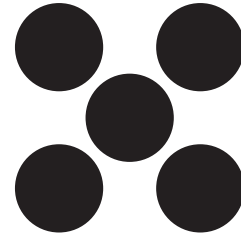
- Groups of 2
- Give students the mats and cards.
- “We are going to learn a new way to play the Less, Same, More center. It is called Less, Same, More, Drawings.”
- “First, draw a card and place it at the top of the mat. Figure out how many things are on the card.”
- Point to each square as you explain: “Draw three groups in the squares below. Draw one group that has fewer things, one group that has the same number of things, and one group that has more things.”
- “Switch mats with your partner. Check to be sure you agree with the groups your partner made.”
- “Choose one of the groups you drew to describe with a sentence using ‘more,’ ‘fewer,’ or ‘the same number’.”
- “When you are finished, place a new card at the top of your mat and draw groups that have more, fewer, and the same number in the squares.”

Activity

- 10 minutes: partner work time

Synthesis

- Display the card with 5 dots in a number cube arrangement:



- “Draw a group that has fewer images.”
- 1 minute: independent work time
- “How many images are in the group you drew?”
- Share responses.
- “Did all of our groups have the same number of things? Why?” (No, some people drew groups with 2 things and some people drew groups with 4 things. 4 and 2 are both less than 5.)
- “Did all of our groups have fewer than 5 things?” (Yes.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice counting and comparing groups of objects and images.

Students choose from any stage of previously introduced centers.

- Less, Same, More
- Bingo
- Math Stories
- Connecting Cubes
- Number Race

Materials to Gather

Materials from previous centers

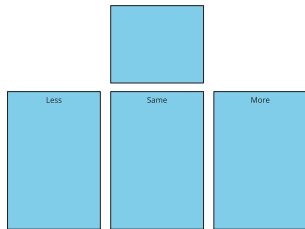
Required Preparation

- Gather materials from:
 - Less, Same, More, Stages 1-3
 - Bingo, Stage 1
 - Math Stories, Stage 1
 - Connecting Cubes, Stages 1-3
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

Less, Same, More



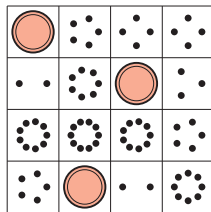
Math Stories



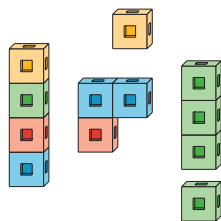
Number Race



Bingo



Connecting Cubes



Launch

- "Today we are going to choose from centers we have already learned. You can also continue playing Less, Same, More."
- 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

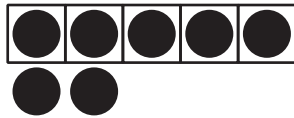
"Tell your partner one way they were a good partner today. Give your partner one suggestion for the next time we work with partners."

Lesson Synthesis

🕒 5 min

“Today we made groups with more, fewer, or the same number of things as another group.”

Draw or display:

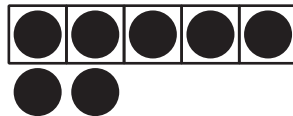


and



“Tell your partner how you would figure out which group has fewer dots.” (I would count each group and see which has more. I see 5 and 2 more in the first group so I would count 5 in the second group and see if there were 2 more. 7 is more than 6.)

Draw or display:



“Tell your partner what you would do if you had to make a group with fewer dots.” (I would draw 5. I know 5 is fewer because there wouldn't be any dots under the 5-frame.)

Student Section Summary

In this section, we counted many different groups of things.

We kept track of which ones we counted to make sure that we only counted each thing one time.

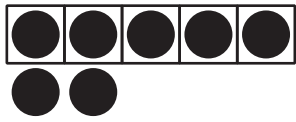
We also compared the number of things in groups using “more”, “fewer”, and “the same number.”

Sometimes we could just see that there were more.



There are more cups than straws.

Sometimes we had to match or count to figure out which group had fewer.



6 dots is fewer than 7 dots.

Section C: Connect Quantities and Numbers

Lesson 12: Connect Quantities and Numbers

Standards Alignments

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

Building Towards K.CC.A.3

Teacher-facing Learning Goals

- Match spoken and written numbers and groups of objects.

Student-facing Learning Goals

- Let's figure out which groups of objects go with which numbers.

Lesson Purpose

The purpose of this lesson is for students to connect quantities to written and spoken numbers.

In previous sections, students connected quantities to spoken number words. In this lesson, students connect groups of objects to written and spoken numbers. A reference sheet is provided for students who do not yet recognize all of the written numbers. Students can determine how many dots there are to figure out which number it is.

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

- Bags (brown paper): Activity 1, Activity 2
- Collections of objects: Activity 1, Activity 2
- Colored pencils, crayons, or markers: Activity 3

Materials to Copy

- Reference Sheet Numbers (1–10) with 5-Frames (groups of 2): Activity 2
- Number Mat 1-10 (groups of 2): Activity 3
- Number Race Stage 1 Recording Sheet for

- Connecting cubes: Activity 3
- Materials from previous centers: Activity 3

Writing (groups of 1): 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

Which centers from this unit can be used to support students in building an understanding that the arrangement of objects does not change the quantity?

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

🕒 0 min

Unit 2, Section C Checkpoint

Standards Alignments

Addressing K.CC.B.4

Student-facing Task Statement

Lesson observations

Student Responses

- Match groups of objects or images to the spoken number word that tells how many.

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

Warm-up

🕒 10 min

How Many Do You See: Image Flash

Standards Alignments

Addressing K.CC

The purpose of this How Many Do You See is for students to recognize and name groups of images and describe how they see the images. This is the first time students complete the full warm-up routine, with 3 images that are flashed quickly for the students to see. The first two images show 3 in different arrangements, which builds the understanding that the same quantity can be represented in different ways. The third image builds on the second image with two more dots added in a different color to encourage students to see the image as both 5 dots as well as a group of 3 dots and a group of 2 dots.

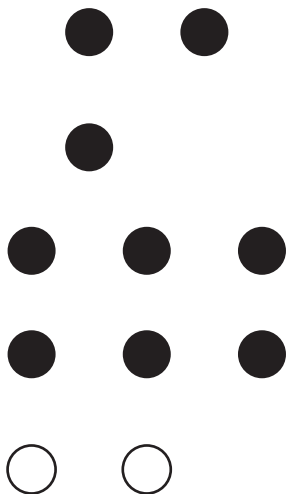
Instructional Routines

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 on the top and 1 on the bottom.
- 3: I just see 3 in a line.
- 5: There are 3 black dots and 2 white dots.

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 image of 5 dots.
- “Did you and your partner see these dots the same way?”
- “There are 5 dots. There are 3 black dots and 2 white dots.”

Activity 1

 10 min

Which Bag?

Standards Alignments

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

The purpose of this activity is for students to match numbers and groups of objects. Students find the bag that contains the given number of objects. The bags can be filled with math tools such as connecting cubes and counters or classroom objects. The number is displayed and said orally to assist students in connecting the written number to the spoken number word.

Access for English Learners

MLR8 Discussion Supports. Students should take turns finding a match and explaining their reasoning to their group. Connect to previously learned comparison language by listening for and encouraging the appropriate use of the phrase “same number as.”

Advances: Listening, Speaking

Materials to Gather

Bags (brown paper), Collections of objects

Required Preparation

- Each group of 4 needs 4 bags. One bag each with: 5 objects, 7 objects, 8 objects, and 9 objects.

Student Responses

Students find the bag that contains the given number of objects.

Launch

- Groups of 4
- Give each group of students 4 bags.
- Write or display the number 8.
- “Find the bag that has 8 objects.”

Activity

- 2 minutes: small-group work time
- Repeat the steps with the numbers 5, 7,

and 9.

Synthesis

- Invite a group of students to share which bag contained 9 objects.
- “How do you know that this bag of objects goes with the number 9?” (We counted them and there are 9.)

Activity 2

🕒 15 min

Counting Stations

Standards Alignments

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

The purpose of this activity is for students to match numbers and groups of objects. Each group of students has a collection of 1-10 objects in a bag labelled with a letter. Each group of students counts to determine how many objects are in their bag. Students find the number on their recording sheet and write the letter that is on their bag. The bags of objects can be rotated between groups or groups of students can move from one bag of objects to the next.

As students count the objects at each station, they write the letter next to the number that shows how many objects are in the bag. Consider establishing a noise or movement to signal to students when it is time to transition between stations. There do not need to be 10 stations.

🕒 Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Students might need support counting the collection of objects that are greater than 5. Give students access to 5-frames so that they can use them to help count the collections.

Supports accessibility for: Conceptual Processing, Organization, Visual-Spatial Processing

Materials to Gather

Bags (brown paper), Collections of objects

Materials to Copy

Reference Sheet Numbers (1–10) with

5-Frames (groups of 2)

Required Preparation

- Each group of 4 needs 1 bag of 1-10 objects labelled with a letter.

Student-facing Task Statement

number of objects	bag name
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Student Responses

Students write the letter from each station under the number that shows how many objects are in the collection.

number of objects	bag name
1	H
2	B
3	G
4	C
5	F
6	J
7	A
8	E
9	D
10	I

Launch

- Groups of 4
- Give students access to the Numbers Reference Sheet.
- Display a bag with 7 objects labelled with the letter "A".
- "How many objects are in the bag?"
- Count as a class or invite a student to count the objects.
- "There are 7 objects. Find the number 7 on your recording sheet. This bag has an 'A' on it, so we should write 'A' next to the number 7."
- Give each group of 4 students a bag.
- "There is a collection of objects and a letter on your bag. Figure out how many objects are in the collection. Then write the letter next to the number that shows how many objects are in the collection."

Activity

- 7 minutes: small-group work time
- Rotate bags or students to as many stations as time allows.

Synthesis

- Invite students to share which number they marked for each station.
- "How did you figure out that the number 5 goes with this collection of objects?" (I counted them and then looked for the number 5.)

Activity 3

🕒 20 min

Revisit Number Race, Numbers 1–10

Standards Alignments

Addressing K.CC.A.3

The purpose of this activity is for students to revisit stage 1 of the Number Race center. In an earlier variation, students traced numbers. Students practice recognizing and writing numbers as they roll a connecting cube onto the mat and write the number that it lands on. Students continue rolling and writing until one number "wins" (all of the numbers in the column are written). After students have written all of one number, they can finish writing the rest of the numbers. Students can use different colors or writing utensils during this center. Writing numbers backwards ("reversals") and incorrectly forming numbers is expected in kindergarten. The emphasis is on students writing a number that is recognizable to others with practice.

After they participate in the center, students choose from any stage of previously introduced centers.

- Geoblocks
- Math Fingers

Materials to Gather

Colored pencils, crayons, or markers,
Connecting cubes, Materials from previous centers

Materials to Copy

Number Mat 1-10 (groups of 2), Number Race Stage 1 Recording Sheet for Writing (groups of 1)

Required Preparation

- Gather materials from:
 - Number Race, Stage 1
 - Geoblocks, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Number Race

Launch

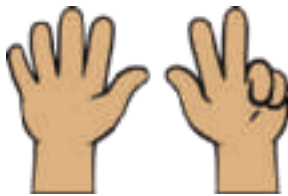
- Groups of 2
- Give each student a recording sheet. Give each group of 2 students a number mat



Geoblocks



Math Fingers



and a connecting cube. Give students access to colored pencils, crayons, or markers.

- Display the recording sheet.
- “We are going to learn a new way to play Number Race. What do you notice?” (The numbers are written at the bottom. There aren’t numbers to trace.)
- 30 seconds: quiet think time
- Share responses.
- “Instead of tracing numbers we will practice writing numbers. What do you do each turn when you play Number Race with your partner?”

Activity

- If needed, say: “Roll the cube onto the number mat. Find that number on your recording sheet and write that number in the bottom box. Take turns rolling and writing until you’ve written all of one number. That number is the winner.”
- 5 minutes: partner work time
- “Now you can choose another center. You can also continue playing Number Race.”
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 10 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- “Which number was your favorite to write? Which number was most challenging to write? What made it challenging?”

Lesson Synthesis

 5 min

Display 4 pattern blocks or 4 other objects.

“Tell your partner about these pattern blocks.”

Invite students who used the number four to describe the pattern blocks to share.

If no student used a number to describe the pattern blocks, say “Tell your partner about these pattern blocks using a number.”

Write the number 4.

“There are 4 pattern blocks. We can use words and numbers to describe how many there are. We can say the word four and write the number 4 and show 4 objects. They are all 4.”

Lesson 13: Numbers in Many Ways

Standards Alignments

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

Teacher-facing Learning Goals

- Count to answer “how many” questions about images presented in lines, arrays, circles, on fingers, and on 5-frames.
- Match written numbers and groups of images.

Student-facing Learning Goals

- Let’s figure out how many things there are.

Lesson Purpose

The purpose of this lesson is for students to connect groups of images in different arrangements to spoken and written numbers.

In a previous section, students counted groups of images in lines, arrays, dot cube arrangements, on 5-frames, and on fingers. In this lesson, students initially match one group of images with a number as they practice counting and keeping track of images in a circle. Circular arrangements can be more challenging for students because they need to keep track of where they started counting. Students need repeated practice counting and keeping track of images arranged in circles. This skill will be revisited in future units and is not necessary for all students by the end of this lesson. Then students match more than one group of images to each number, which encourages them to notice that the arrangement of a group of images does not affect the number of images. Two-color counters and connecting cubes should be made available to students. As demonstrated in the optional activity in the previous section, students can place one object on each image as they count as one way to keep track.

Students have used sets of cards in the Image Cards introduction master in previous sections and lessons. Add the cards from the Images in Circles Cards introduction master to the existing sets of cards.

In the lesson synthesis, students practice saying the verbal count sequence to 20. Add variety to the counting by adding movement. For example, students can count as they clap, stomp their feet, or jump.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

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

Materials to Copy

- Reference Sheet Numbers (1–10) with 5-Frames (groups of 2): Activity 1
- Circle Cards (groups of 2): Activity 2
- Sort By Number Mat 1-10 (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

How effective were your questions in supporting students' thinking today? What did students say or do that showed they were effective?

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

 0 min

Unit 2, Section C Checkpoint

Standards Alignments

Addressing K.CC.B.4

Student-facing Task Statement

Lesson observations

Student Responses

- Match groups of objects or images to the spoken number word that tells how many.

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

Warm-up

 10 min

How Many Do You See: Different Arrangements of 4

Standards Alignments

Building Towards K.CC

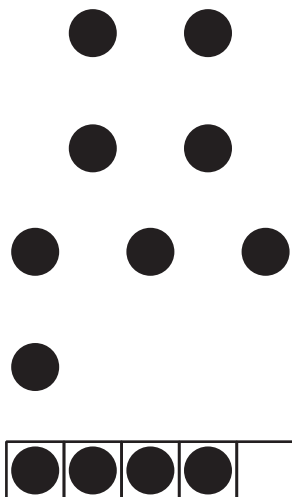
The purpose of this How Many Do You See is for students to recognize and name groups of images and describe how they see the images. Each image has 4 dots, but they are arranged differently. The number 4 is displayed during the synthesis to give students opportunities to recognize numbers and connect numbers and quantities.

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:

- 4: I counted 1, 2, 3, 4. There are 2 and 2 more.
- 4: I see 3 on top and 1 more on the bottom. I see 2 and then 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 or write and say “4”.
- “Each one has 4 dots. Even though they are arranged differently, they are all 4.”
- Display the image of 4 dots in a 5-frame.
- “A 5-frame is one tool that we have been using to arrange and organize objects or pictures. What do you know about this

- 4: It is just like the last picture but the dots are all in a line. 1 dot is missing from the 5-frame.
- 5-frame?" (There are 5 squares. In this picture, there are 4 dots in the squares. One square is empty.)

Activity 1

🕒 10 min

Matching Groups of Images and Numbers

Standards Alignments

Addressing K.CC.B.5

Building Towards K.CC.A.3

The purpose of this activity is for students to match groups of images to numbers. Students count images arranged in circles for the first time, which requires students to keep track of which image they counted first. As students work, monitor for students who:

- mark which image they counted first
- mark each image as they count

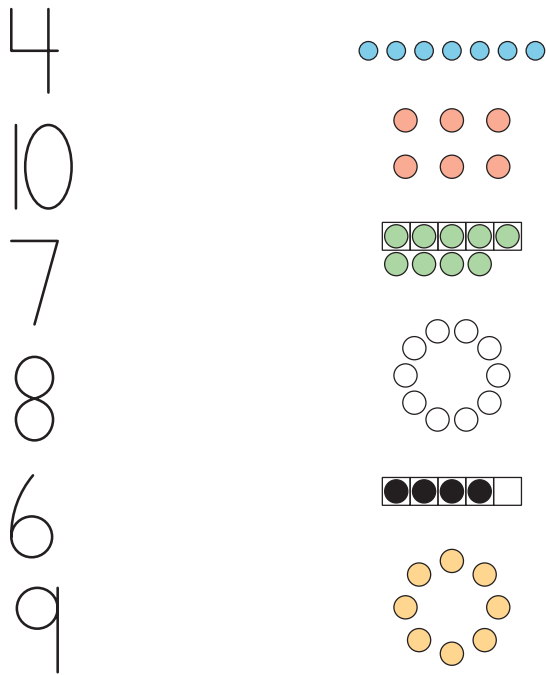
Materials to Copy

Reference Sheet Numbers (1–10) with 5-Frames (groups of 2)

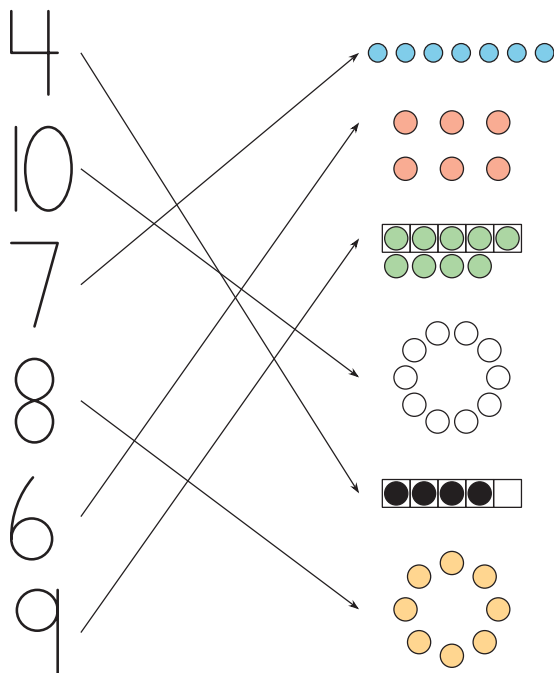
Student-facing Task Statement

Launch

- Groups of 2
- Display the student book.
- "What numbers do you see on this page?"
- "Let's say each number together."
- Point to and say each written number on the student page.
- Give students access to the Number Reference Sheet.
- "Draw a line from each number to the group of dots that it matches."



Student Responses



Activity

- 5 minutes: independent work time
- Monitor for students who have a method for counting images in a circle.
- "Share your work with your partner."
- 2 minutes: partner discussion

Synthesis

- Display 8 dots in a circle.
- "How did you figure out how many dots there are?"
- 30 seconds: partner discussion
- Invite previously identified students to share how they counted the dots.
- "What number matches this group of dots?" (8. There are 8 dots.)
- "I can write the number 8 or draw 8 things. They both show 8."

Advancing Student Thinking

If students count some of the images more than one time or do not count some images, consider asking:

- “Which dots have you counted? How do you know?”
- “What can you do to help you remember which dots you have counted already and which ones you still need to count?”

Activity 2

🕒 15 min

Different Arrangements, Same Number

Standards Alignments

Addressing K.CC.B.5

Building Towards K.CC.A.3

The purpose of this activity is for students to match groups of images to numbers. Students match multiple groups of images to the same number. Students start to work with numerical symbols as they learn that the number describing a set of images or objects stays the same no matter how those images or objects are organized (MP7, MP8).

🌐 Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the question, “How did you count?” or “How did you keep track of your count?” This gives both students an opportunity to produce language.

Advances: Speaking

♿ Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Students might need support connecting the numeral representation of the number to the groups of images. Make connections between these representations by counting the images together and verifying the matching numeral.

Supports accessibility for: Conceptual Processing, Language

Materials to Gather

Materials from a previous activity

Materials to Copy

Circle Cards (groups of 2), Sort By Number Mat 1-10 (groups of 2)

Required Preparation

Cut out images in circle cards from the introduction master to make a set of cards for each group of 2. Add these cards to the Image Cards from a previous lesson.

Student Responses

1	2	3	4	5
Cards with 1 object(s)	Cards with 2 object(s)	Cards with 3 object(s)	Cards with 4 object(s)	Cards with 5 object(s)
6	7	8	9	10
Cards with 6 object(s)	Cards with 7 object(s)	Cards with 8 object(s)	Cards with 9 object(s)	Cards with 10 object(s)

Launch

- Groups of 2
- Display the number mat and 1 card.
- “What do you notice? What do you wonder?”
- 30 seconds: quiet think time
- “Where do you think I should place this card? Why do you think that?” (There are 7 dots so you should put it by the number 7.)

Activity

- Give each group a set of cards and the sort by number mat.
- “With your partner place each card with the number it matches. Take turns flipping a card and explaining which number the card should go with.”
- 7 minutes: partner work time

Synthesis

- “Which cards did you match with the number 5?”
- Share responses. As students share, display the cards that students matched to the number 5.
- “What is the same about all of these cards? What is different about them?” (They all have 5 dots. They look different. Some are in lines and some are in circles.)

- “All of these cards show 5. This number is also 5.”

Activity 3

⌚ 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice composing, decomposing, and comparing numbers.

Students choose from any stage of previously introduced centers.

- Number Race
- Geoblocks
- Math Fingers

Materials to Gather

Materials from previous centers

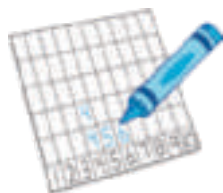
Required Preparation

- Gather materials from:
 - Number Race, Stage 1
 - Geoblocks, Stages 1 and 2
 - Math Fingers, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Number Race



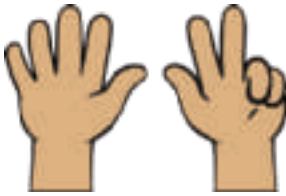
Launch

- “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

Geoblocks



Math Fingers

**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

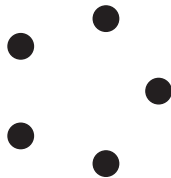
Synthesis

- “Which center did you enjoy most today? What did you like about that center?”

Lesson Synthesis

🕒 5 min

Write the number 5 and display these 2 cards:



“Mai matched the fingers and the dots in a circle to the number 5. Diego says that the fingers and dots can’t both show 5 because the dots are in a circle and the fingers are in a line. What do you think?” (There are 5 fingers and 5 dots so it doesn’t matter how they are arranged.)

“There are 5 fingers and 5 dots, so they can both go with the number 5. There are many different ways to show numbers. We can use ‘5’ to describe many groups that look different, but all have the same number of things.”

“Let’s practice counting to 20.”

Demonstrate counting to 20. Count to 20 as a class 1–2 times.

Lesson 14: Count Out Objects

Standards Alignments

Addressing K.CC, K.CC.B.5, K.CC.C.6

Teacher-facing Learning Goals

- Given a written number, count out a group of objects.

Student-facing Learning Goals

- Let's figure out how many toppings we need to put on our pizza.

Lesson Purpose

The purpose of this lesson is for students to count out a given number of objects.

Counting out objects requires students to remember which number they need to stop at while also matching each object with one number. In this lesson, students create multiple groups with the same number of objects that match written numbers.

Access for:



Students with Disabilities

- Action and Expression (Activity 2)



English Learners

- MLR7 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Chart paper: Activity 2
- Connecting cubes: Activity 2
- Counters: Activity 1, Activity 2, Activity 3
- Geoblocks: Activity 2
- Materials from previous centers: Activity 3
- Number cards 0–10: Activity 3
- Pattern blocks: Activity 2

Materials to Copy

- Number Cards (0-10) (groups of 2): Activity 1
- Reference Sheet Numbers (1–10) with 5-Frames (groups of 2): Activity 1
- Reference Sheet Numbers (1–10) with 5-Frames (groups of 2): Activity 2
- Bingo Stages 1-3 Gameboard (groups of 4): 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 next lesson, students draw groups of images to represent numbers. What did you learn about each student in today's activities that is helpful in planning for the counting activity tomorrow?

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

🕒 0 min

Unit 2, Section C Checkpoint

Standards Alignments

Addressing K.CC.B.5

Student-facing Task Statement

Lesson observations

Student Responses

- Count out 1–10 objects or draw 1–10 images to match a given number.

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

🕒 10 min

How Many Do You See: 5-frames and Fingers

Standards Alignments

Addressing K.CC

The purpose of this How Many Do You See is for students to subitize or use grouping strategies to

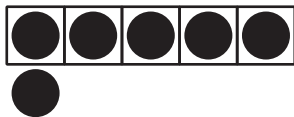
describe the images they see. When students use the structure of fingers and 5-frames to recognize and describe quantities they look for and make use of structure (MP7).

Instructional Routines

How Many Do You See?

Student-facing Task Statement

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



Student Responses

Sample responses:

- 5: The 5-frame is full so there are 5.
- 6: There is 1 more than the last time.
- 6: There are 6 fingers.

Launch

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

Activity

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

Synthesis

- Display the images of 6 dots in a 5-frame and 6 fingers.
- “What is the same about these? What is different?” (They both show 6. They both have a group of 5. One uses dots and one uses fingers.)

Activity 1

Toppings on Pizza

🕒 10 min

👤 ↔ 👤 PLC Activity

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to count out objects to match a number. Students recognize numbers 1-10 and count out objects to represent the number. The 5-frame is not shown under each number, but students who need more support in recognizing numbers should have access to the number cards with 5-frames.

Number Cards 0-10 are provided as a introduction master. In this unit, only numbers 1-10 should be provided to students. Zero will be introduced in a future unit. Students will continue to use these cards throughout the year. Consider copying the cards on cardstock or laminating them and keeping them organized in sets to be used repeatedly.

Materials to Gather

Counters

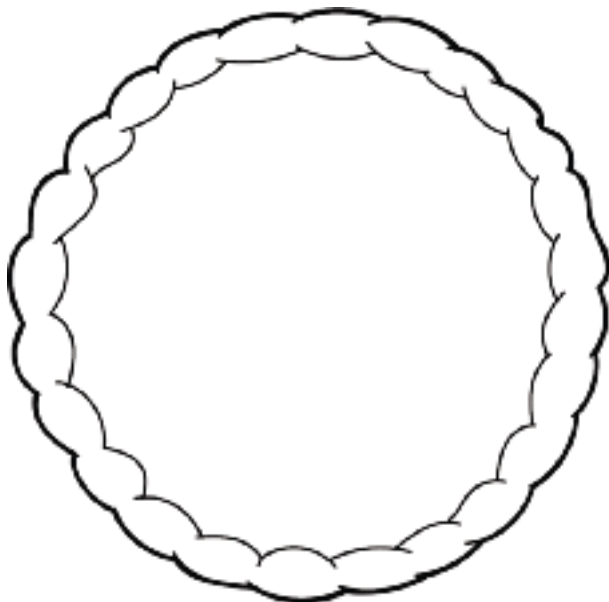
Materials to Copy

Number Cards (0-10) (groups of 2), Reference Sheet Numbers (1-10) with 5-Frames (groups of 2)

Required Preparation

- Create a set of number cards from the introduction master for each group of 2. Remove the cards with 0 from the sets.

Student-facing Task Statement



Launch

- Groups of 2
- Give each group of students a set of number cards and counters.
- "What is your favorite pizza topping?"
- Display the student book and a number card.
- "If my partner showed me this card, how many pizza toppings should I add to my pizza?"
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.

Student Responses

Students put the given number of counters on their pizza.

Activity

- “Pick a card and show it to your partner. Your partner puts that many pizza toppings on the pizza. Check to make sure your partner put the right number of toppings on the pizza. Take turns until you use all of the cards.”
- 5 minutes: partner work time

Synthesis

- “How did you know how many toppings to put on your pizza?” (Because we all saw the number 4 and put 4 pieces on our pizza.)
- Display the number 7.
- “I’m going to put the toppings on the pizza. Tell me when I should stop putting toppings on the pizza.”
- Count as you put each counter on the pizza. Do not stop adding counters until the class tells you to.
- If the class tells you to stop after placing 7 counters, ask:
 - “Why do I need to stop putting toppings on the pizza?”
 - “How many toppings are on the pizza? How do you know?”
- If the class does not tell you to stop placing the counters, place 10-15 counters on the pizza and ask:
 - “How many toppings are on my pizza now? How many toppings was I supposed to put on my pizza?”

Advancing Student Thinking

If students count out more or fewer objects than the given number, consider asking:

- “Tell me about how many toppings you are putting on the pizza.”
- “When will you stop putting toppings on the pizza?”

Activity 2

 15 min

Number Posters with Objects

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to count out objects to match a number. Students work in small groups to create many different groups with the number on their poster. After students create their posters, they participate in a gallery walk. As students see many different groups of objects representing the same number, they develop their understanding that the arrangement of objects does not affect the number (MP7). Consider establishing a small sound or motion to signal to students when it is time to move from one poster to the next. Students can use math tools that they have been introduced to or classroom objects such as crayons, paper clips, and buttons.

The chart paper with numbers will be used again in the next lesson.

Access for English Learners

MLR7 Compare and Connect. Synthesis: To amplify student language as they compare, contrast, and connect the groups of objects, encourage students to point to the relevant parts of the displays as they speak.

Advances: Representing, Conversing

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to plan a strategy, including the tools they will use to create their group poster. If time allows, invite students to share their plan with their whole group before they begin.

Supports accessibility for: Organization, Conceptual Processing

Materials to Gather

Chart paper, Connecting cubes, Counters, Geoblocks, Pattern blocks

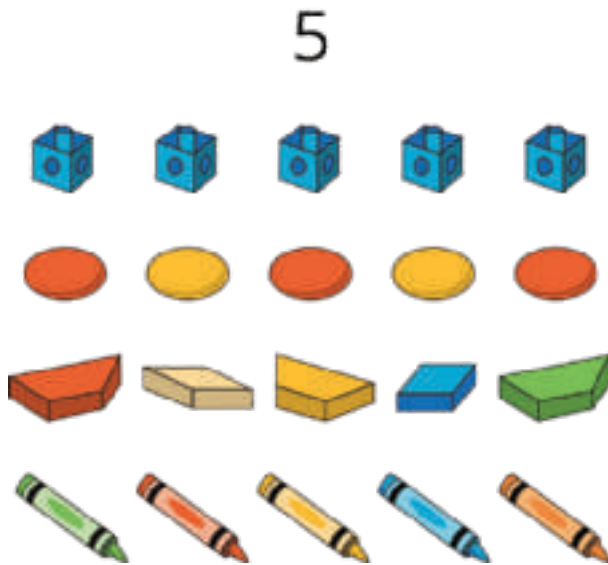
Materials to Copy

Reference Sheet Numbers (1–10) with 5-Frames (groups of 2)

Required Preparation

- Each group of 2 to 4 students needs a piece of chart paper with a number (1-10) written at the top.

Student Responses



Launch

- Groups of 2-4
- Give each group of students a piece of chart paper with a number 1-10 written on top. Give students access to math tools and classroom materials.
- "You are going to make a poster with your group. Use things from our classroom to make groups of objects to show the number on your poster."

Activity

- 5 minutes: small-group work time
- "Walk around and look at the posters that other groups made. What do you notice? How are the other posters the same as your poster? How are they different?"
- 5 minutes: gallery walk

Synthesis

- Display a completed number poster.
- "What is the same about all of the groups on this page? What is different?" (All of the groups have 5 objects. There are lots of different objects.)
- If needed, "The number 5 tells me to get 5 things. But I can get 5 cubes or 5 crayons or 5 apples. The number 5 tells us how many."

Activity 3

🕒 20 min

Introduce Bingo, Images and Numbers

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this activity is for students to learn stage 2 in the Bingo center. Students recognize numbers and identify groups that have the given number of images. The images are presented in a variety of arrangements, such as on fingers, in 5-frames, in lines, or in dot cube arrangements. Students may recognize the number of images or may count the images.

After they participate in the center, students choose from any stage of previously introduced centers.

- Number Race
- Geoblocks
- Math Fingers

Materials to Gather

Counters, Materials from previous centers, Number cards 0-10

Materials to Copy

Bingo Stages 1-3 Gameboard (groups of 4)

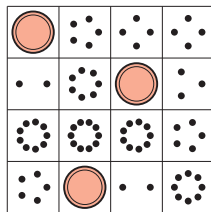
Required Preparation

- Gather materials from:
 - Number Race, Stage 1
 - Geoblocks, Stages 1 and 2
 - Math Fingers, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Bingo



Geoblocks

Number Race



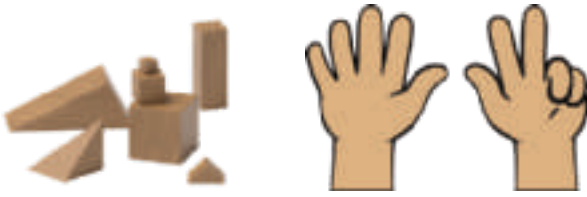
Math Fingers

Launch

- Groups of 4
- Give each student a game board. Give each group of students counters and a set of cards.
- “We are going to learn a new way to play Bingo. There are new cards that have numbers on them. What do you do each turn when you play Bingo with your group?”

Activity

- If needed, say: “Flip over a card and put it in the middle where everyone can see it. Put a counter on each square that has the same number of things. Take turns flipping over



the cards in the deck. The game ends when someone has 4 counters in a row."

- 7 minutes: small-group work time
- "Now you can choose another center. You can also continue playing Bingo."
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 8 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- Display the Bingo gameboards with counters on all of the groups of 5.
- "What card do you think this group flipped over? How do you know?" (They flipped over the card with the number 5. They covered up the groups with 5 things.)

Lesson Synthesis

🕒 5 min

"Today we counted out objects to show numbers. What other things could we do to show the number 9?" (We could show 9 fingers. We could draw a picture with 9 things.)

"Let's practice counting to 20."

Demonstrate counting to 20. Count to 20 as a class 1-2 times.

Lesson 15: Draw Groups of Things

Standards Alignments

Addressing K.CC, K.CC.A.3, K.CC.B.5
 Building Towards K.CC.A.3

Teacher-facing Learning Goals

- Given a written number, draw a picture with that number of images in it.

Student-facing Learning Goals

- Let's figure out how many things to draw.

Lesson Purpose

The purpose of this lesson is for students to draw a given number of images.

In a previous lesson, students created number posters by counting out groups of objects with a given number. In this lesson, students complete the same activity but draw groups of images to show each number. The same posters that were used in the previous lesson can be used in the first activity.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up), MLR7 Compare and Connect (Activity 1)

Materials to Gather

- Chart paper: Activity 1
- Connecting cubes: Activity 2
- Materials from previous centers: Activity 3

Materials to Copy

- Math Libs Scenes (groups of 2): Activity 2
- Number Mat 1-10 (groups of 2): Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min

Teacher Reflection Question

Think about a time you recently made a mistake during math class. How did you leverage your mistake to show students that mistakes are just learning in process?

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 2, Section C Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Count out 1–10 objects or draw 1–10 images to match a given number.
- Write numbers 1–10.

Begin Lesson

Warm-up

🕒 10 min

How Many Do You See: Many Ways to Show 5

Standards Alignments

Addressing K.CC

The purpose of this warm-up is for students to subitize or use grouping strategies to describe the images they see. Students look for and make use of structure when they notice and use the arrangement of one image to help them with the next (MP7).

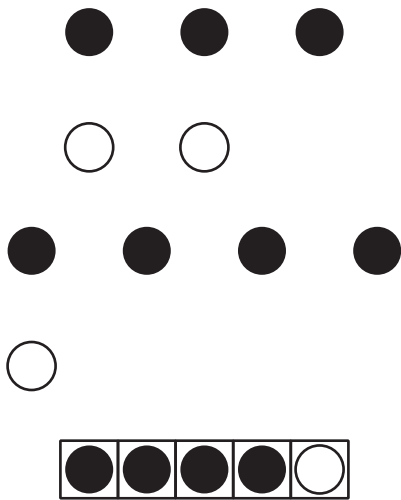
Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?

How do you see them?



Student Responses

Sample responses:

- 5: There are 3 black dots and 2 white dots.
- 5: There are 4 dots on top and 1 on the bottom.
- 5: The 5-frame is full. There are 4 black dots and 1 white dot, just like the last picture.

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 or write and say “5”.
- “Each group has 5 dots. Even though they are arranged differently, they are all 5.”
- “We have been showing numbers in many different ways. What ways to show 5 did you see in this warm-up? What are some other ways that you can show 5?” (We saw 5 dots. We saw 5 on a 5-frame. We could hold up 5 fingers. We could use 5 counters or objects.)

Activity 1

🕒 15 min

Number Posters with Drawings

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to draw images to match a number. Students work in small groups to draw many different groups with the number on their poster. After students create their posters, they participate in a gallery walk. Consider establishing a small sound or motion to signal to students when it is time to move from one poster to the next.

This activity uses *MLR7 Compare and Connect*. Advances: Representing, Conversing.

Instructional Routines

MLR7 Compare and Connect

Materials to Gather

Chart paper

Required Preparation

- Each group of 4 students need a piece of chart paper with a number (1-10) written at the top.

Student Responses

Launch

- Groups of 4
- Give each group of students a piece of chart paper with a number 1-10 written on top. Give students access to crayons, colored pencils, or markers.
- “You are going to make a poster with your group. Draw as many groups as you can to show the number on your poster.”

Activity

- 5 minutes: small-group work time
- “Walk around and look at the posters that other groups made. What do you notice? How are the other posters the same as your poster? How are they different?”
- 5 minutes: gallery walk

8



Synthesis

- Display a student drawing of 6 things or draw 6 apples in an array:



- “Elena drew these apples. Which number poster did she draw these apples for? How do you know?”
- Display a student drawing of 6 things or draw 6 apples in a line of 5 and 1:



- “Diego drew these apples. Which number poster did he draw these apples for? How do you know?”

Activity 2

⌚ 10 min

Introduce Math Libs, Draw 1–10

Standards Alignments

Addressing K.CC.B.5

Building Towards K.CC.A.3

The purpose of this activity is for students to learn stage 1 of the Math Libs center. Students draw groups of images to match given numbers.

Access for English Learners

MLR8 Discussion Supports. Synthesis: Some students may benefit from the opportunity to rehearse what they will say with a partner before they share with the whole class.

Advances: Speaking

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Check for understanding by inviting 1–2 students to rephrase directions in their own words. If time permits, invite students to share the “moves” they will make when it is their turn.

Supports accessibility for: Memory, Organization

Materials to Gather

Connecting cubes

Materials to Copy

Math Libs Scenes (groups of 2), Number Mat 1-10 (groups of 2)

Student Responses

Students draw the number of images in their picture scenes.

Launch

- Groups of 2
- Give each group of students a number mat, a connecting cube, and two copies of a page from the introduction master.
- “We are going to learn a new center called Math Libs.”
- Demonstrate rolling a cube onto the mat.
- “Should I write 4 next to the butterflies, ladybugs, caterpillars, flowers, or rabbits?”
- “I wrote 4 next to the rabbits, so now I need to draw 4 rabbits in my picture. It’s okay if my rabbits don’t look exactly like the rabbits in the picture. Then I will roll for my partner and they will write the number and add drawings to their picture.”
- Demonstrating drawing 4 rabbits in the picture.

Activity

- “Take turns playing with your partner. Roll

the cube and tell your partner the number. Then they choose where to write the number and draw that many things in their picture.”

- 6 minutes: partner work time

Synthesis

- Invite 3–4 students to share their pictures. Display the pictures for the class.
- “Why do all of the pictures have ladybugs in them?” (We all had to draw some ladybugs.)
- “Why don’t they all have the same number of ladybugs?” (The number was different each time you rolled.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice composing, decomposing, and comparing numbers.

Students choose from any stage of previously introduced centers.

- Math Libs
- Bingo
- Number Race
- Geoblocks
- Math Fingers

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:

- Math Libs, Stage 1
- Bingo, Stages 1 and 2
- Number Race, Stage 1
- Geoblocks, Stages 1 and 2
- Math Fingers, Stages 1 and 2

Student-facing Task Statement

Choose a center.

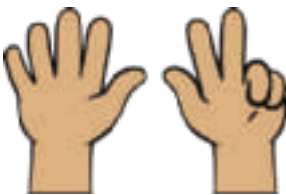
Math Libs



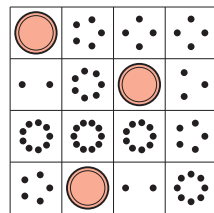
Number Race



Math Fingers



Bingo



Geoblocks



Launch

- "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

- Invite students to display their completed Math Libs page.
- "How many ____ did they draw? How do you know?" (I counted them. They wrote the number ____ next to it.)

Lesson Synthesis

🕒 5 min

Display 2 student-created Math Libs pictures from the second activity, but hide the numbers written at the top. Record and display one set of numbers separately, so that students can determine which picture matches the numbers.

"Han wrote down these numbers for his picture. Which picture did Han draw?"

Lesson 16: Write Numbers to Represent Quantities

Standards Alignments

Addressing K.CC, K.CC.A.3, K.CC.B.5
 Building Towards K.CC.B.4.c

Teacher-facing Learning Goals

- Write numbers 1-10 to represent a quantity.

Student-facing Learning Goals

- Let's write numbers to show how many there are.

Lesson Purpose

The purpose of this lesson is for students to write numbers to represent quantities.

Students count groups of objects and images and write numbers to show how many in each group. Writing numbers backwards (“reversals”) and incorrectly forming numbers is expected in kindergarten. The emphasis is on students writing a number that is recognizable to others with practice.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Bags (brown paper): Activity 2
- Collections of objects: Activity 2
- Materials from previous centers: Activity 3
- Sticky notes: Activity 2

Materials to Copy

- Math Stories Stage 1 Recording Sheet (groups of 2): Activity 1
- Math Stories Stage 1 and 4 Pictures (groups of 8): 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

The CCSS require students to compare two numbers between 1 and 10 presented as written numerals. How has the work of this section helped students prepare to meet this standard?

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

🕒 0 min

Unit 2, Section C Checkpoint

Standards Alignments

Addressing K.CC.A.3

Student-facing Task Statement

Lesson observations

Student Responses

- Write numbers 1–10.

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

🕒 10 min

How Many Do You See: One More with a 5-frame

Standards AlignmentsAddressing K.CC
Building Towards K.CC.B.4.c

The purpose of this How Many Do You See is for students to subitize or use grouping strategies to describe the images they see. Recognizing and describing one more than a given quantity will be useful in the next section when students work on creating and identifying one more than a given quantity or number.

When students use the structure of the 5-frame to recognize and describe quantities, they look for and make use 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

Sample responses:

- 4: There are 4 on the 5-frame. 1 is missing.
- 6: There is a 5-frame and 1 more. 5 and 1 more is 6.
- 7: There is 1 more than the last picture.

Launch

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

Activity

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

Synthesis

- Display the images with 6 dots on a 5-frame and 7 dots on a 5-frame.
- “What changed from this group to this group?” (There was one more dot. There were 6 and now there are 7.)

Activity 1

🕒 10 min

Revisit Math Stories, How Many?

Standards Alignments

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

The purpose of this activity is for students to revisit stage 1 of the Math Stories center. In an earlier variation, students asked and answered “how many” questions about groups of images in different arrangements. In the activity, students represent how many images there are using drawings, numbers, or words. Using written numbers to represent how many images there are is highlighted in the activity synthesis.

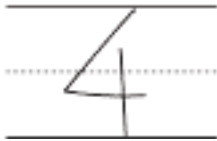
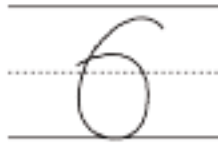
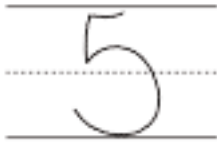
Materials to Copy

Math Stories Stage 1 and 4 Pictures (groups of 8), Math Stories Stage 1 Recording Sheet (groups of 2)

Student Responses

Launch

- Groups of 2
- Give each group of students picture cards. Give each student a recording sheet.
- “We are going to learn a new way to play Math Stories.”
- Display a picture card.
- “Think of one ‘how many’ question that you can ask your partner about this picture.”
- 30 seconds: quiet think time
- Share and record responses.
- “Take turns with your partner asking ‘how many’ questions about the picture. When your partner asks you a ‘how many’ question, show how many things there are on the recording sheet. Show your thinking using drawings, numbers, or words.”



Activity

- 5 minutes: partner work time
- Monitor for students who write a number in their representation.

Synthesis

- Invite students who wrote a number in their representation to share.
- “How many boats did they count? How do you know?” (They counted 5 boats. I know because they wrote the number 5.)
- “We can write numbers to show how many things we counted. If you haven’t already, write a number to show how many you counted.”
- “When you play Math Stories during centers, be sure to write a number to show how many things you counted. You can also use drawings or words.”

Advancing Student Thinking

If students count the images in the introduction master and do not create a written representation:

- “How many ___ are there?”
- “How can you show that there are ___ things? Can you use drawings or numbers to show that there are ___ things?”

Activity 2

🕒 15 min

Label Mystery Bags

Standards Alignments

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

The purpose of this activity is to represent quantities of 1-10 objects using a number. Students practice counting groups of 1-10 objects and recognizing and writing numbers. In the activity synthesis, students determine how many objects are in a bag based on the number label, which encourages them to connect numbers to quantities (MP2). Students develop their understanding that the arrangement of objects does not affect the quantity.

Any small classroom materials can be used to fill the mystery bags, such as buttons, connecting cubes, or pencils. Collections that students bring from home can also be used.

Access for English Learners

MLR8 Discussion Supports. Synthesis: After the objects are arranged in a line and students state how many objects there are, ask, “How do you know?”. Give students 1–2 minutes to make sure that everyone in their group can explain. Invite groups to rehearse what they will say before sharing with the whole class.

Advances: Speaking, Conversing

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Some students would benefit from having clear examples of the expectation of group work in this activity. Invite students to generate a list of shared expectations for group work. Ask students to share explicit examples of what those expectations would look like in this activity.

Supports accessibility for: Social-Emotional Functioning

Materials to Gather

Bags (brown paper), Collections of objects,
Sticky notes

Required Preparation

- Each student needs a brown paper (not see through) bag with 1 to 10 objects inside.

Student Responses

- Students determine how many objects are in the bag.
- Students use the correct number to represent how many objects are in each bag.

Launch

- Groups of 4
- “Today we’re going to play a game called ‘Mystery Bags’. There are some objects inside each bag but we can’t see how many. We need to figure out how many objects are in the bag and then put a label on the bag so that the next group knows

how many objects are inside.”

- Display a bag. Demonstrate taking each object out of the bag and counting the objects.
- “Which number should I write on my sticky note to show how many objects there are?”
- Demonstrate writing the number on the sticky note and placing it on the bag.

Activity

- Give each group of students 4 bags filled with 1-10 objects and sticky notes.
- “Work with your group to figure out how many objects are in each bag. Write a number on the sticky note to show how many objects are in each bag.”
- 5 minutes: small-group work time
- Each group trades their bags with another group.
- “Now you have another group’s bags. Look at their sticky notes and see if you can figure out how many objects are in the bag. Then check in the bag to see how many objects are really in the bag.”
- 5 minutes: small-group work time

Synthesis

- Display a bag containing 8 objects labelled with the number 8 for all to see.
- “How many objects do you think are in this bag? What makes you think that?” (I think there are 8 objects in the bag, because the number 8 is on the sticky note.)
- 30 seconds: quiet think time
- Share responses.
- “Let’s see if you were right.”
- Take the objects out of the bag and count them.
- “There were 8 objects in the bag. We could

tell because the number 8 was written on the bag. Now I'm going to put the objects in a line. How many objects are there now?"

- Demonstrate moving the 8 objects into a line.
- "We still have 8 objects. I didn't add any more objects or take any away, so there are still 8 objects."

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice composing, decomposing, and comparing numbers.

Students choose from any stage of previously introduced centers.

- Math Stories
- Math Libs
- Bingo
- Number Race
- Geoblocks
- Math Fingers

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Math Stories, Stage 1
 - Math Libs, Stage 1
 - Bingo, Stages 1 and 2
 - Number Race, Stage 1

- Geoblocks, Stages 1 and 2
- Math Fingers, Stages 1 and 2

Student-facing Task Statement

Choose a center.

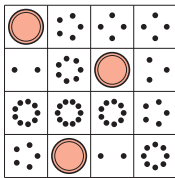
Math Stories



Math Libs



Bingo



Number Race



Geoblocks



Math Fingers



Launch

- “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 is one math question that your partner asked you during centers today?”

Lesson Synthesis

🕒 5 min

“Why are numbers helpful?” (They tell us how many. It is quicker to write a number than to draw a picture or take out objects.)

If needed, say: “We can write numbers to tell how many there are. Numbers help us communicate ‘how many’ easily.”

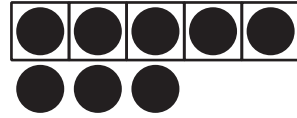
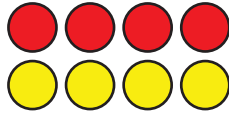
“Let’s practice counting to 20.”

Demonstrate counting to 20. Count to 20 as a class 1–2 times.

 **Student Section Summary**

In this section, we matched numbers with groups of things.

8

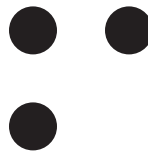


We also counted out objects and drew pictures to show numbers.

5



We wrote numbers to show how many things there are.



3

Section D: Compare Numbers

Lesson 17: Order Towers and Numbers

Standards Alignments

Addressing K.CC.B.4, K.CC.B.4.c, K.CC.C.6

Building Towards K.CC.C.7

Teacher-facing Learning Goals

- Order numbers from 1–10.

Student-facing Learning Goals

- Let's put numbers and cube towers in order from 1–10.

Lesson Purpose

The purpose of this lesson is for students to order numbers from 1–10.

Students build cube towers to match each number from 1–10. They put the towers and numbers in order. Students may use the count sequence to put the numbers in order, or they may use the cube towers as representations of each number to help them put the numbers in order. This representation of the numbers and cube towers for each number will be used in the next lesson as students determine one more and one less than a given number.

During this lesson and throughout the section, students who are not yet recognizing written numbers should have access to the Reference Sheet Numbers (1–10) with 5-frames introduction master.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Act It Out (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1, Activity 2

- Materials from a previous activity: Activity 2
- Materials from previous centers: Activity 3
- Number cards 0–10: Activity 1, Activity 2

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

In the first activity, students created towers for numbers. How does this relate to the standard K.CC.B.4.c?

(K.CC.B.4.c: Understand that each successive number name refers to a quantity that is one larger.)

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

 0 min

Unit 2, Section D Checkpoint

Standards Alignments

Addressing K.CC.B.4, K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize numbers 1–10.
- Represent numbers with drawings or objects in order to compare.

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

Warm-up

 10 min

Act It Out: Family Dinner

Standards Alignments

Addressing K.CC.B.4

The purpose of this warm-up is to allow students to connect language to mathematical representation, and consider different representations for the same quantity. This will be useful when students need to create and compare representations of quantities in a later activity. This warm-up gives students opportunities to make sense of problems (MP1).

Instructional Routines

Act It Out

Student-facing Task Statement

Han is helping his grandfather set the table for dinner.

Han puts 8 plates on the table.

Student Responses

Sample responses:

- We can draw pictures of 8 plates.
- We can use 8 objects like counters to represent the flowers.
- We can write the number "8".

Launch

- Groups of 2
- Display and read the story.
- "What is the story about?"
- 30 seconds: quiet think time
- Share responses.

Activity

- Read the story again.
- "How can you show the plates?"
- 30 seconds: quiet think time
- "Discuss your thinking with your partner."
- 1 minute: partner discussion
- Share responses.

Synthesis

- As a class, choose two ways to represent the plates in the story.

Activity 1

Cube Towers

🕒 15 min

Standards Alignments

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

The purpose of this activity is for students to make cube towers with a given number of cubes in each tower. Students practice counting out a given number of objects and connecting numbers and quantities. The cube towers will be used again in the next activity and in the next lesson.

Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Students might need support verifying that the cube tower with 10 cubes does not have 6 cubes. Make connections to the cube tower and the number cards by counting the total number of cubes in the 6 cube tower to verify that there are 6 cubes.

Supports accessibility for: Conceptual Processing, Language

Materials to Gather

Connecting cubes, Number cards 0–10

Required Preparation

Each group of students needs a set of number cards 1–10.

Student Responses

Students build a tower to represent each number from 1–10.

Launch

- Groups of 2
- Give each group a set of number cards and access to connecting cubes.
- “We are going to make cube towers. First, choose a number card. Then build a cube tower with that number of cubes. When both partners agree that the tower has the correct number of cubes, choose another number card and build the next tower.”

Activity

- 10 minutes: partner work time

Synthesis

- Display the number 6 and three different

cube towers (2, 6, 10).

- “Which tower matches this number? How do you know?” (6. I counted and there were 6 cubes. I can tell by looking that this one only has 2 cubes and the big one has too many cubes to be 6.)

Activity 2

🕒 10 min

Order Towers and Numbers

Standards Alignments

Addressing K.CC.C.6

Building Towards K.CC.C.7

The purpose of this activity is for students to put cube towers and numbers in order in a way that makes sense to them. Students may order the towers first and then match the numbers to the towers, match the numbers first and then match the towers to the numbers, or they may order the towers and the numbers separately. These different strategies are discussed in the synthesis, giving students a chance to articulate different ways they made sense of ordering the towers and numbers (MP3).

Access for English Learners

MLR8 Discussion Supports. 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 how you put your numbers/towers in order, and decide who will share each part.”

Advances: Speaking, Conversing, Representing

Materials to Gather

Connecting cubes, Materials from a previous activity, Number cards 0–10

Required Preparation

Students need access to number cards 1–10 and the cube towers that they created in the previous activity.

Student Responses

Students order their towers and number cards from 1–10.

Launch

- Groups of 2
- Give groups access to number cards and the cube towers created in the previous activity.
- “Put your cube towers and numbers in order in a way that makes sense to you.”

Activity

- 5 minutes: partner work time
- Monitor for a group that puts the towers in order first and another group that puts the numbers in order first.

Synthesis

- Invite a previously selected group to share how they put their towers in order first and then matched the numbers to each tower.
- “How did it help you to put the towers in order first?” (We started with the smallest tower that only has one cube, and then we kept finding the tower that had one more cube. At the end we just matched the numbers to the towers.)
- Invite a previously selected group to share how they put the numbers in order first and then matched a tower to each number.
- “How did it help you to put the numbers in order first?” (We put the numbers in order from 1-10 like when we count. Then we picked up each tower, counted the cubes, and put it next to the number it matches.)

Activity 3

Centers: Choice Time

🕒 20 min

The purpose of this activity is for students to choose activities that offer practice with number and counting concepts

- Math Stories
- Math Libs
- Number Race

Students will choose from these centers throughout the section. Keep materials from these centers organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Math Stories, Stage 1
 - Math Libs, Stage 1
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

Math Stories



Math Libs



Launch

- "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

Number Race

**Synthesis**

- “What is one thing that you did well during centers today? What is one thing that you want to improve the next time you work in centers?”

Lesson Synthesis

🕒 5 min

“Today we made cube towers to match each number. We put the towers and numbers in order.”

Display the cube towers in order from 1–10 with the numbers below each tower.

“What do you notice about the towers and the numbers?” (The towers get bigger as you count. Each tower has one more cube than the one before it. Each number is one more than the number before it.)

Lesson 18: 1 More or 1 Less with Towers and Numbers

Standards Alignments

Addressing K.CC.B.4, K.CC.B.4.c, K.CC.C.6
 Building Towards K.CC.C.7

Teacher-facing Learning Goals

- Identify one more and one less than a given number.

Student-facing Learning Goals

- Let's find 1 more or 1 less than a number.

Lesson Purpose

The purpose of this lesson is for students to identify 1 more or 1 less than a given number.

Students use the cube towers from the previous lesson. They may notice that the tower and number just before the given number shows one less and the tower and number just after the given number shows one more. Students also discuss how to use the count sequence to identify one less and one more than a given number.

In the lesson synthesis, students practice saying the verbal count sequence to 20. Add variety to the counting by adding movement. For example, students can count as they clap, stomp their feet, or jump.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Act It Out (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1, Activity 2
- Materials from previous centers: Activity 3
- Number cards 0–10: 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

In future lessons, students will compare written numbers 1-10. How does the work with one more and one less help prepare students for this work?

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

🕒 0 min

Unit 2, Section D Checkpoint

Standards Alignments

Addressing K.CC.B.4.c, K.CC.C.6

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize numbers 1–10.
- Use knowledge of the count sequence or understanding of magnitude of numbers to compare numbers.

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

🕒 10 min

Act It Out: Forks for Dinner

👤 ↔ 👤 PLC Activity

Standards Alignments

Addressing K.CC.B.4, K.CC.B.4.c, K.CC.C.6

Building Towards K.CC.C.7

The purpose of this warm-up is to allow students to connect language to mathematical representation, which will be useful when students need to represent and compare quantities in a later activity. This warm-up gives students opportunities to make sense of a problem by acting it out first before thinking about how to solve the problem (MP1).

Instructional Routines

Act It Out

Student-facing Task Statement

Mai is helping hand out the forks for dinner.
There are 9 people sitting at the table.
Mai has 7 forks.
Are there enough forks for each person to get one?

Student Responses

Sample responses

- We could have 9 people pretend to sit at a table. We could get 7 connecting cubes and pretend that they are forks. We could hand them out and see if there are enough.
- We could use 9 connecting cubes as people and 7 counters as forks and match them up.
- We could draw a picture with 9 people at the table and 7 forks.

Launch

- Groups of 2
- Display and read the story.
- "What is the story about?"
- 30 seconds: quiet think time
- Share responses.
- Read the story again.
- "How can you act out this story?"
- 30 seconds: quiet think time

Activity

- "Discuss your thinking with your partner."
- 1 minute: partner discussion
- Share responses.
- Choose a way to represent the story as a class.
- Read the story together.

Synthesis

- "Are there enough forks for each person to get one? How do you know?" (There are not enough forks for each person to get one. When we acted out the story, some of the people didn't get forks.)

Activity 1

🕒 10 min

What's Missing?

Standards Alignments

Addressing K.CC.B.4, K.CC.B.4.c, K.CC.C.6
 Building Towards K.CC.C.7

The purpose of this activity is for students to determine the missing number and tower from the set of 1–10. Students may use the written numbers or the towers to determine which are missing. Students may begin counting from 1 to find the missing number or tower. Students may create a cube tower with the same number of cubes as the tower next to the missing tower, and put 1 more cube on or take 1 cube away. Students may use the existing numbers and determine which number is more or less (“6 is 1 more than 5. 6 is 1 less than 7.”) In the synthesis, students will discuss how they thought about 1 more or 1 less to find the missing number. When students relate the count sequence, via cube towers or numbers, to 1 more and 1 less they are using a vital structure of the count sequence (MP7).

Materials to Gather

Connecting cubes, Number cards 0–10

Required Preparation

- Each group of 2 needs cube towers of 1–10 and number cards 1–10.

Student Responses

Sample responses:

- Students start at 1 and count to identify the missing tower and number.
- Students use the number or tower before the one that is missing and know what 1 more is.
- Students use the number or tower after the one that is missing and know what 1 less is.

Launch

- Groups of 2
- Give each group access to number cards and cube towers 1–10.
- “Put your towers and numbers in order from 1–10. Put the number under each tower.”
- 1 minute: partner work time
- “Now one person will close their eyes and their partner will remove one tower and the number that matches and hide them behind their back.”

- Demonstrate by telling the whole class to close their eyes. Remove the tower and number card that show 4.
- “Open your eyes. Which number and tower are missing? How do you know?”
- 30 seconds: quiet think time.
- 30 seconds: partner discussion
- “The number and tower that show 4 were missing.”
- Show the tower and the number card that was hidden.
- “Continue playing, taking turns with your partner.”

Activity

- 5 minutes: partner work time
- Monitor for groups using 1 more or 1 less to determine the missing number.

Synthesis


- Display the towers and numbers in order from 1–10 with 9 missing.
- “What number is missing? How do you know?”
- “Did you use the numbers or the towers to help you figure out what was missing?”
- Invite previously selected groups to share how they used 1 more or 1 less with towers or numbers to figure out what number was missing.

Advancing Student Thinking

If students do not use the towers or numbers to identify what is missing, consider asking:

- “What are you trying to figure out?”
- “Could you build a tower that fits in this spot?”

Activity 2

 15 min

One Less, One More

Standards Alignments

Addressing K.CC.B.4, K.CC.B.4.c, K.CC.C.6
 Building Towards K.CC.C.7

The purpose of this activity is for students to identify the number that is 1 less or 1 more than a given number. Students build cube towers and write numbers to match. Students can then find 1 less or 1 more, using the number or the cube towers for support.

Access for English Learners

MLR8 Discussion Supports. Invite students to chorally repeat phrases that include “one more than,” and “one less than” to increase opportunities for verbal output.

Advances: Listening, Speaking

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Students might benefit from counting the first tower that was built to determine how many cubes they need to create a tower that is 1 fewer or 1 more. Invite students to count in sequence the number of cubes and remind them to stop at the number that is 1 less or 1 more.

Supports accessibility for: Memory, Attention, Organization

Materials to Gather

Connecting cubes

Student-facing Task Statement

my tower	my partner's tower
_____	_____
-----	-----
_____	_____

Launch

- Groups of 2
- “You will work with your partner to find 1 less and 1 more.”
- “Let’s do one together.”
- “First, one person builds a tower with the cubes and writes down a number to show how many cubes are in the tower.”

my tower	my partner's tower
_____	_____
-----	-----
_____	_____

my tower	my partner's tower
_____	_____
-----	-----
_____	_____

my tower	my partner's tower
_____	_____
-----	-----
_____	_____

Student Responses

Students determine 1 fewer or 1 more using cube towers.

Students determine 1 less or 1 more using numbers.

- Make a tower with 7 cubes and write the number 7.
- "Then, their partner makes a new tower with either 1 fewer or 1 more cube than this tower."
- "How many cubes can be in the new tower we make?" (6 or 8)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- "We can make a tower with 6 cubes because 6 is 1 less than 7. Then we write the number 6."
- Build a tower with 6 cubes and write the number 6.
- "Now, describe our towers using the words 'one fewer' or 'one more.'" (The tower with 6 has 1 fewer cube than the tower with 7. The tower with 7 has 1 more cube than the tower with 6.)
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Give each group 10 connecting cubes.
- "Now it is your turn to play with your partner."

Activity

- 10 minutes: partner work time

Synthesis

- Invite a student to share a tower and number they recorded.
- "What cube towers and numbers can we record to show 1 more and 1 less?"

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose activities that offer practice with number and counting concepts

- Math Stories
- Math Libs
- Number Race

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Math Stories, Stage 1
 - Math Libs, Stage 1
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

Math Stories



Math Libs

Launch

- “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.”



Number Race



- 8 minutes: center work time

Synthesis

- “What did you like about the activities you worked on today?”

Lesson Synthesis

🕒 5 min

“Today we found 1 less and 1 more than a given number. Tell your partner how you can figure out what number is 1 less than 9.” (I can count and figure out what number I say right before 9. I can use cube towers and look for the tower before 9.)

“Let’s practice counting to 20.”

Demonstrate counting to 20. Count to 20 as a class 1–2 times.

Lesson 19: Compare Numbers and Images

Standards Alignments

Addressing K.CC.B.4, K.CC.C.6, K.CC.C.7

Teacher-facing Learning Goals

- Compare groups of images and numbers 1–10.

Student-facing Learning Goals

- Let's figure out which number is more.

Lesson Purpose

The purpose of this lesson is for students to compare groups of images and numbers 1-10.

In this lesson, students have the support of images given with each number. Students may use the images to help them compare, or they may use the count sequence and their understanding that each successive number represents a quantity of 1 more. In the next lesson, students will compare written numbers.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Act It Out (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3

Materials to Copy

- Less, Same, More Mat (groups of 2): Activity 2
- Number and Image Cards (groups of 2): Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min

Teacher Reflection Question

What makes someone good at math? In what ways are you making assumptions about which of your students are good at math?

Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

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

🕒 0 min

Unit 2, Section C Checkpoint

Standards Alignments

Addressing K.CC.C.6, K.CC.C.7

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize numbers 1–10.
- Represent numbers with drawings or objects in order to compare.
- Use knowledge of the count sequence or understanding of magnitude of numbers to compare numbers.
- Use “more,” “less,” and “the same number” to describe comparisons of written numbers.

Begin Lesson

Warm-up

🕒 10 min

Act It Out: Pass Out Snacks

Standards Alignments

Addressing K.CC.B.4

The purpose of this warm-up is to allow students to connect language to mathematical representation, which will be useful when students interpret and create representations of quantities in order to identify one more or one less.

This warm-up gives students opportunities to make sense of a problem by acting it out first before thinking about how to solve the problem (MP1).

Instructional Routines

Act It Out

Student-facing Task Statement

Diego is passing out snacks to the students at his table.

He has 5 apples.

His teacher gives him 1 more apple.

How many apples does Diego have now?



Student Responses

Sample responses:

- We can draw a picture of the 5 apples and then 1 more apple.
- We can use counters to show the apples. We can get 5 counters and then 1 more counter.

Launch

- Groups of 2
- Display and read the story.
- “What is the story about?”
- 30 seconds: quiet think time
- Share responses.
- Read the story again.
- “How can you act out this story?”
- 30 seconds: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share responses.
- Choose a way to represent the story as a class.
- Read the story together.

Synthesis

- “What number is one more than 5? How do you know?” (6. I counted the pictures we drew. I know that 6 comes after 5 when we count.)

Activity 1

🕒 10 min

Which Has More?

Standards Alignments

Addressing K.C.C.C.6, K.C.C.C.7

The purpose of this activity is for students to compare images and numbers. Students count the number of images and write the number. In order to compare the groups, students may use the images or the numbers. In the synthesis, students discuss both of these strategies.

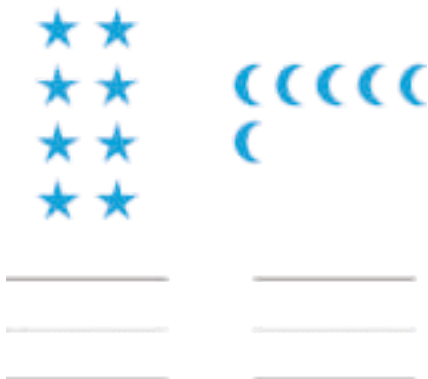
🕒 Access for Students with Disabilities

Engagement: Provide Access by Recruiting Interest. Leverage choice around perceived challenge. Invite students to decide which problem they want to solve first.

Supports accessibility for: Social-Emotional Skills, Attention

Student-facing Task Statement

1.



2.

Launch

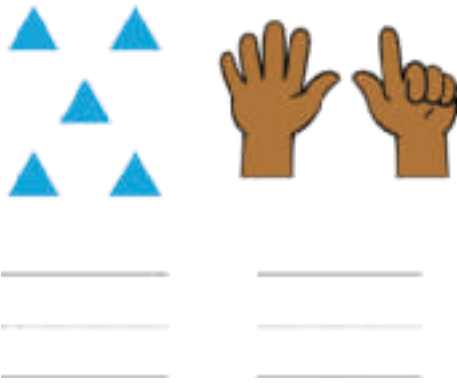
- Groups of 2
- “Figure out how many things there are in each group. Write the number. Then circle the group that has more.”

Activity

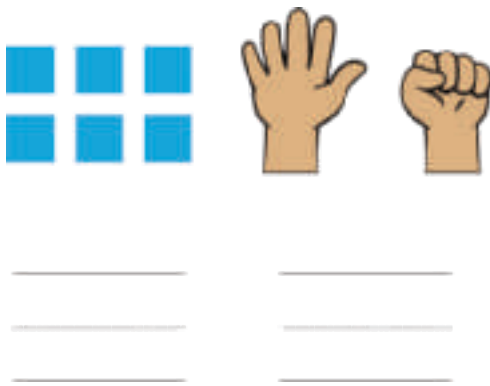
- 5 minutes: partner work time
- Monitor for students who use the images to compare and other students who use the numbers to compare.

Synthesis

- Display the second problem.
- Invite previously selected students to share how they used the images to compare.
- Invite previously selected students to share how they used the numbers to compare.



3.



Student Responses

1. 8 and 6, circle 8
2. 5 and 7, circle 7
3. 6 and 5, circle 6

Activity 2

🕒 15 min

Introduce Less, Same, More, Numbers and Images

Standards Alignments

Addressing K.CC.C.6, K.CC.C.7

The purpose of this activity is for students to learn stage 4 of the Less, Same, More center.

Students use cards that show the written number as well as a group of images representing the number. Students determine if the number on each card is less than, the same as, or more than the given number. During the synthesis, students discuss how the structure of the counting sequence helps us compare numbers (MP7).

Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the questions, “Why did you place that card there?”, and, “How do you know?”. This gives both students an opportunity to produce language.

Advances: Conversing

Materials to Copy

Less, Same, More Mat (groups of 2), Number and Image Cards (groups of 2)

Required Preparation

Cut out cards from the introduction master for each group of 2.

Launch

- Groups of 2
- Give students the mats and cards.
- “We are going to learn a new way to do the Less, Same, More center.”
- “First, draw a card and place it at the top of the mat. That card will stay there for the whole round.”
- “As you flip over each other card, decide if it shows, less than, the same number as, or more than the card at the top. If it shows less than, put it in the square on the left. If it shows the same number as, put it in the square in the middle, and if it shows more than, put it in the square on the right.”
- “After you place each card, tell your partner a sentence using the words ‘less than’, ‘the same as’, or ‘more than’.”
- Demonstrate one round.

Activity

- 10 minutes: partner work time

Synthesis

- Display a mat with the 7 card at the top.
- “What numbers are less than 7? How do you know?” (1, 2, 3, 4, 5, 6 because when you count all of those numbers come before 7 so they are less than 7.)
- “What numbers are more than 7?” (8, 9, 10)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose activities that offer practice with number and counting concepts

- Less, Same, More
- Math Libs
- Number Race

Materials to Gather

Materials from previous centers

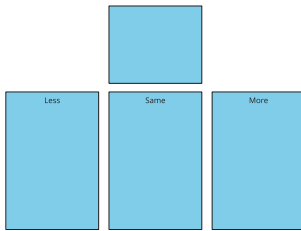
Required Preparation

- Gather materials from:
 - Less, Same, More, Stages 1-4
 - Math Libs, Stage 1
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

Less, Same, More



Math Libs



Number Race



Launch

- “Today we are going to choose from centers we have already learned. One of the choices is to continue playing Less, Same, More.”
- 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

- “Which materials do you need if you want to play Less, Same, More? Where can you find the materials in our classroom?”

Lesson Synthesis

🕒 5 min

Display 7 images with the number 7 underneath. Display the number 5.

“How can we figure out which is more?” (We can draw 5 things and figure out if there are more. I know that 7 is more than 5 because when we count, 7 comes after 5.)

Lesson 20: Represent and Compare Numbers

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.CC.C.6, K.CC.C.7

Teacher-facing Learning Goals

- Represent and compare numbers 1–10.

Student-facing Learning Goals

- Let's show numbers in different ways and make comparison statements.

Lesson Purpose

The purpose of this lesson is for students to represent and compare quantities and numbers to 10.

Students choose a number to represent in different ways using objects, images, and written numbers. Students use their classmate's representations to compare numbers and make comparison statements using the words "more", "less", and "the same number".

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR7 (Activity 2)

Instructional Routines

Act It Out (Warm-up)

Materials to Gather

- Chart paper: Activity 1
- Colored pencils, crayons, or markers: Activity 1
- Connecting cubes or counters: Activity 1
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min

Teacher Reflection Question

In this lesson, students represented numbers in different ways. What connections did students make between the different representations?

Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

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

🕒 0 min

Unit 2, Section C Checkpoint

Standards Alignments

Addressing K.CC.C.6, K.CC.C.7

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize numbers 1–10.
- Represent numbers with drawings or objects in order to compare.
- Use knowledge of the count sequence or understanding of magnitude of numbers to compare numbers.
- Use “more,” “less,” and “the same number” to describe comparisons of written numbers.

Begin Lesson

Warm-up

🕒 10 min

Act It Out: Plates and Cups for Dinner

Standards Alignments

Addressing K.CC.C.6

The purpose of this warm-up is to allow students to connect language to mathematical representation, which will be useful when students need to compare quantities and numbers in later activities. In the synthesis, students have the opportunity to practice using the language “more” to compare quantities.

This warm-up gives students opportunities to make sense of a problem by acting it out first before thinking about how to solve the problem (MP1).

Instructional Routines

Act It Out

Student-facing Task Statement

Lin and her brother are setting the table for dinner.

Lin put 8 cups on the table.

Her brother put 6 plates on the table.

Did Lin or her brother put more things on the table?



Student Responses

Sample responses:

- We could have someone pretend to be Lin and someone pretend to be her brother. They can pretend to hand out plates and cups.
- We can use counters as the plates and connecting cubes as the cups. We can take out 8 counters for the 8 plates and 6 cubes for the 6 cups.
- We can draw a picture with 8 cups and 6 plates.

Launch

- Groups of 2
- Display and read the story.
- “What is the story about?”
- 30 seconds: quiet think time
- Share responses.
- Read the story again.
- “How can you act out this story?”
- 30 seconds: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share responses.
- Choose a way to represent the story as a class.
- Read the story together.

Synthesis

- “Did Lin or her brother put more things on the table? How do you know?” (Lin put more things on the table. When we acted it out, there were 2 plates that did not have any cups, so there were more plates. 8 is more than 6.)
- “Tell your partner about 8 and 6 using ‘more.’” (8 is more than 6.)
- “8 plates is more than 6 cups. 8 is more than

Activity 1

🕒 10 min

Represent Numbers

Standards Alignments

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

The purpose of this activity is for students to represent a number from 1–10 in different ways. Students write the number, use objects to create groups, and draw groups of images. Students use these representations while they take a gallery walk in the next activity. Students use appropriate tools strategically as they choose which objects to use and how to organize them to represent their number (MP5).

🕒 Access for Students with Disabilities

Representation: Internalize Comprehension. Students would benefit from recalling the previous activity where they created a poster. Begin by asking, “Does anyone remember doing a previous activity where you had to create a poster?” Invite students to share what expectations and strategies they used in the prior activity and determine if any of those are applicable in this activity.

Supports accessibility for: Social-Emotional Functioning

Materials to Gather

Chart paper, Colored pencils, crayons, or markers, Connecting cubes or counters

Required Preparation

- Each group of 2 needs 1 half sheet of chart paper.

Student Responses

Students choose a number and represent it in different ways including writing the number, creating groups of objects, and drawing groups of images.

Launch

- Groups of 2
- Give each group a half-sheet of chart paper and access to crayons or colored pencils and connecting cubes or counters.

- “Work with your partner to choose a number from 1–10 to show in many different ways.”
- 1 minute: partner discussion
- “Show your number in as many different ways as you can.”

Activity

- 5 minutes: partner work time

Synthesis

- “What are some different ways you and your partner showed your number?” (We counted out 5 cubes. We wrote the number 5. We drew groups of 5 images. We showed that it is 1 more than 4 and 1 less than 6.)

Activity 2

🕒 15 min

Gallery Walk: Different Representations

Standards Alignments

Addressing K.CC.C.6, K.CC.C.7

The purpose of this activity is for students to look at different representations of numbers 1–10 that their classmates made. Students compare two numbers, using the numbers or any of the representations on the charts. They make comparison statements using the words, “more”, “less”, and “the same number.” When students share how they compare their numbers, they use their own mathematical vocabulary and listen to others' thinking (MP6).

🌐 Access for English Learners

MLR7 Compare and Connect. Synthesis: To amplify student language, and illustrate connections, follow along and point to the relevant parts of the displays as students compare the charts.

Advances: Representing, Conversing

Student Responses

Students compare the numbers using the words "more," "less", and "the same number".

Launch

- Groups of 4
- Arrange the charts from the previous activity around the room in groups of 2.
- "We are going to go on a gallery walk. We will look at two charts showing different numbers that our classmates made. First, talk to your group about what number each chart shows. Then, compare the numbers using the words 'more', 'less', and 'the same number'."
- "When you hear the signal, walk to the next group of charts and repeat."

Activity

- 10 minutes: small-group work time
- After students have had about 3 minutes discussing their first set of charts, give the signal for them to move on.
- Repeat 3 times.

Synthesis

- Display 2 charts.
- "What number does each chart show?"
- "Compare the numbers using the words 'more', 'less', and 'the same number'."
- Point to one of the charts and ask, "What number is 1 more than this number? What number is 1 less?"

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose activities that offer practice with number and

counting concepts

- Less, Same, More
- Math Libs
- Number Race

Materials to Gather

Materials from previous centers

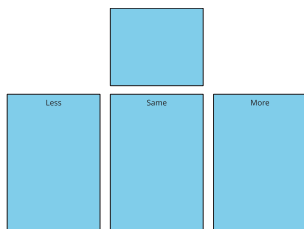
Required Preparation

- Gather materials from:
 - Less, Same, More, Stages 1-4
 - Math Libs, Stage 1
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

Less, Same, More



Math Libs



Number Race

Launch

- "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

- "Think of a time when you were frustrated while you were working in centers. What did you do? Was it helpful?"



Lesson Synthesis

🕒 5 min

"Today we showed numbers in many different ways. We also compared numbers."

"During the gallery walk, how did you figure out which number was more? What things did other students include on their posters that helped you compare the numbers?"

"Let's practice counting to 20."

Demonstrate counting to 20. Count to 20 as a class 1-2 times.

Lesson 21: Compare Numbers

Standards Alignments

Addressing K.CC.A.3, K.CC.C.6, K.CC.C.7

Teacher-facing Learning Goals

- Compare numbers 1–10.

Student-facing Learning Goals

- Let's figure out which number is more and which is less.

Lesson Purpose

The purpose of this lesson is for students to compare numbers 1–10.

Students can compare numbers in any way that makes sense to them. Students may:

- create groups of objects or draw groups of images and match to compare.
- use the count sequence to compare.
- begin to automatically know which numbers are less or more than a given number.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Act It Out (Warm-up)

Materials to Gather

- Connecting cubes or counters: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Materials to Copy

- Number Mat 1-10 (groups of 2): Activity 2

Lesson Timeline

Warm-up	10 min
---------	--------

Teacher Reflection Question

As you finish up this unit, reflect on the norms and activities that have supported each student

Activity 1	10 min	in learning math. List ways you have seen each student grow as a young mathematician throughout this work. List ways you have seen yourself grow as a teacher. What will you continue to do and what will you improve upon in Unit 3?
Activity 2	15 min	
Activity 3	20 min	
Lesson Synthesis	5 min	

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

⌚ 0 min

Unit 2, Section C Checkpoint

Standards Alignments

Addressing K.C.C.7

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize numbers 1–10.
- Represent numbers with drawings or objects in order to compare.
- Use knowledge of the count sequence or understanding of magnitude of numbers to compare numbers.
- Use “more,” “less,” and “the same number” to describe comparisons of written numbers.

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

Warm-up

⌚ 10 min

Act It Out: Hand Out Milk

Standards Alignments

Addressing K.C.C.6

The purpose of this warm-up is to allow students to connect language to mathematical representation, which will be useful when students need to compare quantities and numbers in later activities. In the synthesis, students have the opportunity to practice using the language “less” to compare quantities.

This warm-up gives students opportunities to make sense of a problem by acting it out first before thinking about how to solve the problem (MP1).

Instructional Routines

Act It Out

Student-facing Task Statement

Tyler is handing out the drinks to his class.
9 students chose milk.
5 students chose water.
Did fewer students choose milk or water?

Student Responses

Sample responses:

- We can have 9 students pretend to choose milk and 5 students pretend to choose water.
- We can draw a picture to show the students that chose milk and the students that chose water.

Launch

- Groups of 2
- Display and read the story.
- “What is the story about?”
- 30 seconds: quiet think time
- Share responses.
- Read the story again.
- “How can you act out this story?”
- 30 seconds: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share responses.
- Choose a way to represent the story as a class.
- Read the story together.

Synthesis

- “Did fewer students choose milk or water? How do you know?” (Fewer students chose water. I know that 5 is less than 9. 5 comes before 9 when we count.)
- “Tell your partner about the numbers 9 and 5 using ‘less.’”

Activity 1

🕒 10 min

Which Number is More?

Standards Alignments

Addressing K.C.C.7

The purpose of this activity is for students to compare numbers in a way that makes sense to them. Students can use physical objects or make drawings to represent each number (MP5), and match or count to compare. Students can also use their knowledge of the count sequence and understanding that each successive number refers to a quantity that is one more to compare the numbers. In the synthesis students describe how creating representations of numbers helps to compare numbers.

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. After students decide which manipulative they will use for the activity, invite students to plan a strategy for how they will use their manipulatives to determine which number is more. If students choose to use counters, give them access to 5-frames to help with the counting.

Supports accessibility for: Visual-Spatial Processing, Conceptual Processing, Organization

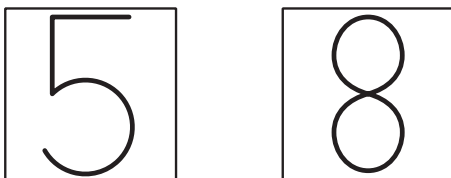
Materials to Gather

Connecting cubes or counters

Student-facing Task Statement

Circle the number that is more.

1.



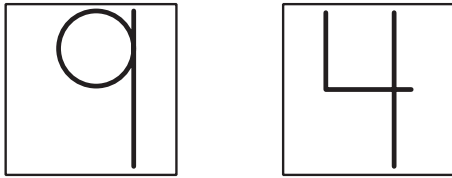
2.

Launch

- Groups of 2
- Give students access to connecting cubes or counters.
- “Work with your partner to figure out which number is more. Circle the number that is more.”

Activity

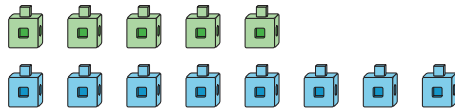
- 5 minutes: partner work time
- Monitor for students who create



Student Responses

1. 8. Sample responses:

- a. I counted out 8 cubes and 5 cubes. I lined them up and matched them. The line of 8 cubes has extra cubes at the end so 8 is more than 5.



- b. I drew a line of 8 circles and a line of 5 circles so that they match. I can see that the 8 has extra circles, so 8 is more than 5.



- c. I know that when I count to 10, I say 5 first and then I say 8 later. 1, 2, 3, 4, 5, 6, 7, 8. The numbers get bigger as you count, so 8 is more than 5.

2. 9

representations of the numbers using cubes or a drawing and use these representations to compare.

- Monitor for students who counted to figure out which number is more.

Synthesis


- Invite previously selected students to share the representations they made and how they used them to figure out which number is more.
- “How did counting out the groups of objects or drawing pictures help you figure out which number is more?”
- Invite previously selected students to share how counting helped them compare the numbers.
- “We know 8 is more than 5. Compare these numbers using ‘less’.”

Advancing Student Thinking

If students circle the number that is less instead of the number that is more, consider asking:

- “What do you know about these two numbers? What are you trying to figure out?”
- “How can you use the cubes to show each number? How can the cubes help you figure out which number is more?”

Activity 2

 15 min

Which Number is Less?

Standards Alignments

Addressing K.CC.A.3, K.CC.C.7

The purpose of this activity is for students to write and compare numbers 1–10. Students compare numbers in any way that makes sense to them.

Access for English Learners

MLR8 Discussion Supports. Make sure that students can explain how they know which number is less. This invites groups to rehearse what they will say when they share with the whole class.
Advances: Speaking, Conversing, Representation

Materials to Gather

Connecting cubes or counters

Materials to Copy

Number Mat 1-10 (groups of 2)

Student-facing Task Statement

Write the numbers you roll.
Circle the number that is less.

_____	_____
-----	-----
_____	_____
_____	_____
-----	-----
_____	_____

Launch

- Groups of 2
- Give each group a number mat and 2 cubes. Give each group of students access to connecting cubes or counters.
- “We are going to roll two numbers and figure out which number is less.”
- Invite a student to act as your partner in the demonstration.
- “First we each roll a cube onto the number mat.”
- Demonstrate rolling cubes onto the number mat.
- “Next we write both numbers on the lines.”
- Demonstrate writing each number on a line.
- “In the last activity we circled the number

_____	_____
-----	-----
_____	_____

Write the numbers you roll.
Circle the number that is less.

_____	_____
-----	-----
_____	_____
_____	_____
-----	-----
_____	_____
_____	_____
-----	-----
_____	_____

Student Responses

- Students represent each number with objects and compare the objects to identify which number is less.
- Students draw a picture for each number to identify which number is less.
- Students identify the number that is less using the count sequence.

that is more. Now we are going to circle the number that is less. What could we do to figure out if 8 or 4 is less?" (You could draw pictures. You could count out objects and compare them. You could think about which number comes first when you count.)

- 30 seconds: quiet think time
- Share responses.
- Demonstrate one student suggestion for comparing 8 and 4.
- "4 is less than 8, so we circle the number 4."
- "It's your turn to play the game with your partner. You will each roll one cube, write down the numbers, and work together to figure out which number is less."

Activity

- 5 minutes: partner work time

Synthesis

- Display 9 and 2.
- "Which number is less? How do you know?" (2. I know that 2 is small. 9 is a lot more. When you count you come to 2 first which means it is less.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose activities that offer practice with number and counting concepts

- Less, Same, More
- Math Libs
- Number Race

Materials to Gather

Materials from previous centers

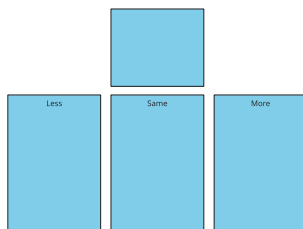
Required Preparation

- Gather materials from:
 - Less, Same, More, Stages 1-4
 - Math Libs, Stage 1
 - Number Race, Stage 1

Student-facing Task Statement

Choose a center.

Less, Same, More



Math Libs

Launch

- “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.”



Number Race



- 8 minutes: center work time

Synthesis

- Display student pages or materials from centers throughout the units.
- “What was your favorite center to work on during this unit? What made it your favorite center?”

Lesson Synthesis

🕒 5 min

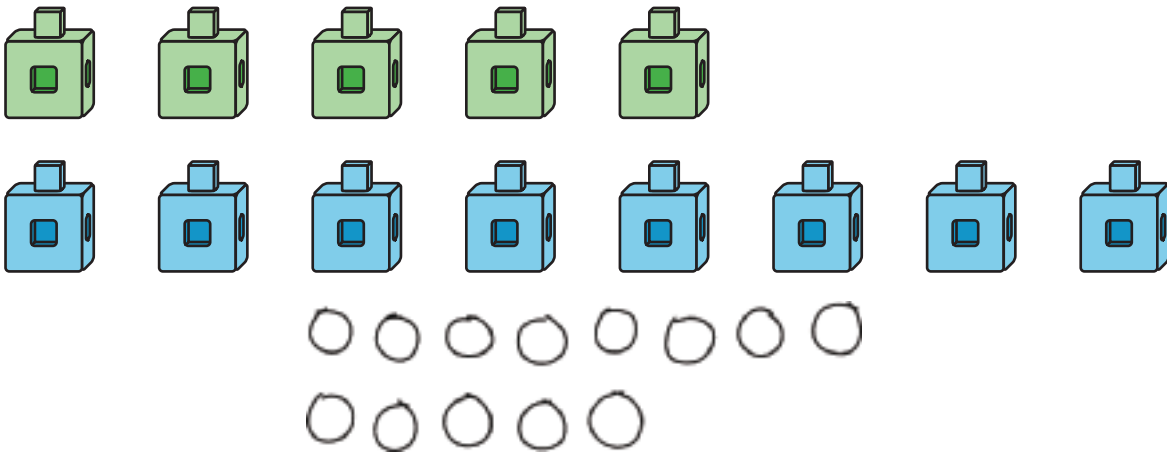
“Diego doesn’t know if 7 is more or less than 4. How could you help Diego understand that 7 is more than 4?” (I could tell him to show 4 fingers on his hands and show 7 fingers on my hands so he could see 7 is more. I could tell him that when you count, you get to 4 but then you need to say more numbers to get to 7 so it is more. I know that 4 is less than 5 and 7 is more than 5.)

Student Section Summary

In this section we compared numbers. We used objects and drawings to help us figure out which number is more and which is less.

5

8



We also learned that we can use what we know about counting to compare the numbers.

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

5 comes before 8 when we count.

5 is less than 8.

8 is more than 5.

Lesson 22: The Pizzeria (Optional)

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.CC.C.6, K.CC.C.7

Teacher-facing Learning Goals

- Compare groups of images and numbers 1–10.
- Connect quantities with spoken number words and written numbers.
- Write numbers 1–10 to represent a quantity.

Student-facing Learning Goals

- Let's count pizza toppings.

Lesson Purpose

The purpose of this lesson is for students to apply skills and their understanding of numbers 1–10 in the context of pizza toppings.

This lesson is optional because it does not address any new mathematical content standards. This lesson does provide students with an opportunity to apply precursor skills of mathematical modeling. In previous lessons students learned to connect quantities with spoken number words and written numbers. They compared and wrote numbers up to 10. In this lesson, they apply the various skills from the previous units in the context of pizza toppings. Throughout the lesson, students make sense of problems and persevere in solving them (MP1).

In the first activity, students take a class order for a pizza and make the order. In doing so, they connect the spoken number with the written number and a representation of the number. When students translate a mathematical answer back into the context of a real world situation, they model with mathematics (MP4).

In the second activity, students continue to take orders with up to 10 of any toppings for up to 3 types of toppings and create a visual representation of the order. They analyze their orders by comparing the different quantities. When students make choices and adhere to mathematical constraints, they model with mathematics (MP4).

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Colored pencils or crayons: Activity 1, Activity 2

Lesson Timeline

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

Materials to Copy

- Pizza Orders (groups of 1): Activity 2

Teacher Reflection Question

Check-in with your norms and routines. Are they promoting engagement from all of your students? Are there any adjustments you might make so that all students do math tomorrow?

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

Warm-up

🕒 10 min

Notice and Wonder: Pizza Toppings

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

The purpose of this warm-up is to elicit the idea that there are different quantities of toppings on each pizza, which will be useful when students create pizzas with given numbers of toppings in a later activity. While students may notice and wonder many things about these images, the number of toppings is the important discussion point. Students use more, fewer, and the same as to describe the quantities they see.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

Launch

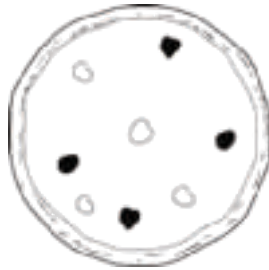
- Groups of 2

What do you wonder?

Jada's Pizza



Diego's Pizza



Student Responses

- Students may notice:
 - There are 2 pizzas.
 - There are different kinds of toppings on the pizzas.
 - One pizza has 3 white toppings. One has 4 white toppings.
- Students may wonder:
 - Which pizza has more toppings?
 - What do the different colored toppings represent?
 - How many toppings are there on both pizzas?

- "Jada and Diego drew different personal pizzas with sausage and olives on them."
- 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

- Display Jada's pizza.
- "The black toppings represent sausages and the white toppings represent olives. Did she put more sausages or more olives on her pizza? How do you know?"
- Display Diego's pizza.
- "Let's take a look at Diego's pizza. Did he put fewer sausages or fewer olives on his pizza? How do you know?"

Activity 1

🕒 15 min

Class Pizza Order

Standards Alignments

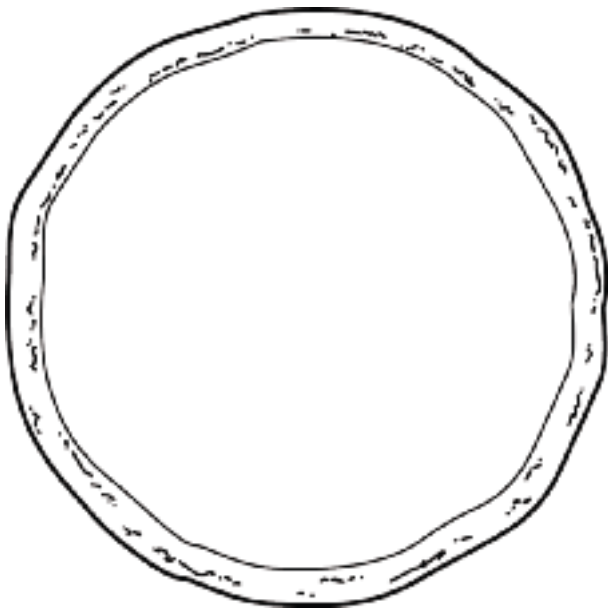
Addressing K.CC.A.3, K.CC.B.5, K.CC.C.6, K.CC.C.7

The purpose of this activity is for students to write numbers and draw images to represent each written number. In this activity the teacher walks students through taking a class order. Students draw the toppings on the pizza and then make comparisons in the synthesis.

Materials to Gather

Colored pencils or crayons

Student-facing Task Statement



Student Responses

Students draw toppings (in a way that makes sense to them) that match the class order.

Launch

- Groups of 2
- Give students access to colored pencils or crayons.
- “When you call a pizza shop to order pizzas, they usually have lots of toppings on their menu to choose from. The person who answers the phone has to tell the chef exactly what kind of toppings to put on the pizza and how many of each.”
- “We will create a class order for just one pizza. Our topping choices are pepperoni, sausage, olive, bell pepper, and pineapple. We can have up to 10 of any topping.”
- Invite 5 different students to share the number of toppings for each option.
- Consider role-playing as you take the order.
 - “What toppings would you like?”
 - For each topping, ask “How many ____ would you like?”
- Students record the number for each topping.

Activity

- “Use our class order to draw the toppings on the pizza.”
- 1 minute: independent work time
- 4 minutes: partner work time

Synthesis

- For a few of the toppings, ask:
 - “Are there more ____ or ____?”
 - “Are there fewer ____ or ____?”

- 30 seconds: quiet think time
- Share responses.

Activity 2

🕒 25 min

More Pizza Orders

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6, K.CC.C.7

The purpose of this task is for students to connect quantities with spoken number words and written numbers and to write numbers independently up to 10. This activity gives students an opportunity to practice their counting fluency and to demonstrate understanding of written numbers corresponding with specific quantities, regardless of arrangement.

Materials to Gather

Colored pencils or crayons

Materials to Copy

Pizza Orders (groups of 1)

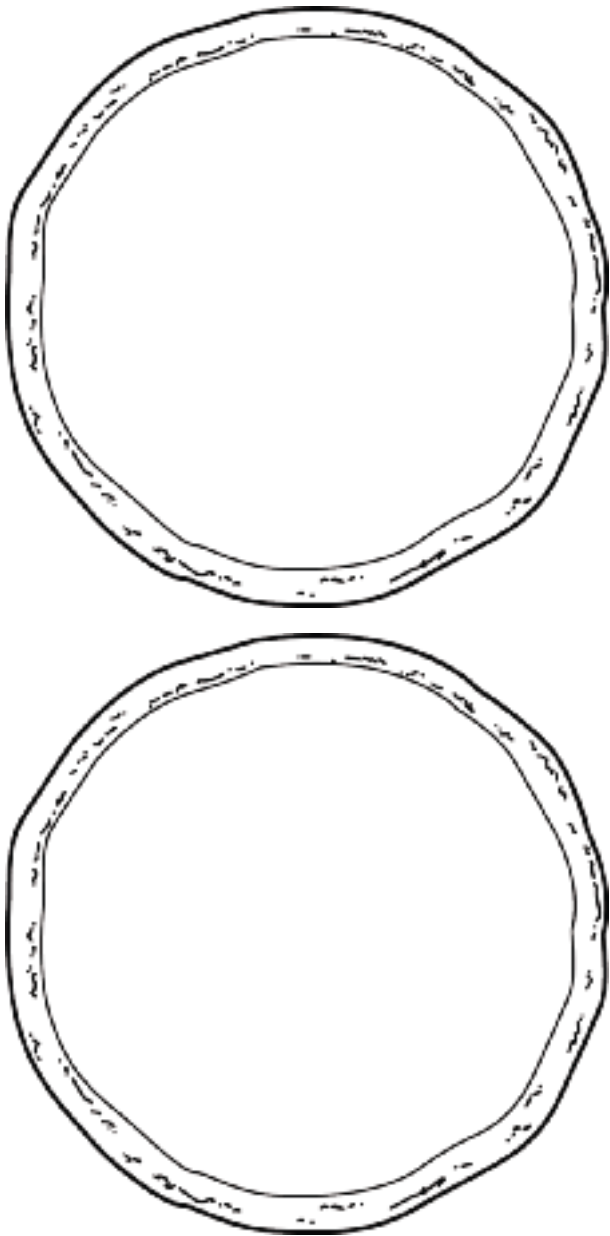
Student-facing Task Statement

Launch

- Groups of 4
- Give an order sheet to each student.
- “Take orders from your group. You can order a pizza with up to 3 kinds of toppings. You can have up to 10 of those toppings.”
- “Each person will take turns as an order giver and taker. Everyone will listen to the order, write down the number, and then make the pizza.”

Activity

- 10 minutes: group work time
- Monitor for explanations that demonstrate

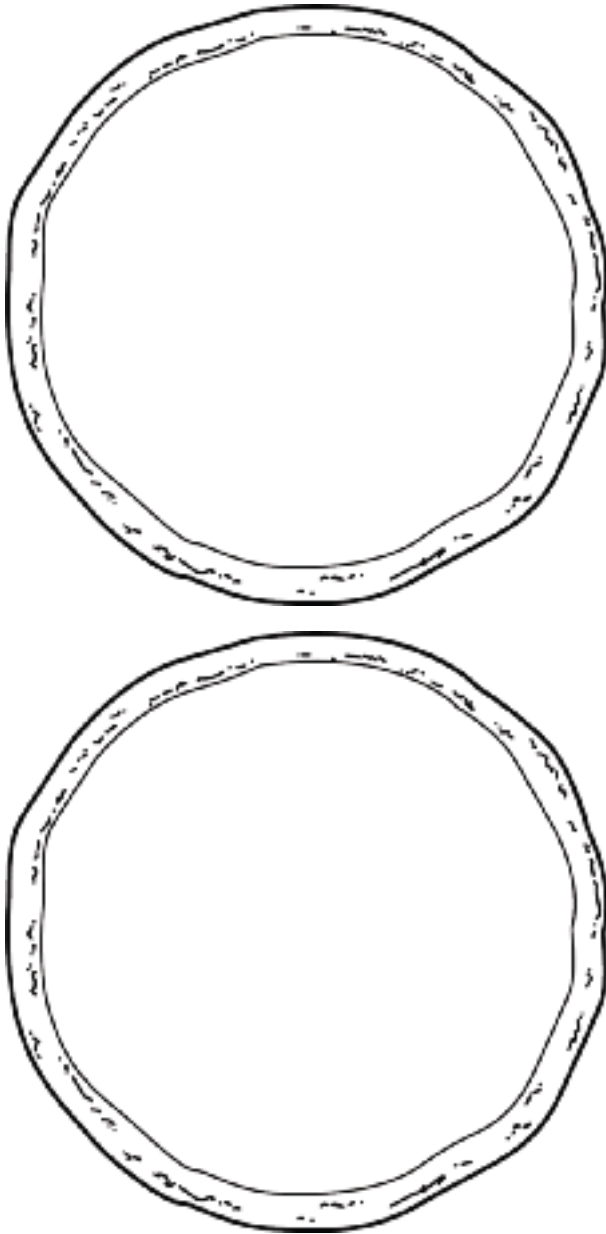


understanding of written numbers corresponding with specific quantities, regardless of arrangement.

- Monitor for 2–3 pizzas to share during synthesis.
- Monitor for an order sheet that has at least two toppings with the same amount for lesson synthesis.

Synthesis

- Display 2–3 pizzas from students for all to see.
- “Which pizzas have more than 6 ____ [topping of your choice]? How can you tell?”
- Count as a class or invite a student to count the toppings.
- “Which pizzas have less than 4 ____ [topping of your choice]? How can you tell?”
- Count as a class or invite a student to count the toppings.
- Display only one pizza.
- “How do you know your pizzas are exactly what the customer ordered?” (When I count each topping they match the number on the order.)



Student Responses

Students draw toppings to match each written number. Students show that the topping corresponds to the written number by counting or other appropriate strategies.

Lesson Synthesis

🕒 10 min

"Today we said, wrote, read, and compared numbers while we made pizzas by counting out and drawing different toppings for our pizzas."

Display an order form.

"How many of each topping are on this pizza?"

Invite different students to read the order form.

"Use the word 'more' to compare the toppings. Share with your partner."

Repeat the steps with "fewer" and the "same number."

Invite a few students to share their responses with the whole class.

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Family Support
Materials

Family Support Materials

Numbers 1–10

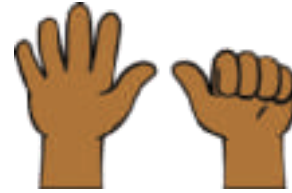
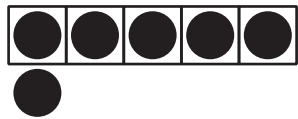
In this unit, students answer questions about how many objects there are. Students count out and compare groups within 10 and write numbers to represent how many.

Section A: Count and Compare Groups of Objects

In this section, students connect the quantities they see and the spoken number words as they count to answer questions about “how many”. They rearrange and count groups of objects, and notice that the arrangement of objects does not affect the total number of objects. Students compare groups of objects and use the language of more and fewer, which may be new to them. For example, students may compare a group of 7 objects to a group of 2 objects.

Section B: Count and Compare Groups of Images

In this section, students begin by counting images for the first time. This can be more challenging for students because images cannot be rearranged and it can be more difficult to keep track of which images they have counted. Students count groups of images in lines, arrays, on 5-frames, in number cube arrangements, and on fingers.

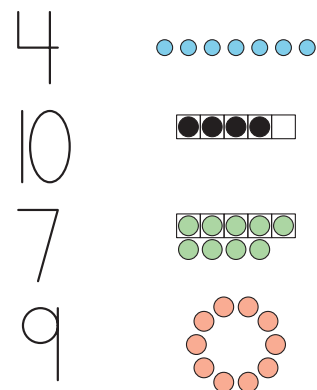


Students count and compare images arranged on 5-frames and images of fingers throughout the section. These images have the structure of 5 and some more, which supports students to count on from 5 to determine how many images there are.

Section C: Connect Quantities and Numbers

In this section, students write numbers to represent quantity for the first time in this section. Students continue their work from Section B of counting groups of organized images, and begin to count images arranged in a circle which requires students to develop a method to keep track of which images they have counted. Students also represent numbers by counting out groups of objects and drawing groups of images.

For example, students match the written numeral on the left to the dots on the right side of the page.



Section D: Compare Numbers

In this section, students compare written numbers. Students see that, as they count, the numbers get larger and that there is 1 more each time. They find 1 more and 1 less than a given number or group of objects. Students may compare written numbers in several ways:

- Create a drawing of each number and use the drawings to compare.
- Use mental images of numbers or number sense.
- Use the knowledge of the count sequence and know that numbers that come later in the count sequence are greater.

Try it at home!

Near the end of the unit, ask your student to compare two amounts of objects (pencils, cups, fruit, etc.)

Questions that may be helpful as they work:

- How many ____ do you have? (Repeat for both sets of objects.)
- Which one has more? Which one has fewer?
- How do you know?

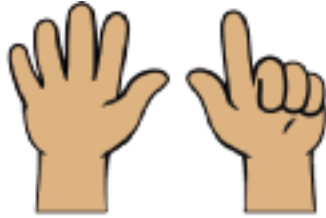
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Unit Assessments

End-of-Unit Assessment

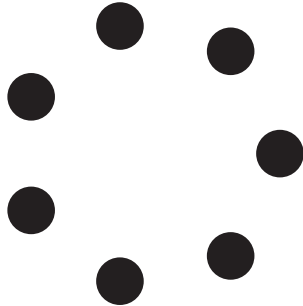
Numbers 1-10: End-of-Unit Assessment

1. Draw a line to match each picture with the number it shows.

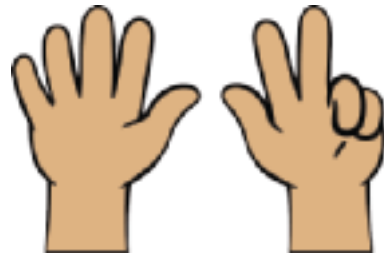
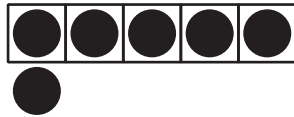


2. How many dots are there?

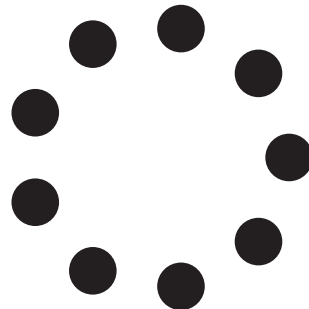
Write a number to show how many dots there are.



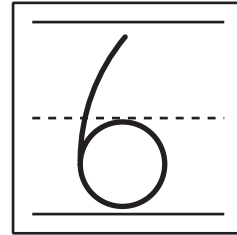
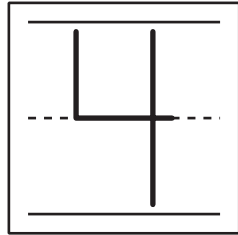
3. a. Circle the group that has more things.



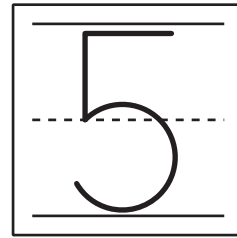
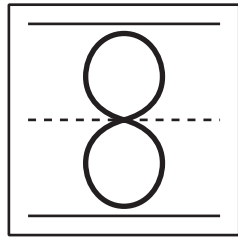
b. Circle the group that has fewer things.



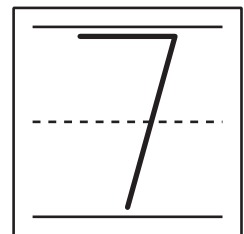
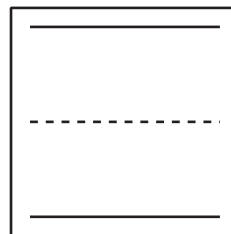
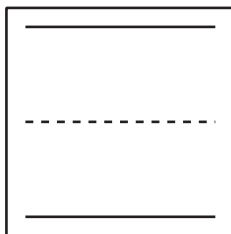
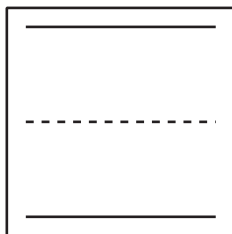
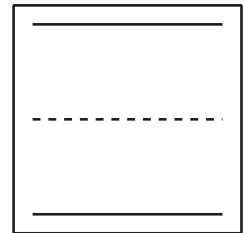
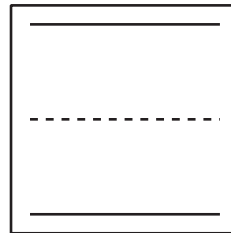
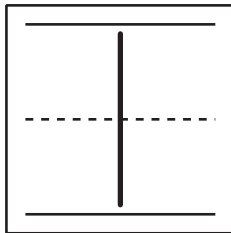
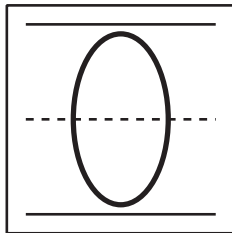
4. a. Circle the number that is more.



b. Circle the number that is less.



5. Write the missing numbers.



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Assessment Answer Keys

Check Your Readiness A, B, C and D
End-of-Unit Assessment

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 up to 10 objects and know the number remains the same regardless of the arrangement of objects.
 - Say one number for each object.
 - Answer how many without counting again.
 - Answer how many about a group that has been rearranged without counting again.
 - Use the structure of 5 (in 5-frames or on fingers) to count on from 5 to tell how many.
- Compare the number of objects in groups of up to 10 objects.
 - Compare the number of objects in groups.
 - Use “more,” “fewer,” and “the same number” to describe comparisons.
 - Make groups with more than, fewer than, or the same number of objects as a given group.

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.

- Count up to 10 images in organized arrangements and know the number remains the same regardless of the order in which the images are counted.
 - Say one number for each object.
 - Answer how many without counting again.
 - Use the structure of 5 (in 5-frames or on fingers) to count on from 5 to tell how many.
- Compare the number of images in groups of up to 10 images.
 - Compare the number of images in groups.
 - Use “more,” “fewer,” and “the same number” to describe comparisons.
 - Make groups with more than, fewer than, or the same number as a given group.

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.

- Understand the relationship between number and quantity.
- Connect quantities with spoken number words and written numbers.
 - Match groups of objects or images to the spoken number word that tells how many.
 - Match groups of objects or images to the written number that tells how many.
 - Count out 1–10 objects or draw 1–10 images to match a given number.
 - Write numbers 1–10.

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.

- Compare written numbers 1–10.
 - Recognize numbers 1–10.
 - Represent numbers with drawings or objects in order to compare.
 - Use knowledge of the count sequence or understanding of magnitude of numbers to compare numbers.
 - Use “more,” “less,” and “the same number” to describe comparisons of written numbers.

Assessment: End-of-Unit Assessment

Teacher Instructions

Give students access to 5-frames and connecting cubes or two-color counters.

Problem 1

Standards Alignments

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

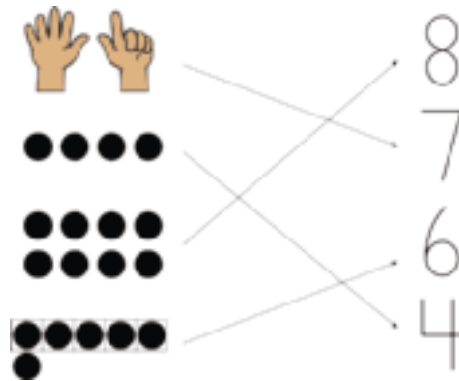
Narrative

Students count groups of images and match them with written numbers. Students may be able to accurately count the groups of images but make errors with matching if they do not recognize the written numbers. Read the task statement aloud.

Consider following up individually with students who do not yet answer this question correctly. Ask these students how many images there are to determine if they are able to count groups of images accurately.

Draw a line to match each picture with the number it shows.

Solution



Problem 2

Standards Alignments

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

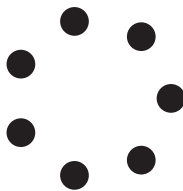
Narrative

Students count a group of dots in a circle and write a number to show how many dots there are. Students may be able to accurately count the group of dots but make errors because they do not yet recognize or are not yet able to write numbers. Reversals and incorrectly formed numbers are expected in kindergarten. The emphasis is on students writing a number that is recognizable to others with practice. Read the task statement aloud.

Consider following up individually with students who do not yet answer this question correctly. Ask these students how many images there are to determine if they are able to count groups of images accurately.

How many dots are there?

Write a number to show how many dots there are.



Solution

7

Problem 3

Standards Alignments

Addressing K.C.C.6

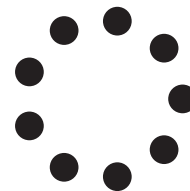
Narrative

Students compare groups of images. In both cases, the number of images differs by 2 making the comparison more accessible. If students answer incorrectly they may not yet understand the meaning of "more" and "fewer". Read the task statement aloud.

- a. Circle the group that has more things.



- b. Circle the group that has fewer things.



Solution

- a. 8 fingers
b. 7 dots

Problem 4

Standards Alignments

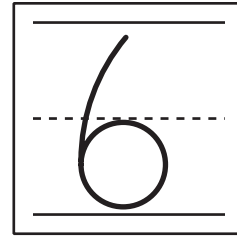
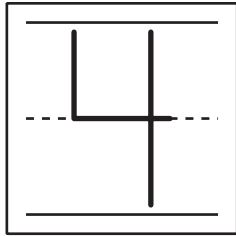
Addressing K.C.C.7

Narrative

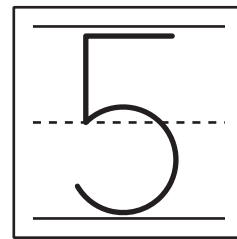
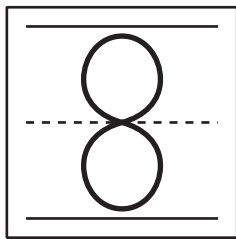
Students compare two written numbers, complementing the previous item where they compare collections of objects. Students who answer this question incorrectly may understand that a quantity of 4 is less than a quantity of 6 and may not yet recognize the written numbers 4 and 6.

Alternatively, they may still be learning the meaning of the words more and less. Read the task statement aloud.

- a. Circle the number that is more.



- b. Circle the number that is less.



Solution

- a. 6
b. 5

Problem 5

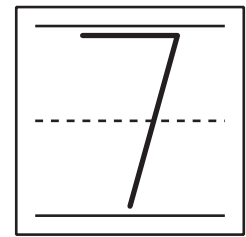
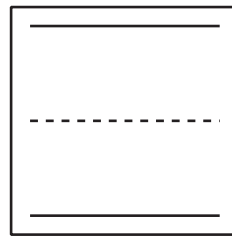
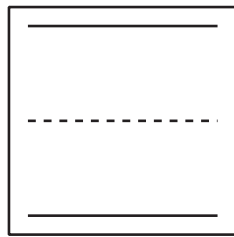
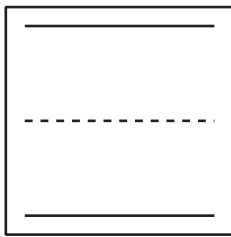
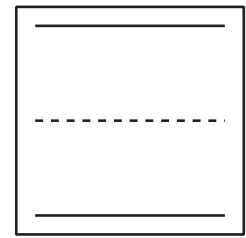
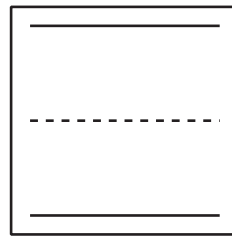
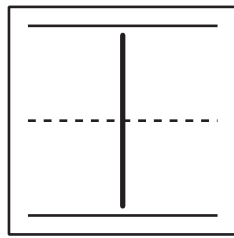
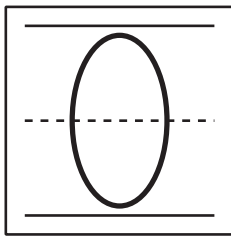
Standards Alignments

Addressing K.CC.A.3

Narrative

Students use their knowledge of the count sequence to write the missing numbers. As with other problems on the assessment, students may know how to say the count sequence but may draw the incorrect numbers. Students who are struggling with counting in the correct order will likely have difficulty with most of the questions on this assessment. Read the task statement aloud.

Write the missing numbers.



Solution

2, 3, 4, 5, 6

CKMath™
Core Knowledge **MATHEMATICS™**



Instructional
Masters

introduction Masters for Numbers 1-10

address	title	students written per copy	on?	students requires cutting?	card stock recommended?	color paper recommended?
Activity Kindergarten.2.8.WU	Questions About Us Chart	30	no	no	no	no
Activity Kindergarten.2.9.WU	Questions About Us Chart	30	no	no	no	no
Activity Kindergarten.2.10.WU	Questions About Us Chart	30	no	no	no	no
Activity Kindergarten.2.11.WU	Questions About Us Chart	30	no	no	no	no
Activity Kindergarten.2.16.1	Math Stories Stage 1 Recording Sheet	2	yes	no	no	no
Center	Math Stories Stage 1 Recording Sheet	2	yes	no	no	no
Activity Kindergarten.2.9.3	Bingo Stages 1-3 Gameboard	4	no	no	no	no
Activity Kindergarten.2.14.3	Bingo Stages 1-3 Gameboard	4	no	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no	no
Activity Kindergarten.2.3.3	Number Race Stage 1 Recording Sheet for Tracing	1	yes	no	no	no
Center	Number Race Stage 1 Recording Sheet for Tracing	1	yes	no	no	no

Activity Kindergarten.2.9.3	Bingo Stage 1 Cards	4	no	yes	no	no	no
Center	Bingo Stage 1 Cards	4	no	yes	no	no	no
Assessment Kindergarten.2	Checkpoint	0	yes	no	no	no	no
Activity Kindergarten.2.12.3	Number Race Stage 1 Recording Sheet for Writing	1	yes	no	no	no	no
Center	Number Race Stage 1 Recording Sheet for Writing	1	yes	no	no	no	no
Activity Kindergarten.2.7.1	Images in Stations	30	no	yes	no	no	no
Activity Kindergarten.2.15.2	Math Libs Scenes	2	yes	no	no	no	no
Center	Math Libs Scenes	2	yes	no	no	no	no
Activity Kindergarten.2.5.1	Less, Same, More Mat	2	no	no	no	no	no
Activity Kindergarten.2.10.2	Less, Same, More Mat	2	no	no	no	no	no
Activity Kindergarten.2.11.2	Less, Same, More Mat	2	no	no	no	no	no
Activity Kindergarten.2.19.2	Less, Same, More Mat	2	no	no	no	no	no
Center	Less, Same, More Mat	2	no	no	no	no	no
Center	Less, Same, More Mat	2	no	no	no	no	no
Center	Less, Same, More Mat	2	no	no	no	no	no
Center	Less, Same, More Mat	2	no	no	no	no	no
Activity Kindergarten.2.9.1	Compare 5-frame Cards	1	no	yes	no	no	no

Assessment Kindergarten.2	Checkpoint	0	yes	no	no	no	no
Activity Kindergarten.2.13.2	Sort By Number Mat 1-10	2	no	no	no	no	no
Activity Kindergarten.2.10.2	Image Cards Grade K	2	no	yes	no	no	no
Activity Kindergarten.2.11.2	Image Cards Grade K	2	no	yes	no	no	no
Center	Image Cards Grade K	2	no	yes	no	no	no
Center	Image Cards Grade K	2	no	yes	no	no	no
Activity Kindergarten.2.19.2	Number and Image Cards	2	no	yes	no	no	no
Center	Number and Image Cards	2	no	yes	no	no	no
Assessment Kindergarten.2	Checkpoint	0	yes	no	no	no	no
Activity Kindergarten.2.1.3	Math Fingers Cards	2	no	yes	no	no	no
Activity Kindergarten.2.5.2	Math Fingers Cards	2	no	yes	no	no	no
Center	Math Fingers Cards	2	no	yes	no	no	no
Center	Math Fingers Cards	2	no	yes	no	no	no
Activity Kindergarten.2.13.2	Circle Cards	2	no	yes	no	no	no
Activity Kindergarten.2.12.2	Reference Sheet Numbers (1-10) with 5-Frames	2	no	no	no	no	no
Activity Kindergarten.2.13.1	Reference Sheet Numbers (1-10) with 5-Frames	2	no	no	no	no	no

Activity Kindergarten.2.14.1	Reference Sheet Numbers (1-10) with 5-Frames	2	no	no	no	no	no
Activity Kindergarten.2.14.2	Reference Sheet Numbers (1-10) with 5-Frames	2	no	no	no	no	no
Activity Kindergarten.2.7.3	Math Stories Stage 1 and 4 Pictures	8	no	no	no	no	no
Activity Kindergarten.2.16.1	Math Stories Stage 1 and 4 Pictures	8	no	no	no	no	no
Center	Math Stories Stage 1 and 4 Pictures	8	no	no	no	no	no
Assessment Kindergarten.2	Checkpoint	0	yes	no	no	no	no
Activity Kindergarten.2.3.3	Number Mat 1-10	2	no	no	no	no	no
Activity Kindergarten.2.12.3	Number Mat 1-10	2	no	no	no	no	no
Activity Kindergarten.2.15.2	Number Mat 1-10	2	no	no	no	no	no
Activity Kindergarten.2.21.2	Number Mat 1-10	2	no	no	no	no	no
Center	Number Mat 1-10	2	no	no	no	no	no
Center	Number Mat 1-10	2	no	no	no	no	no
Activity Kindergarten.2.22.2	Pizza Orders	1	yes	yes	no	no	no
Activity Kindergarten.2.14.1	Number Cards (0-10)	2	no	yes	yes	no	no
Center	Pattern Blocks Stage 2 Mat	2	no	no	no	no	no

Center	Pattern Blocks Stage 3 Directions	2	no	no	no	no
Center	Picture Books Stage 2 Recording Sheet	1	yes	no	no	no
Center	Connecting Cubes Stage 2 Cards	2	no	yes	no	no
Center	Connecting Cubes Stage 3 Directions	2	no	no	no	no
Center	Geoblocks Stage 2	8	no	no	no	no

Questions About Us Chart

These images are examples of what to display for the Questions About Us warm-ups in Section B. In order to create a display that will be visible to the whole class, print and cut out enough 5-frames so that there is a square for each student in the class. For example, if there are 23 students in the class, cut out four 5-frames and 3 squares out of a fifth 5-frame. Consider laminating the display and using a dry erase marker to write the two choices and record students' responses. If available, these images can also be enlarged.

Questions About Us Chart

cats					
dogs					

slide					
swings					

Questions About Us Chart

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Questions About Us Chart

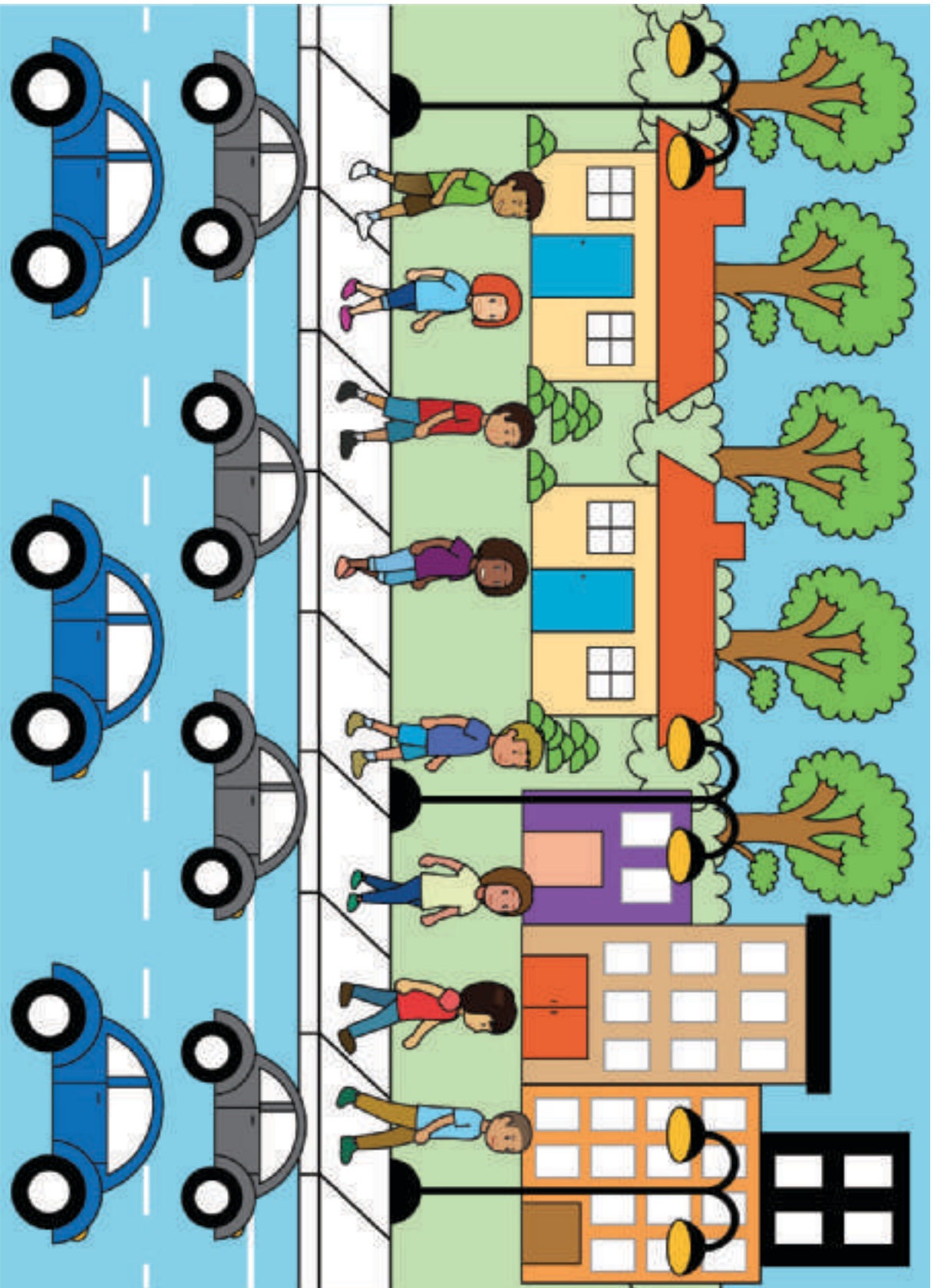
cats					
dogs					

slide						
swings						

Questions About Us Chart

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Picture A



Picture B



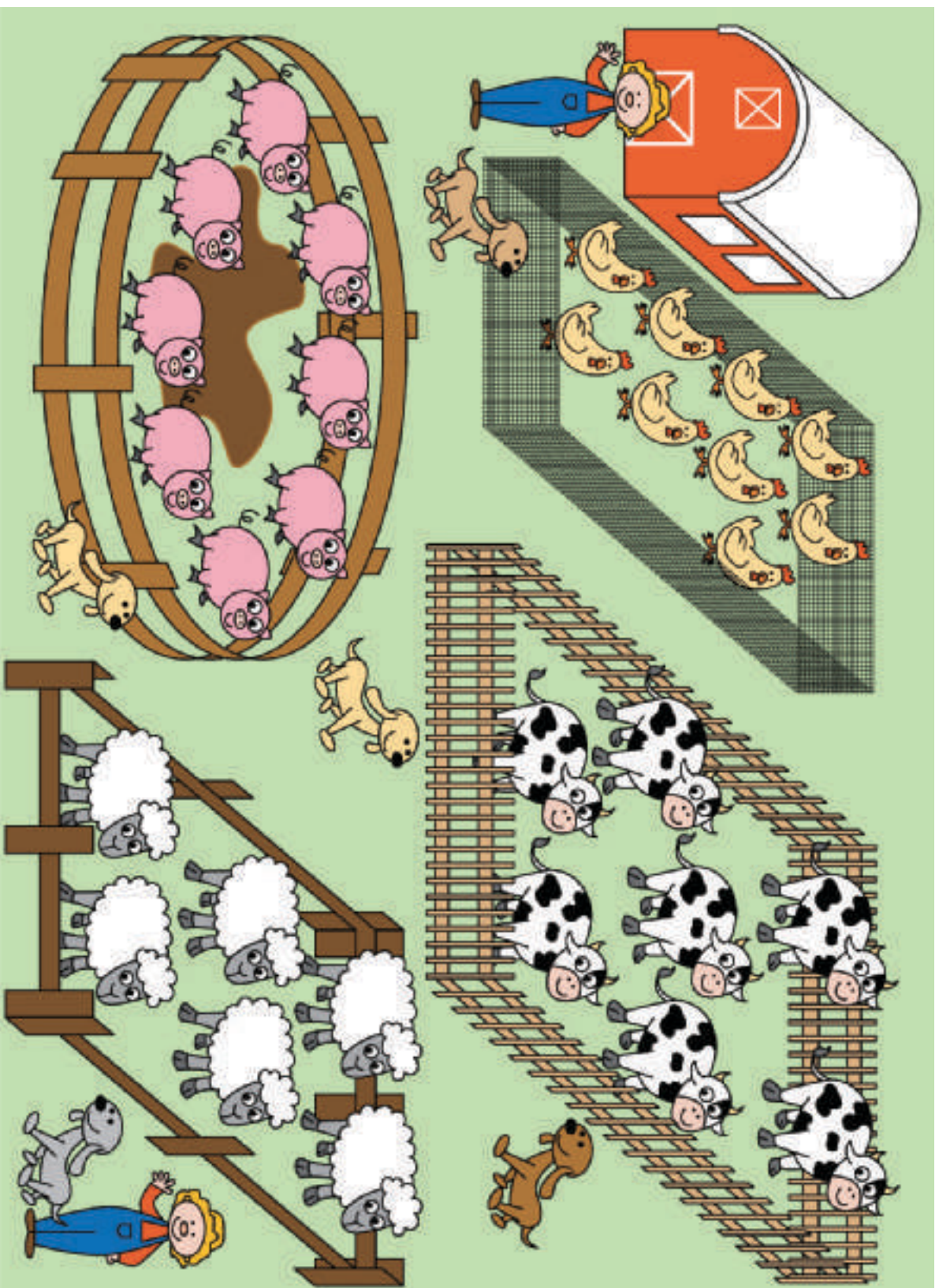
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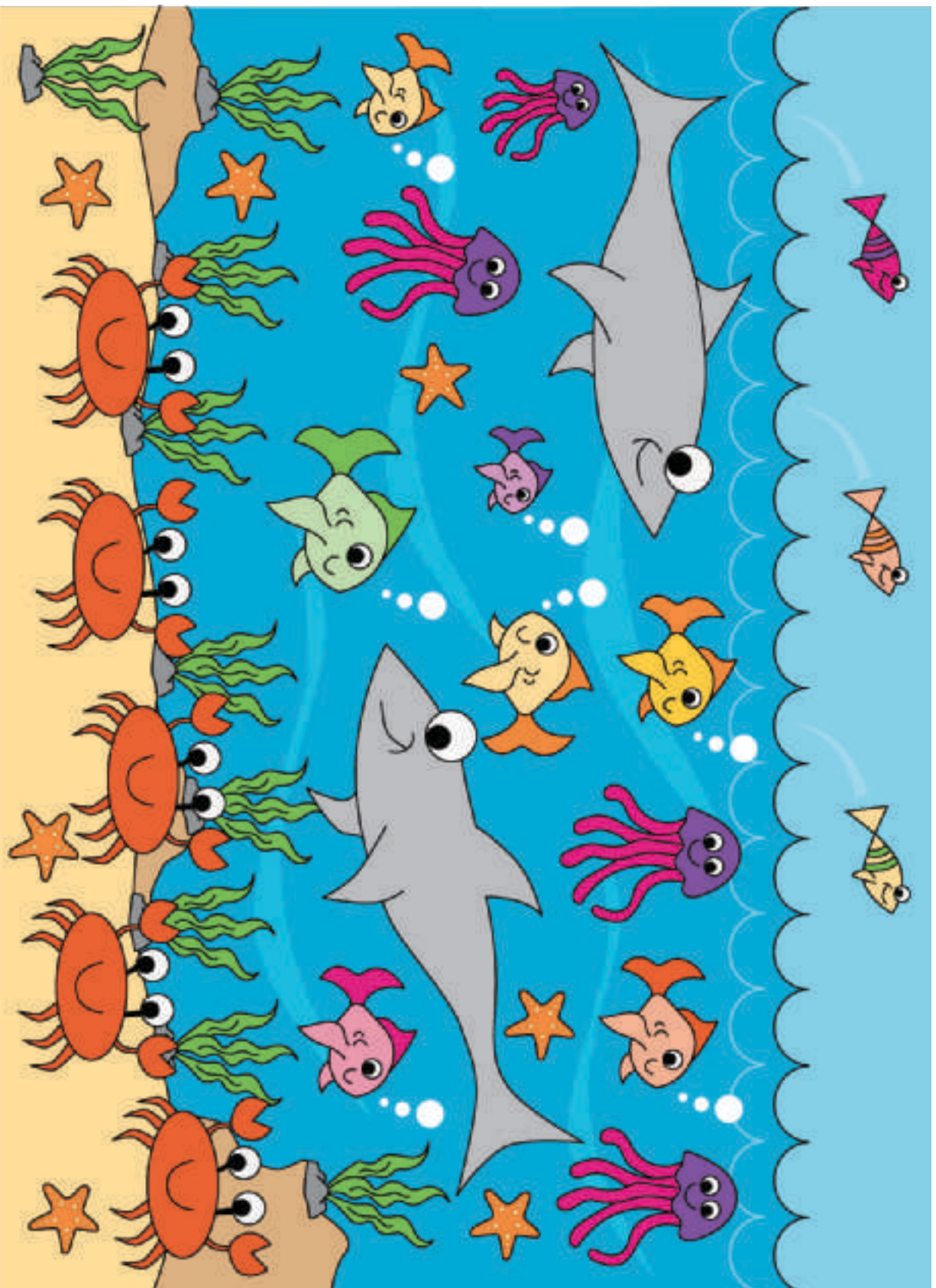
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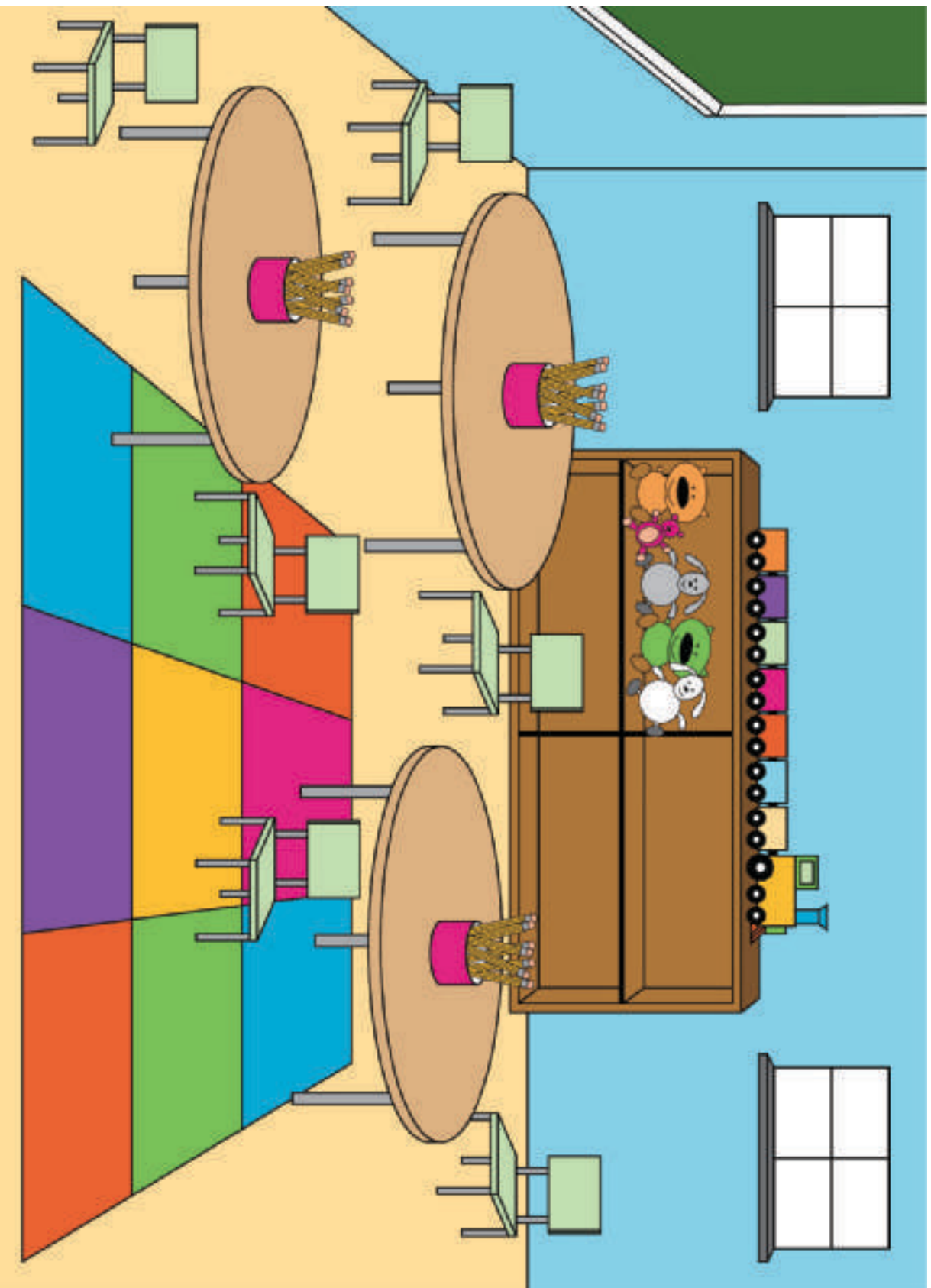
Picture E



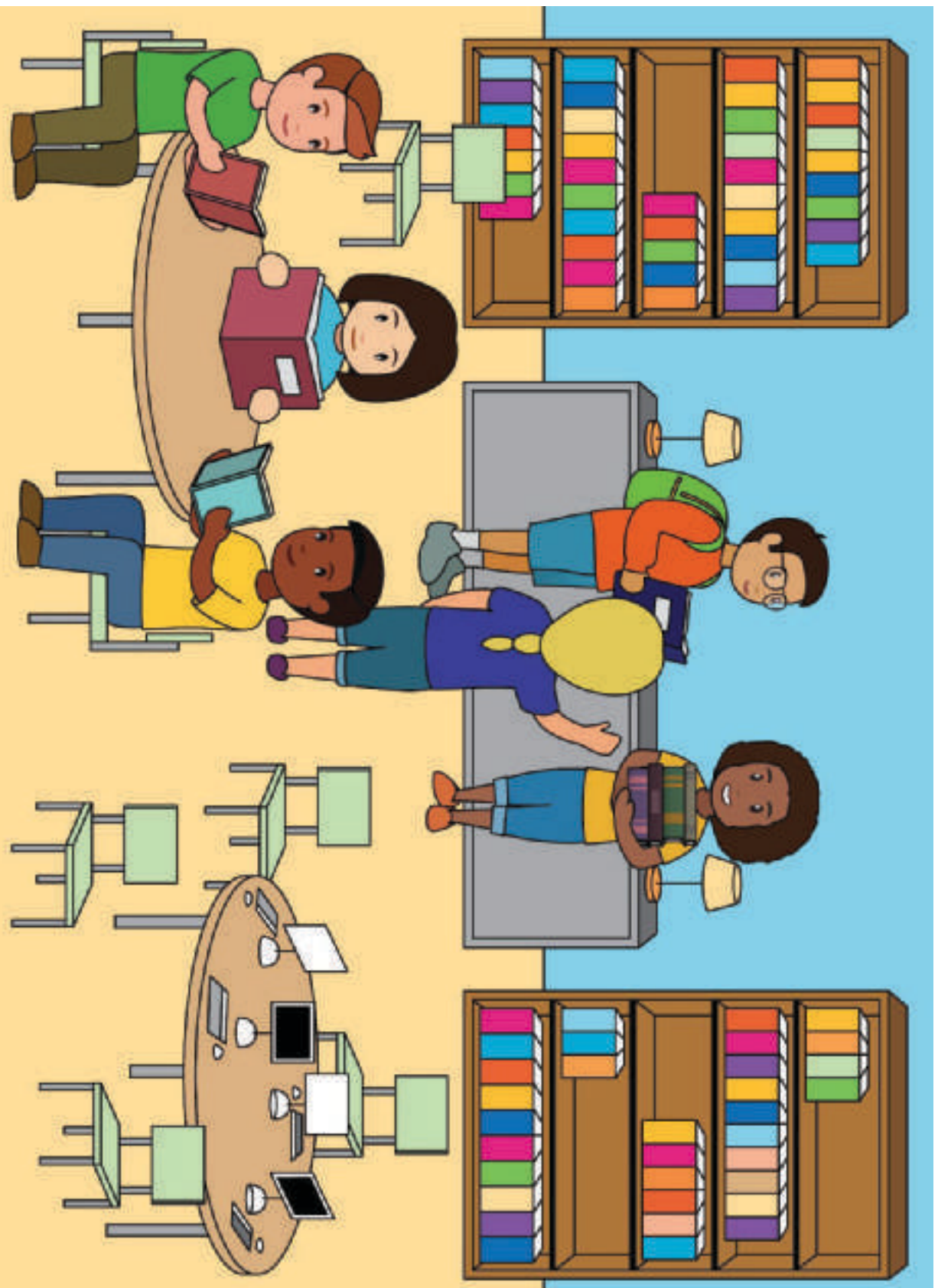
Picture F






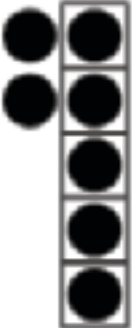



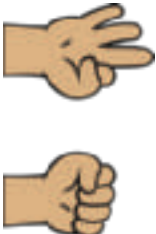



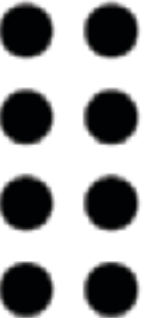





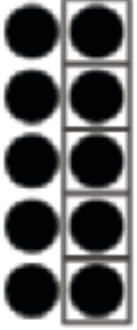













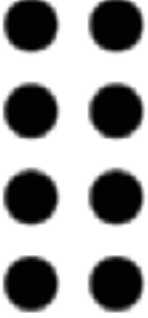
Picture G



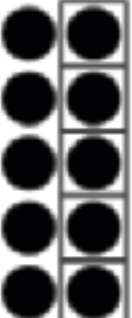




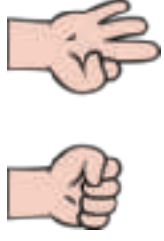
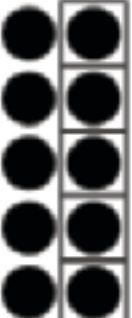




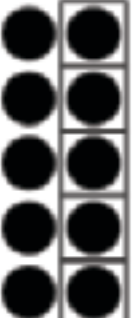


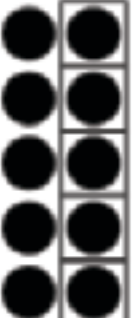


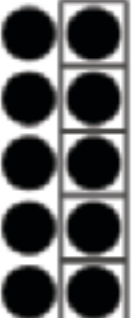

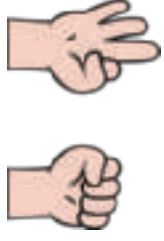
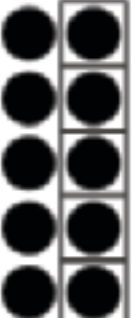



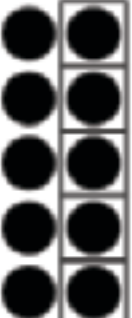



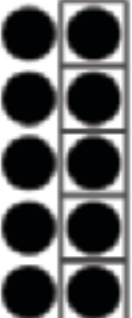


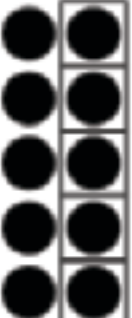







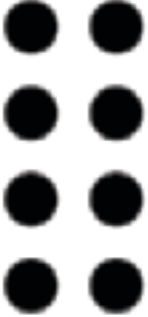

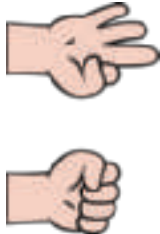


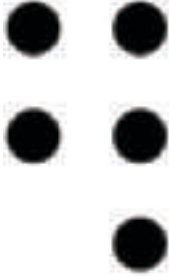




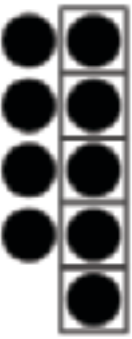

Picture H






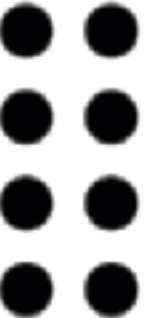



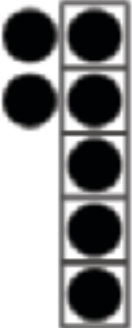


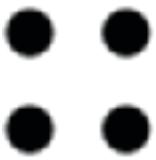





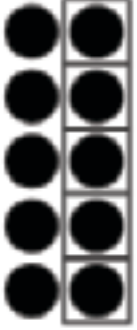













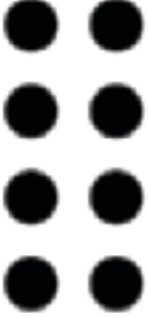
			
			
			
			



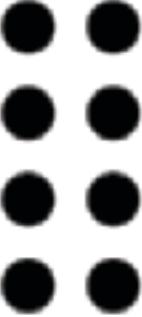


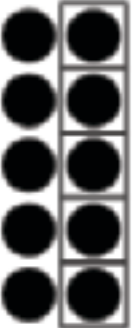


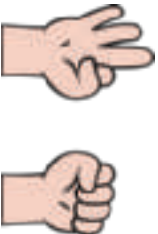



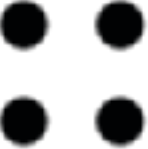



			
			
			
			






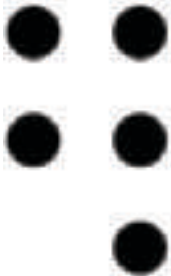
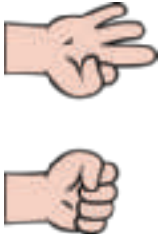



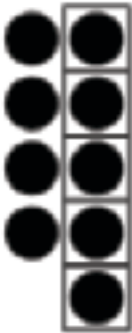

						
						
						
						
						





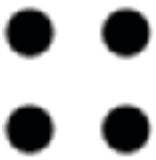



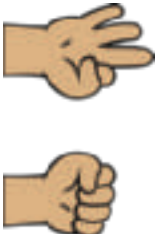









			
			
			
			


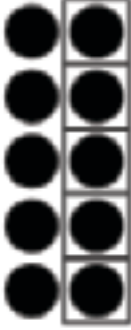













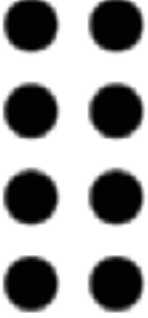
					
					
					

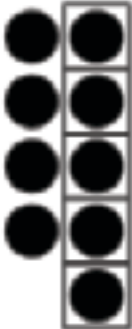



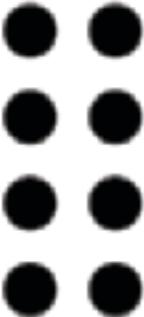



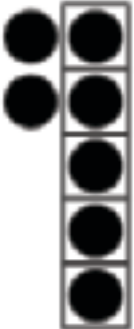
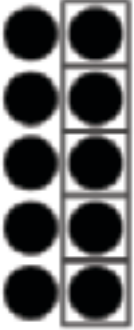




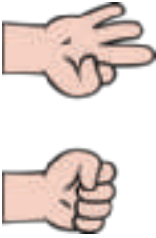
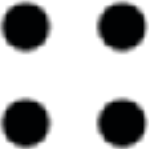
			
			
			
			


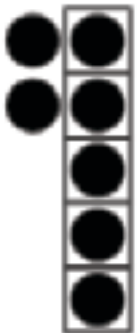



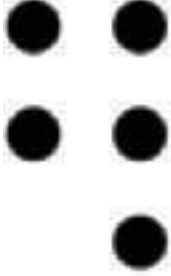
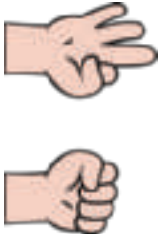



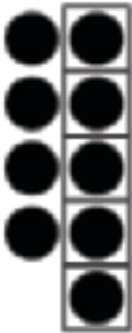

			
			
			
			









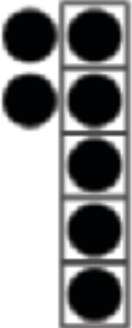

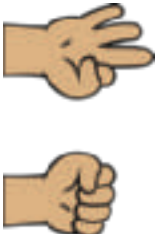
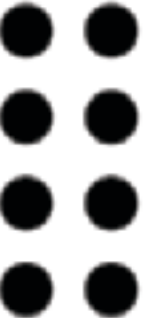






			
			
			


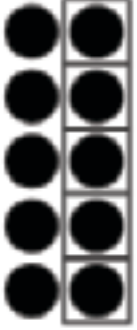













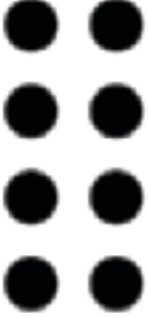
					
					
					



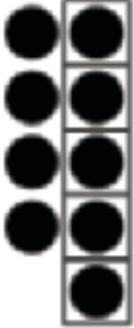
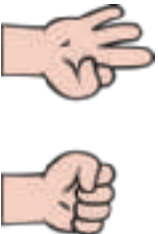
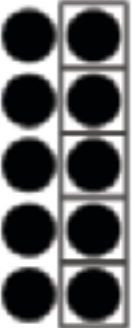























			
			
			
			


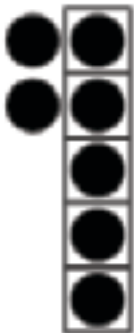


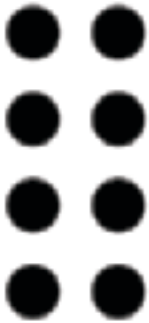

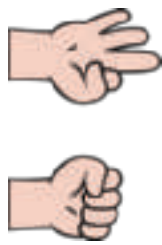


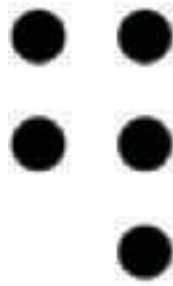






			
			
			
			

Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



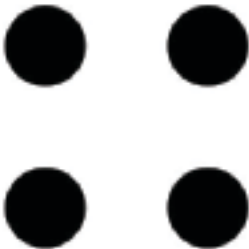
Bingo Image Card



Bingo Image Card



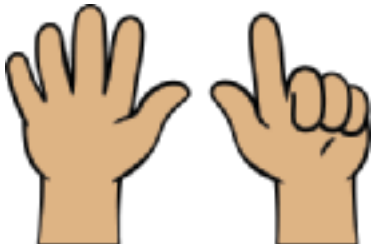
Bingo Image Card



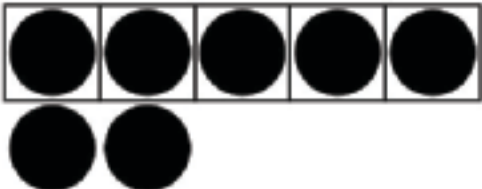
Bingo Image Card



Bingo Image Card



Bingo Image Card

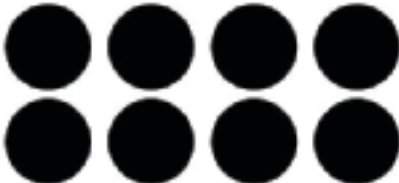


Bingo Stage 1 Cards

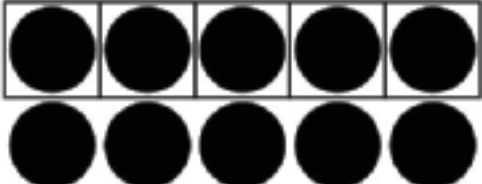
Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card

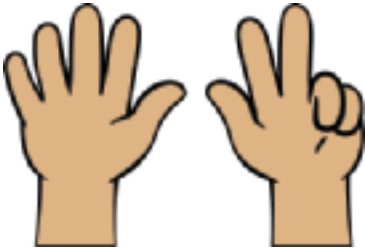


Bingo Image Card

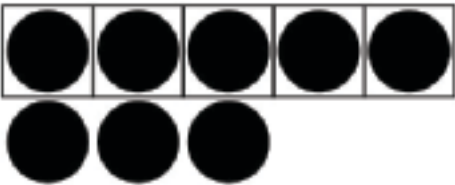


Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



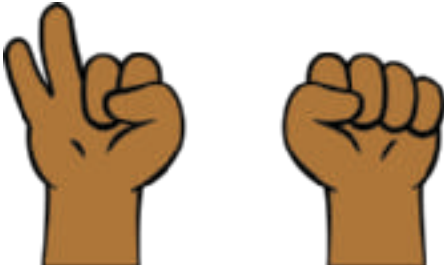
Bingo Image Card



Bingo Image Card



Bingo Image Card

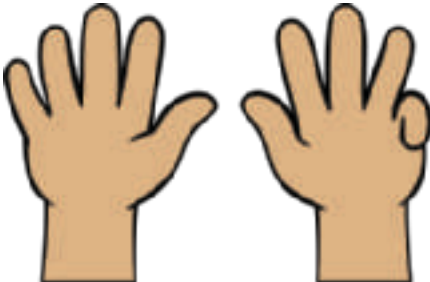


Bingo Image Card

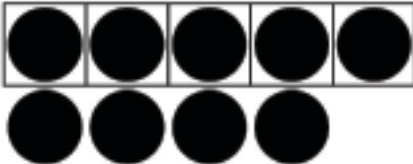


Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



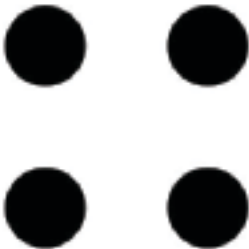
Bingo Image Card



Bingo Image Card



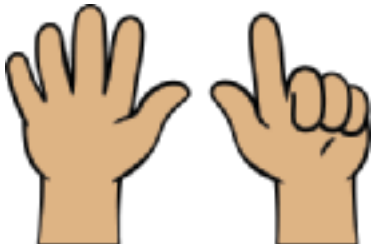
Bingo Image Card



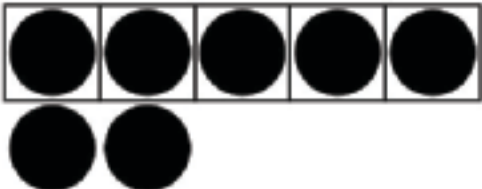
Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Stage 1 Cards

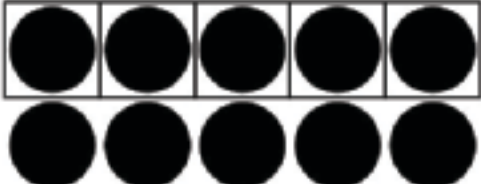
Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card

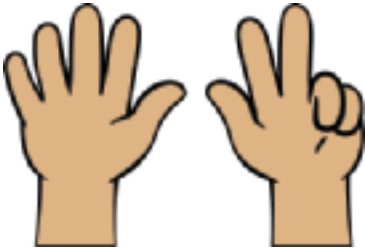


Bingo Image Card

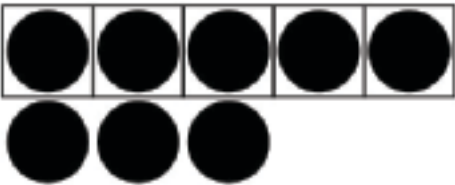


Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card

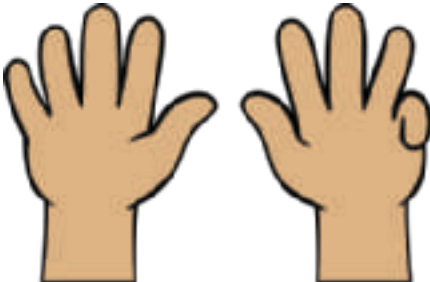


Bingo Image Card

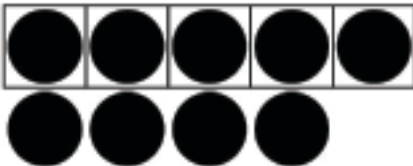


Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Checkpoint

**Kindergarten, Unit 2
Section A
Checkpoint**

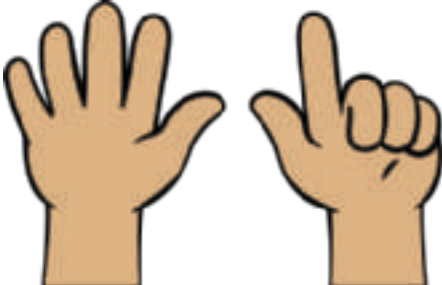
	<ul style="list-style-type: none"> Count up to 10 objects and know the number remains the same regardless of the arrangement of objects. 	<ul style="list-style-type: none"> Compare the number of objects in groups of up to 10 objects.
	Say one number for each object.	
	Answer how many without counting again.	
	Answer how many about a group that has been rearranged without counting again.	
	Use the structure of 5 (in 5-frames or fingers) to count on from 5 to tell how many.	
	Compare the number of objects in groups.	Use "more," "fewer," and "the same number" to describe comparisons.
		Make groups with more, fewer, or the same number of objects than a given group.

1	2	3	4	5	6	7	8	9	10	

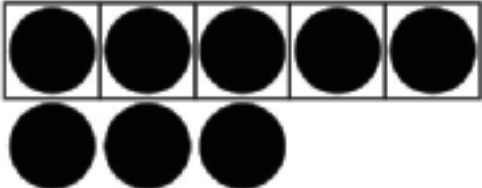
1	2	3	4	5	6	7	8	9	10

Images in Stations

Images in Stations



Images in Stations



Images in Stations

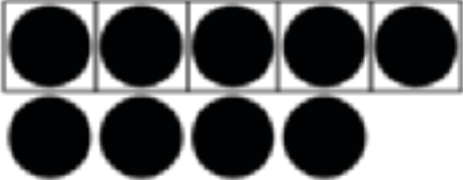


Images in Stations



Images in Stations

Images in Stations



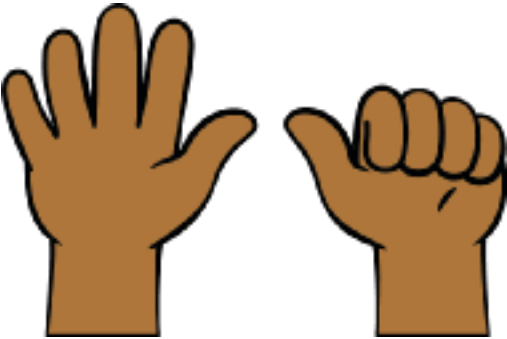
Images in Stations



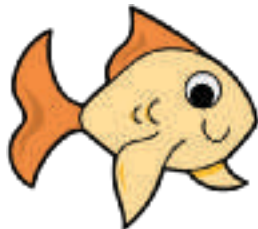
Images in Stations



Images in Stations



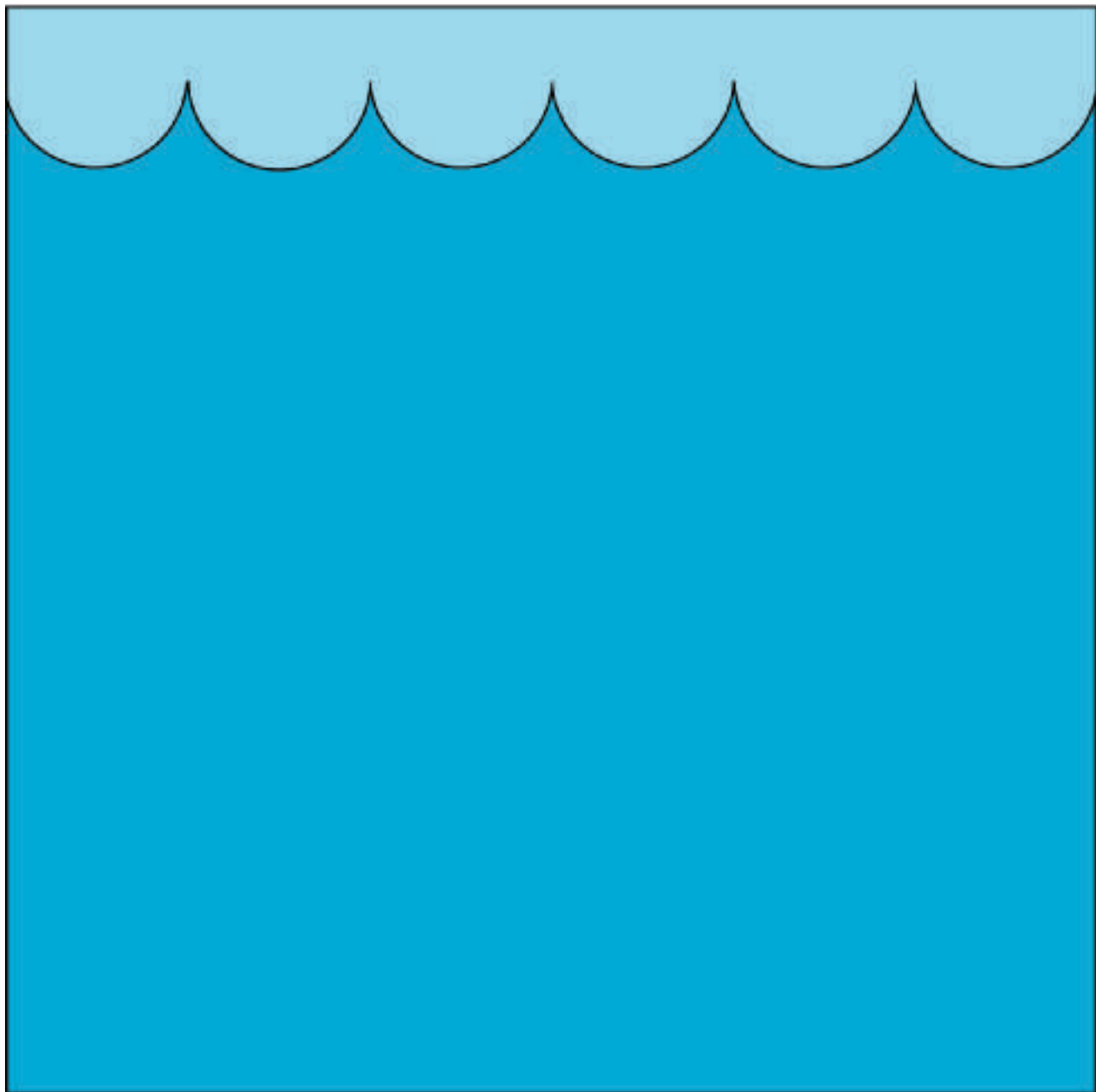
Math Libs Scenes











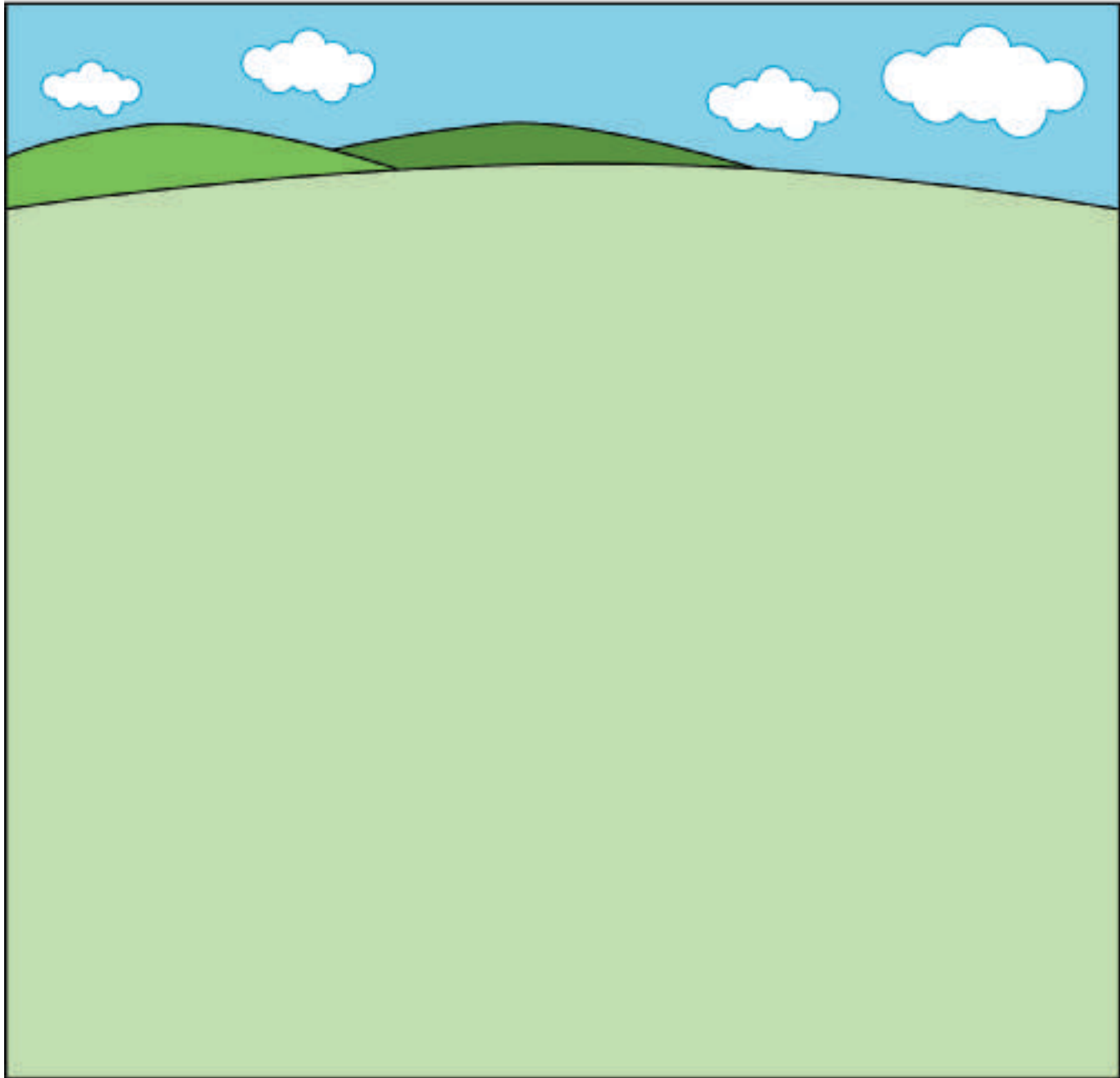
Math Libs Scenes











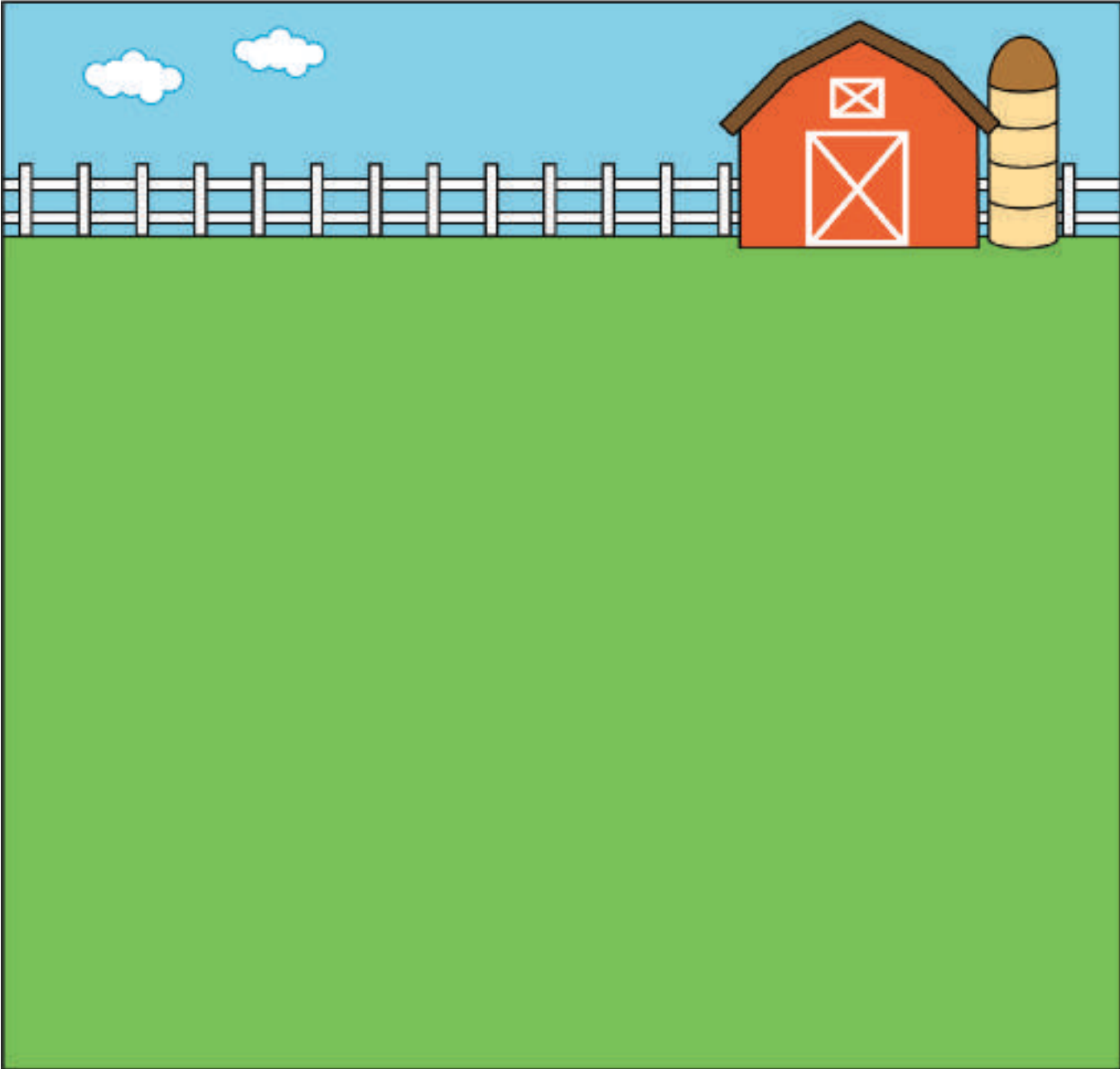
Math Libs Scenes



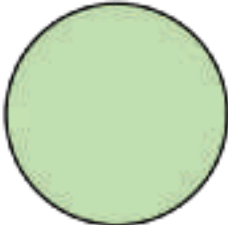






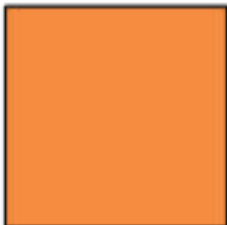


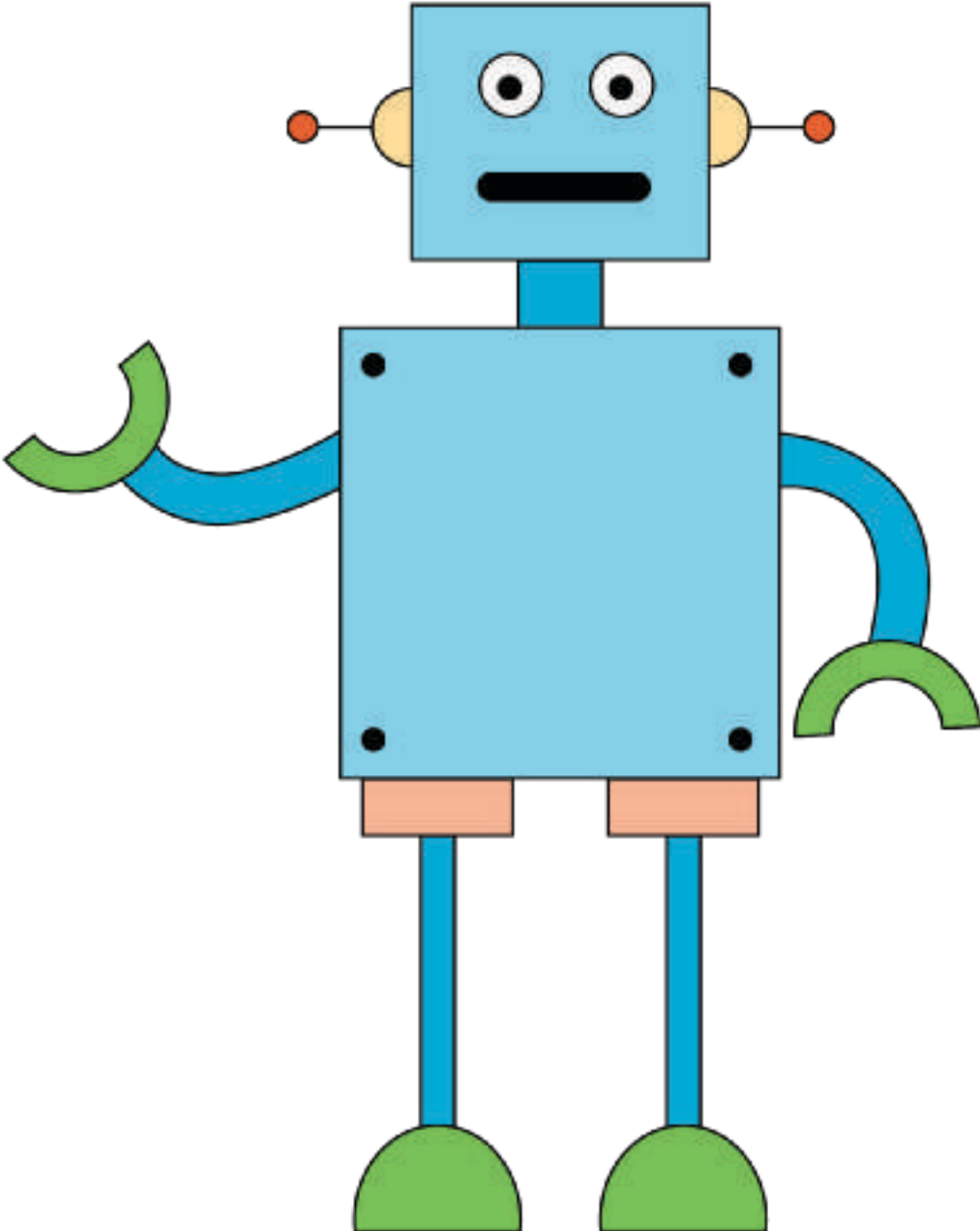
Math Libs Scenes











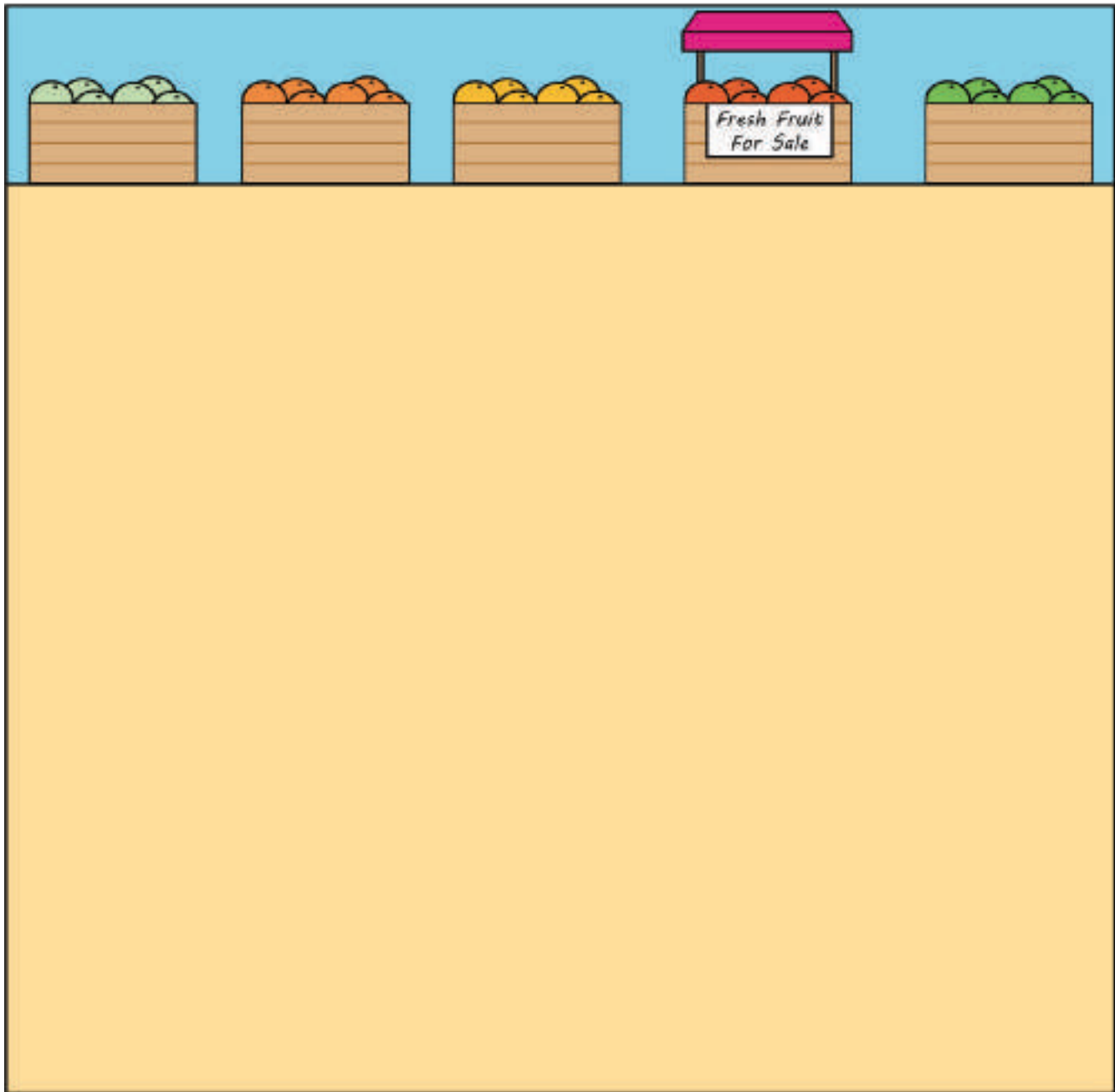
Math Libs Scenes











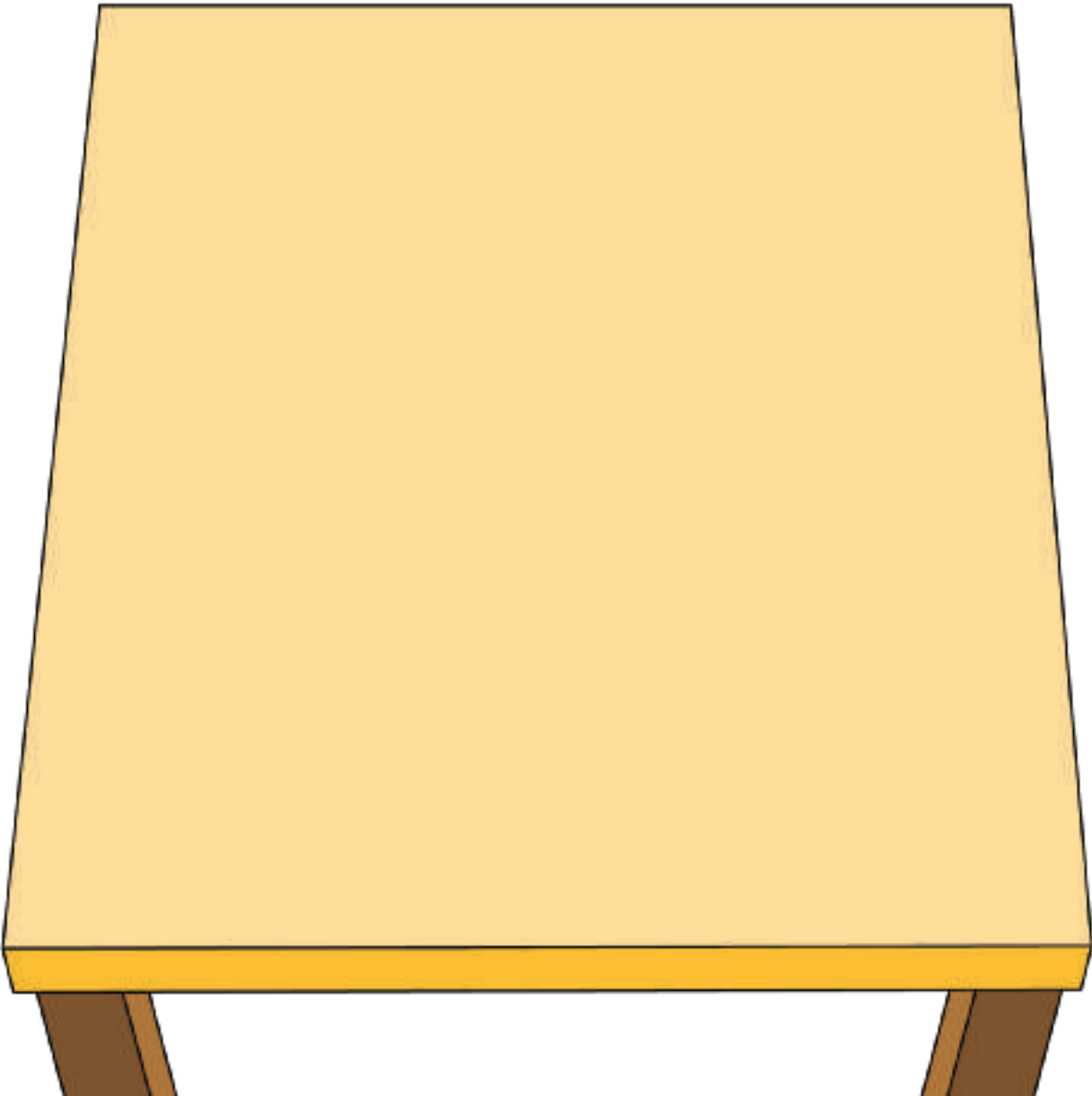
Math Libs Scenes







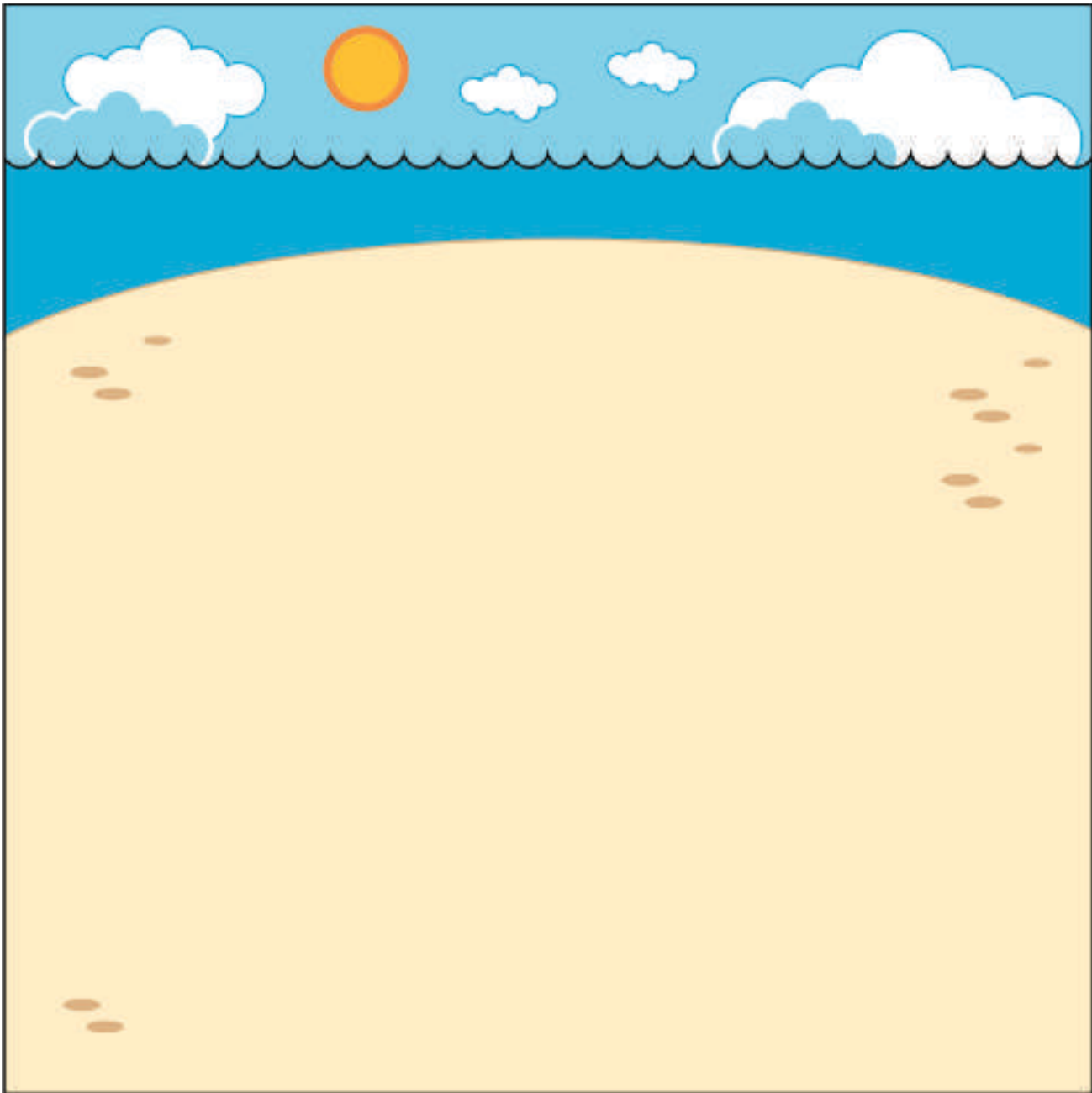




Math Libs Scenes







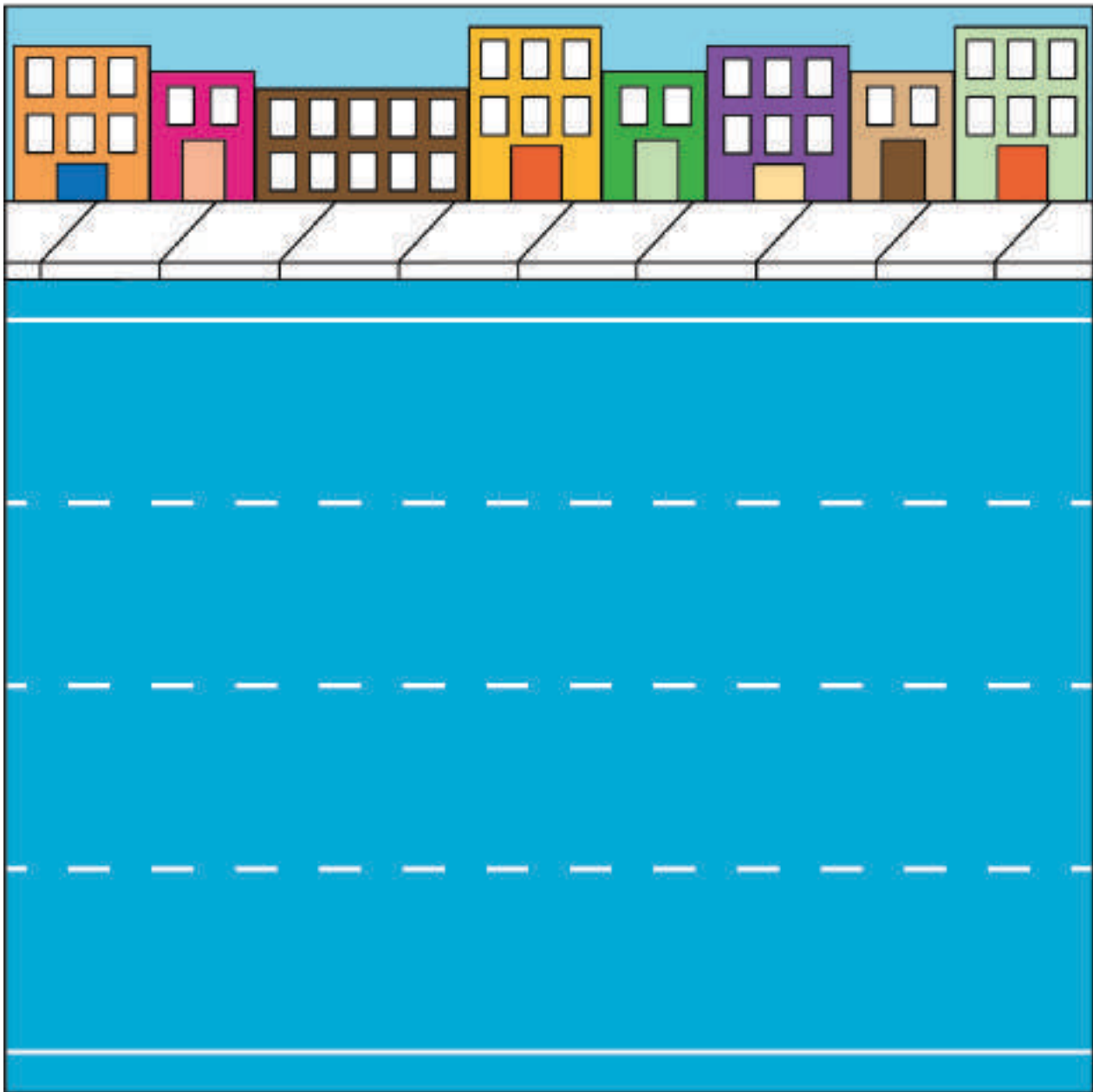
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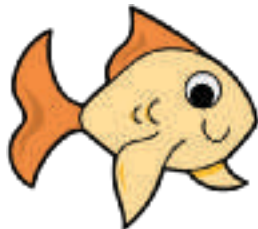








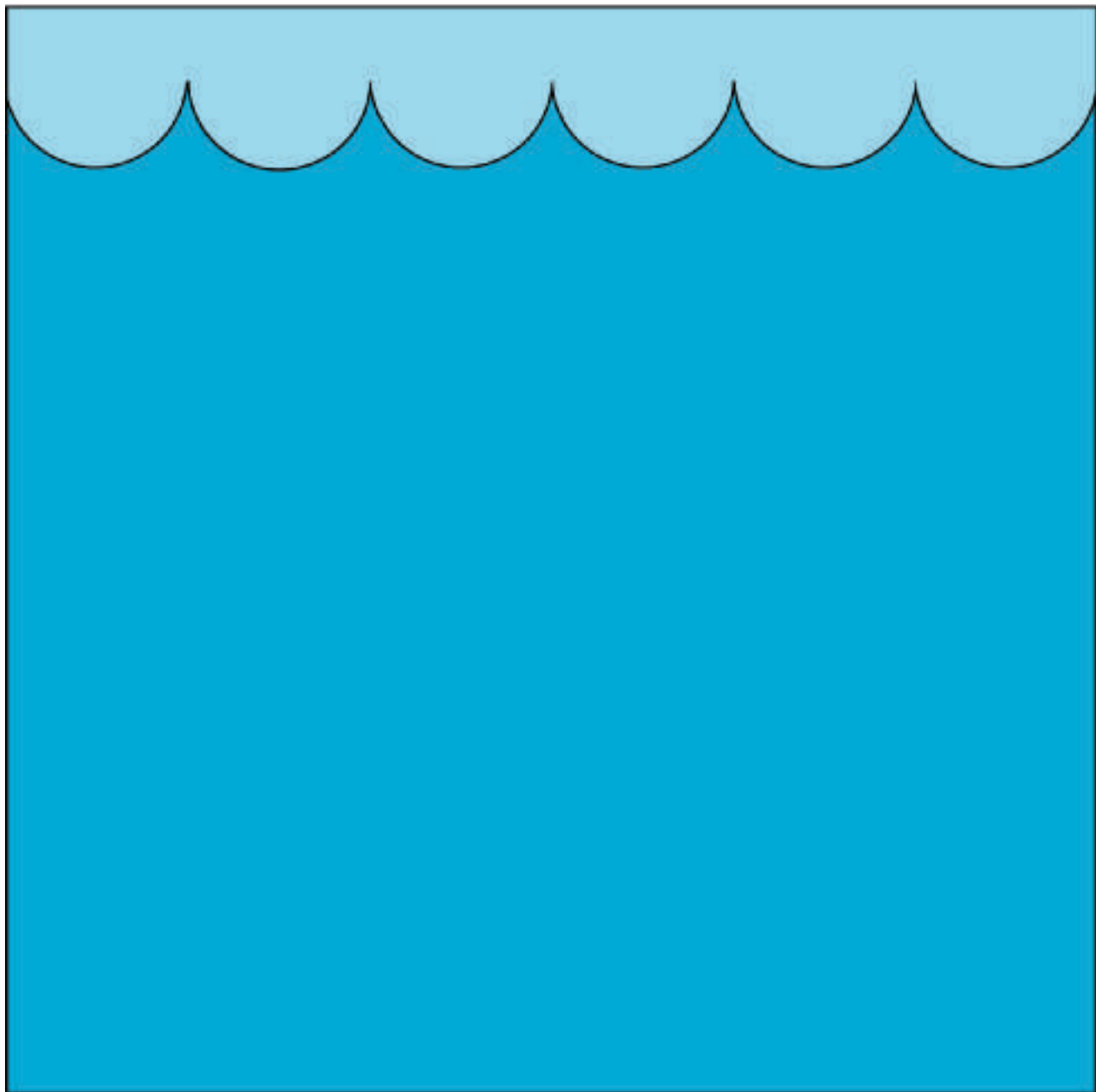
Math Libs Scenes



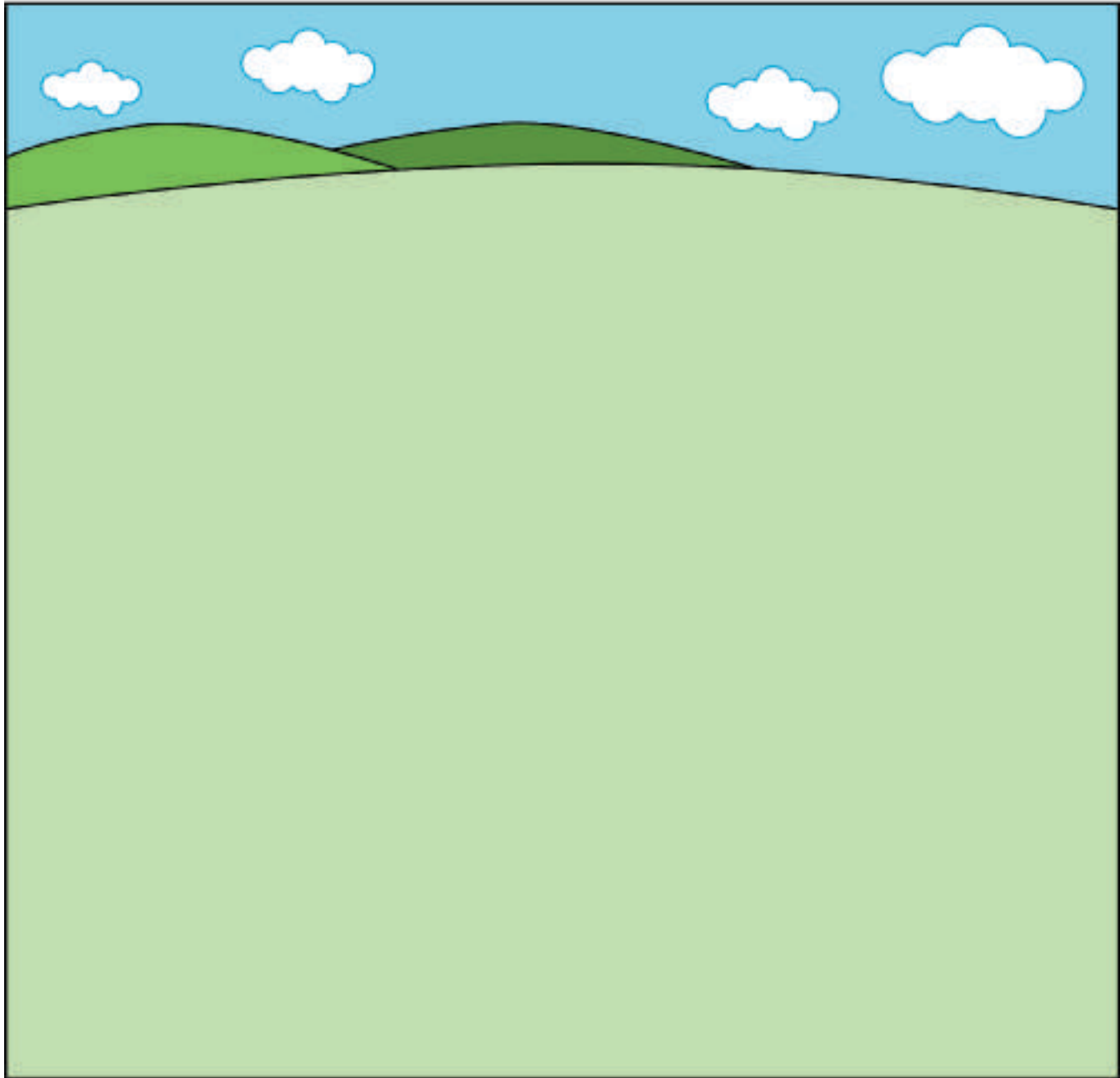








Math Libs Scenes



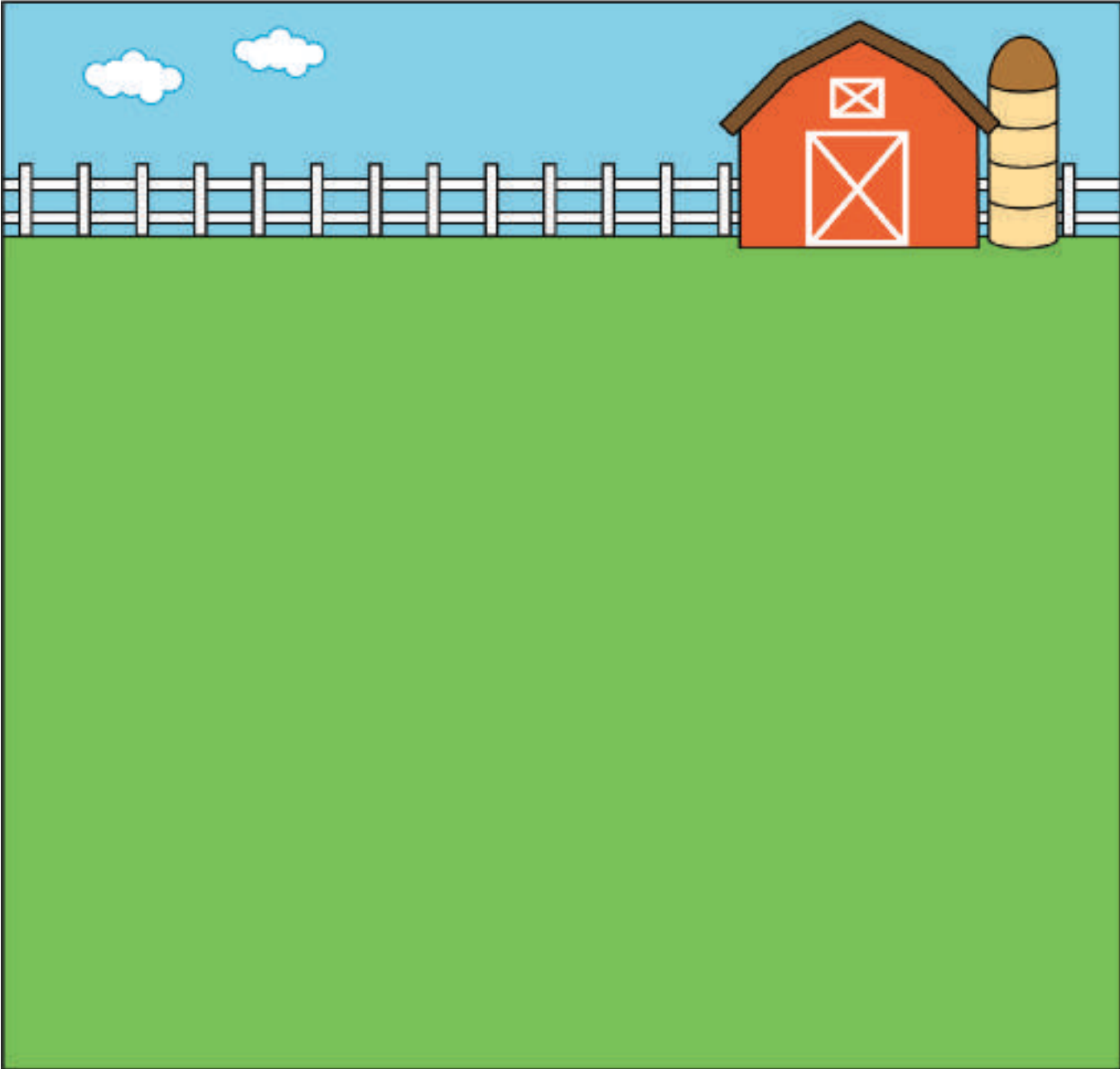
Math Libs Scenes



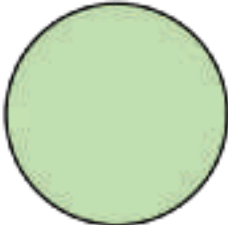






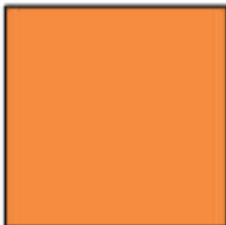


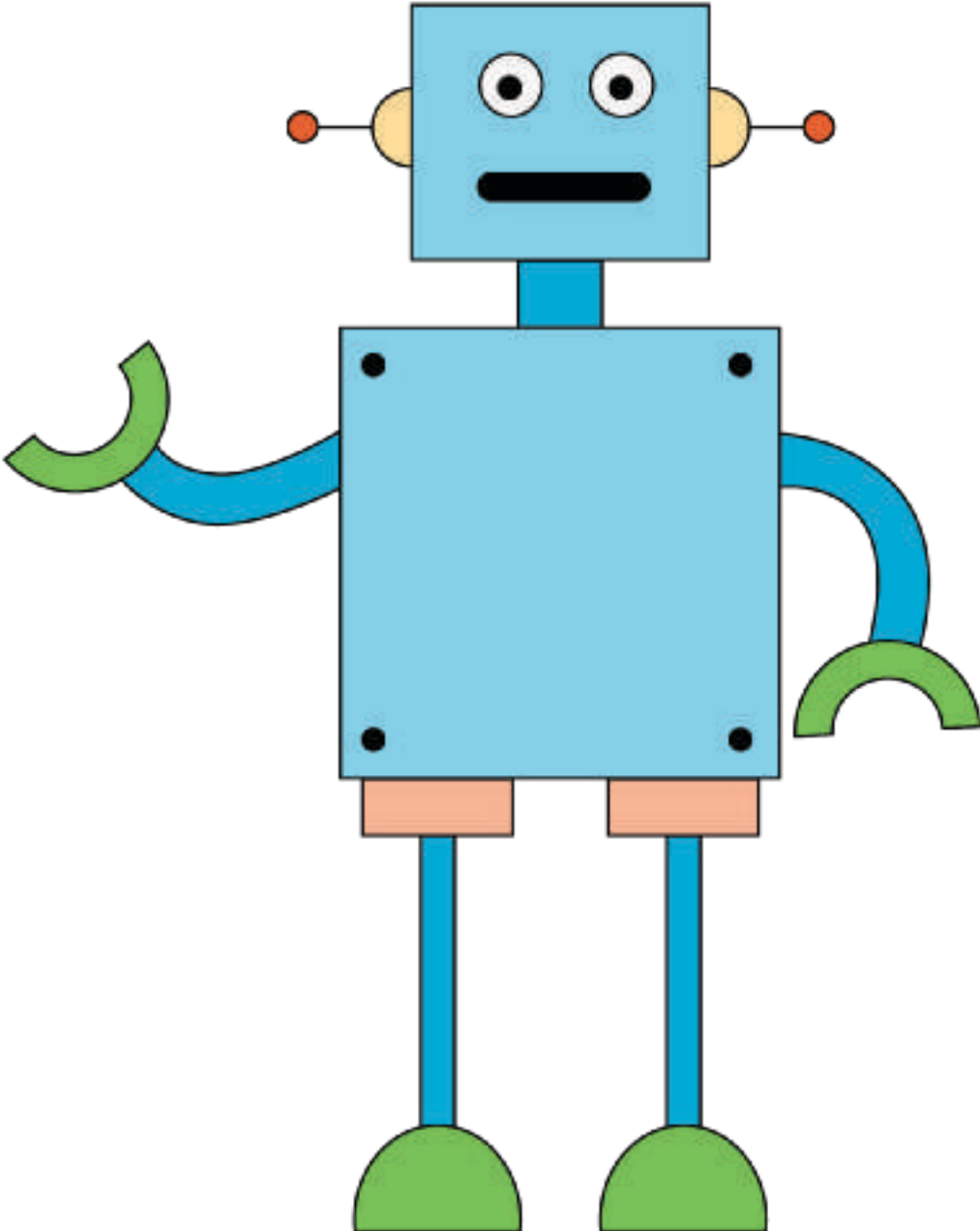
Math Libs Scenes











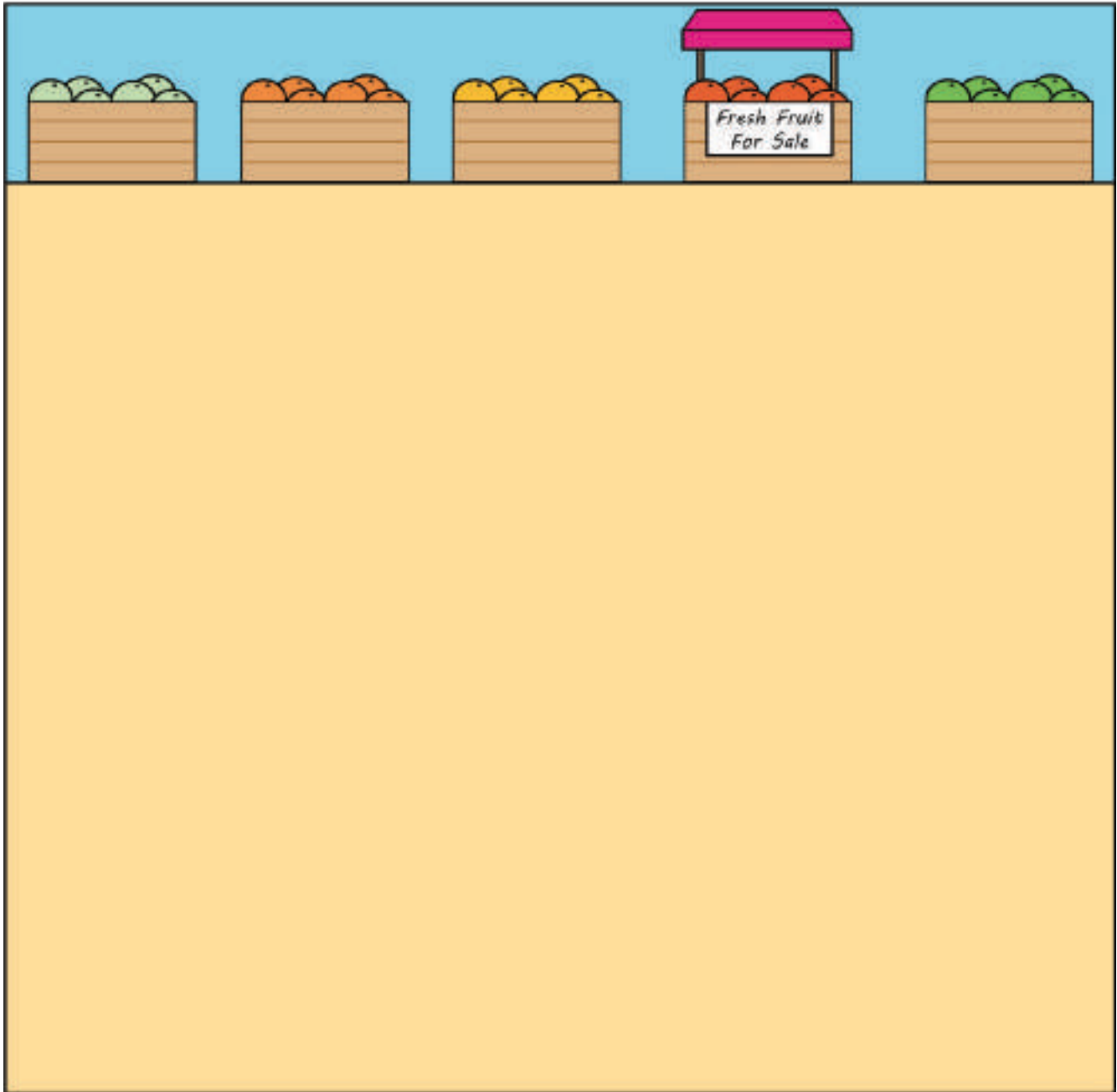
Math Libs Scenes











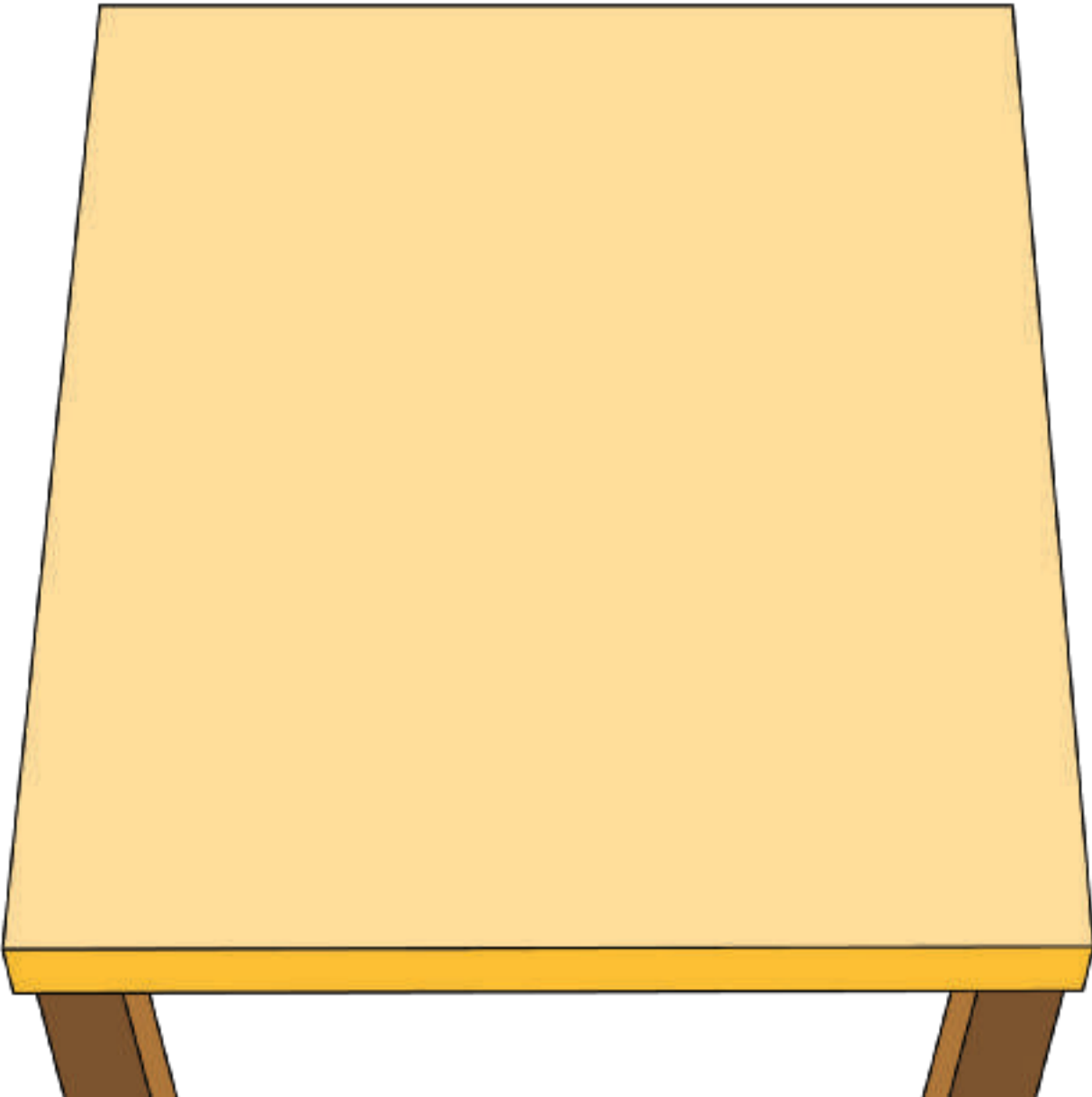
Math Libs Scenes







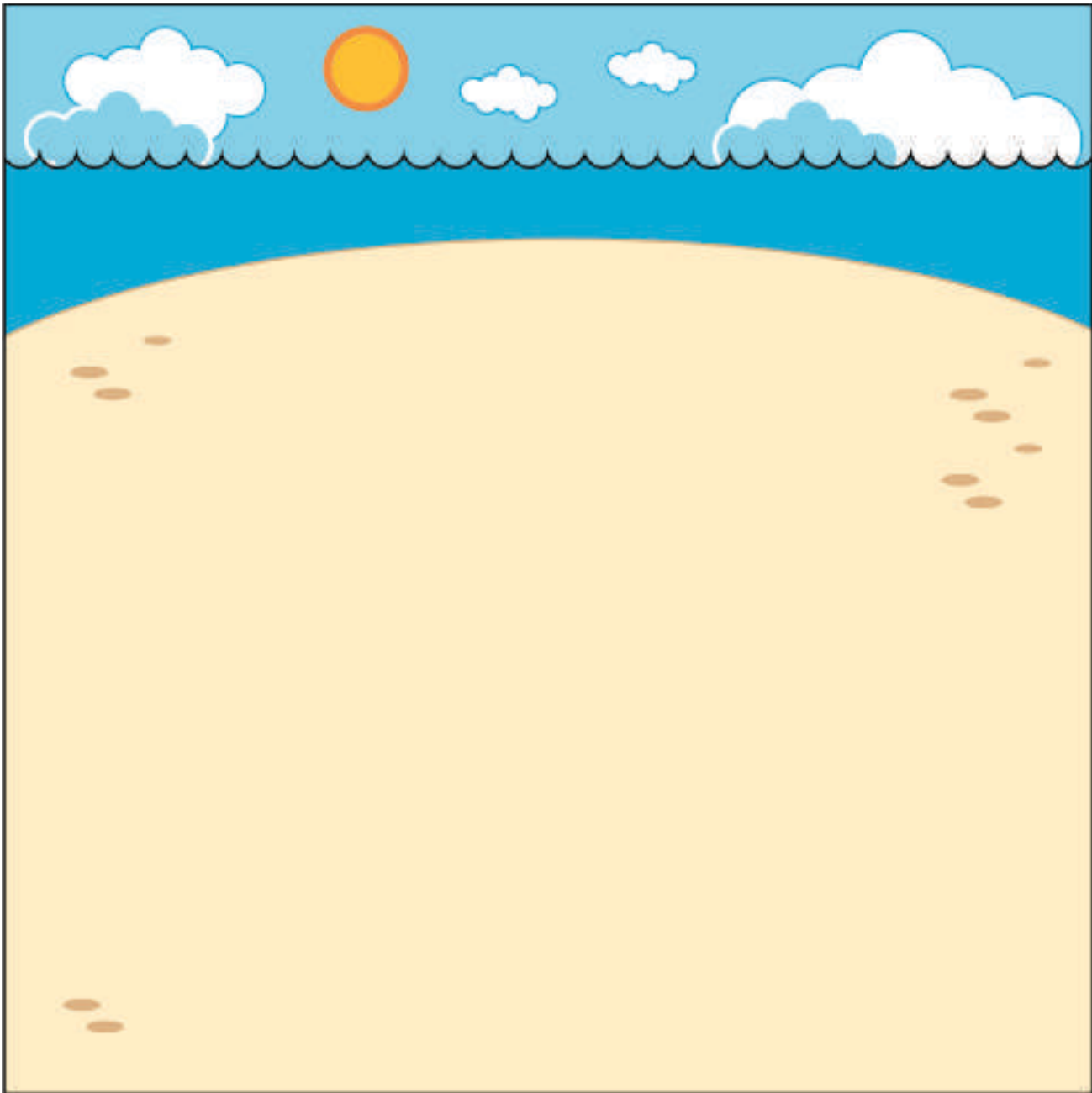




Math Libs Scenes







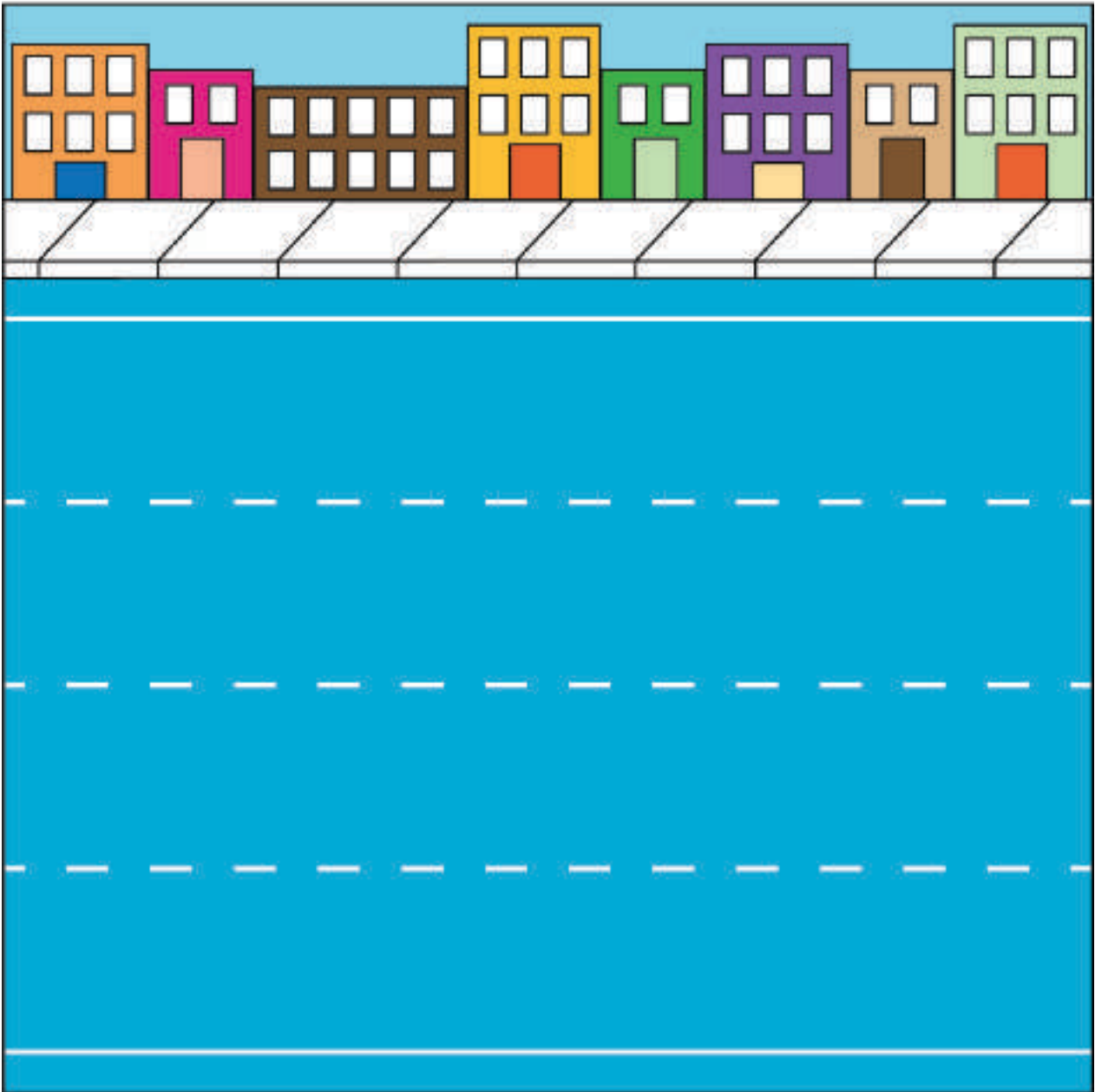
Math Libs Scenes

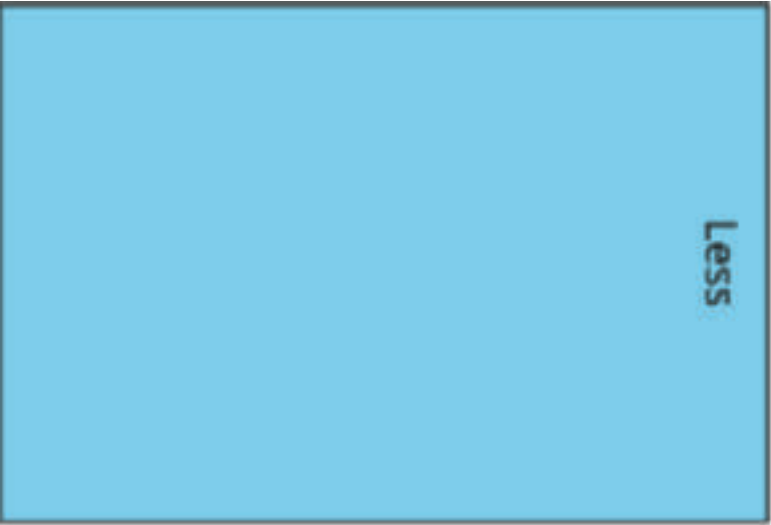
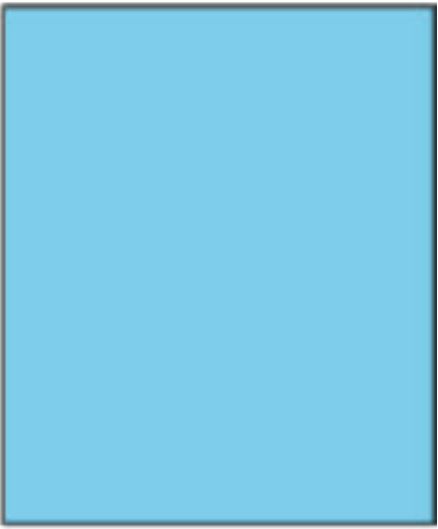


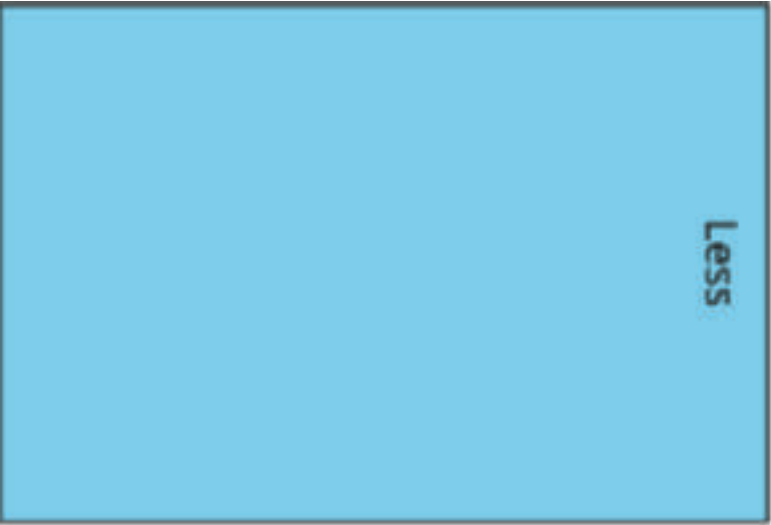
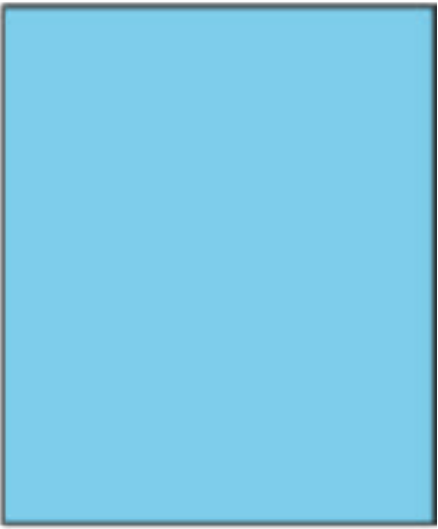


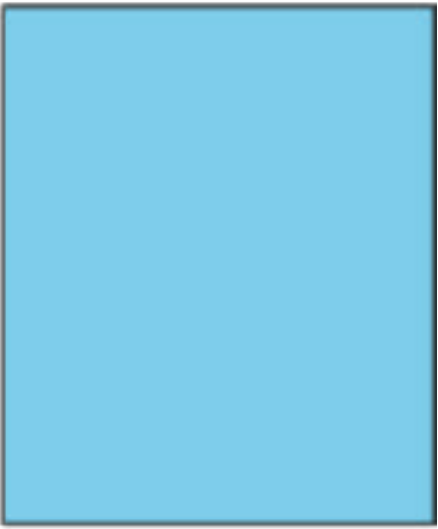




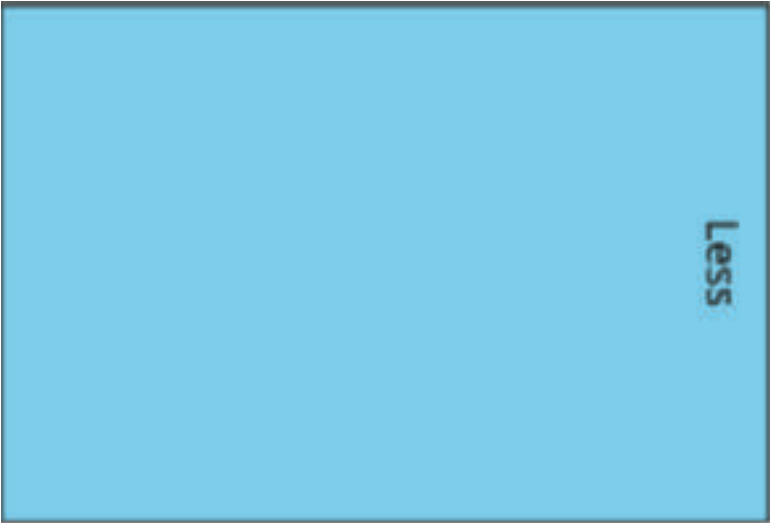








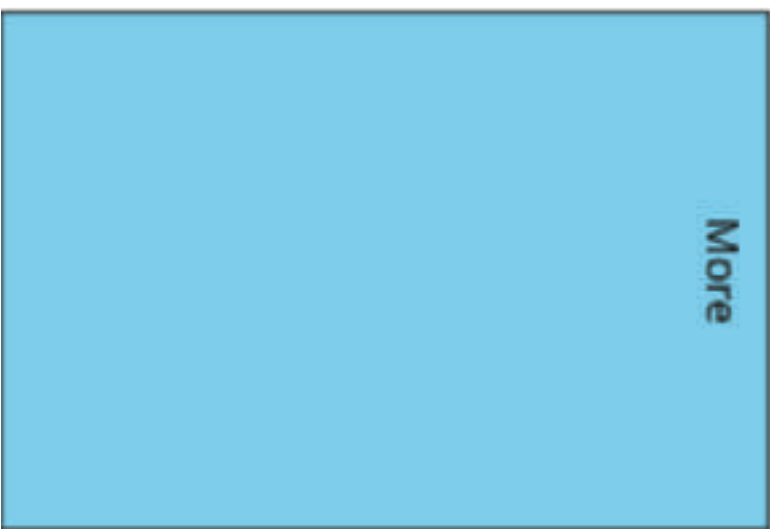
Less

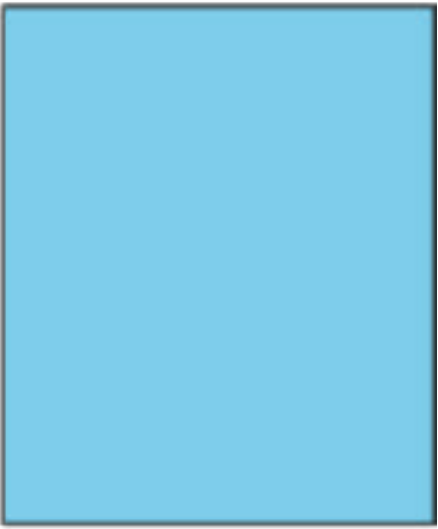


Same



More





Less

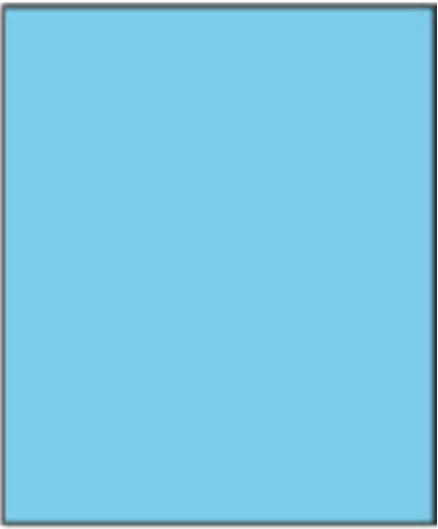
A large, empty rectangular box with a black border, intended for a student to write or draw their response for the 'Less' category.

Same

A large, empty rectangular box with a black border, intended for a student to write or draw their response for the 'Same' category.

More

A large, empty rectangular box with a black border, intended for a student to write or draw their response for the 'More' category.



Less

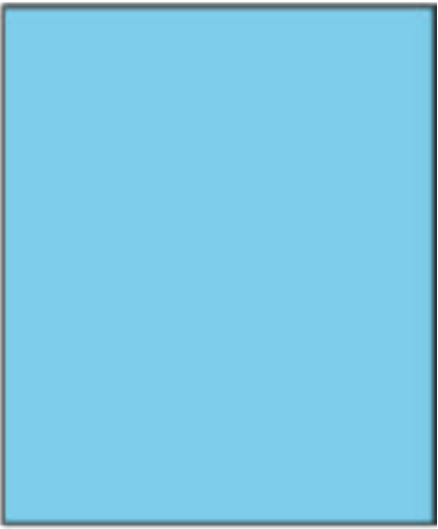
A large, empty rectangular box with a black border, intended for a student to write or draw their response for the 'Less' category.

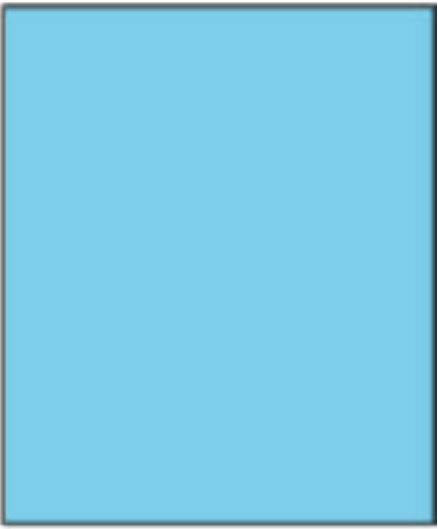
Same

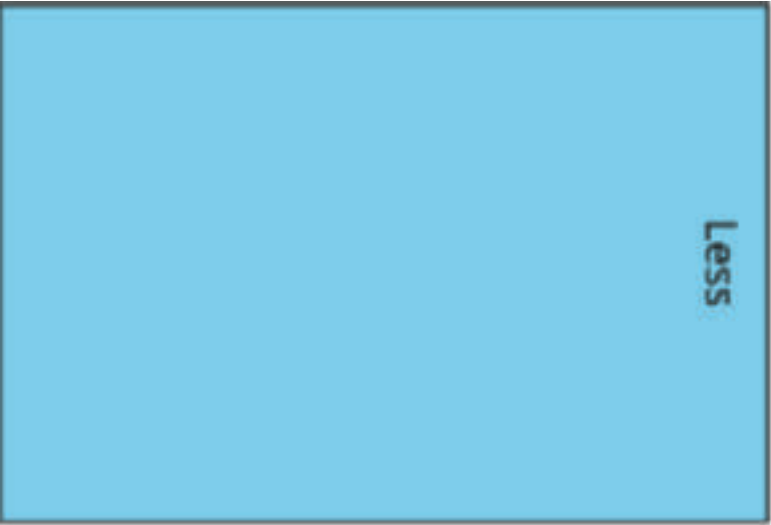
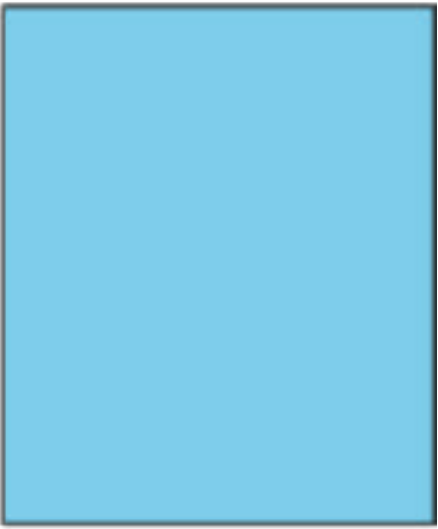
A large, empty rectangular box with a black border, intended for a student to write or draw their response for the 'Same' category.

More

A large, empty rectangular box with a black border, intended for a student to write or draw their response for the 'More' category.







Compare 5-frame Cards

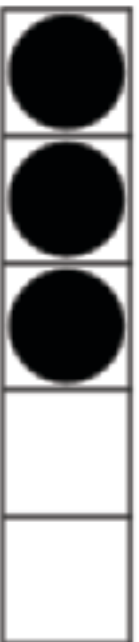
Compare 5-frame Cards



Compare 5-frame Cards



Compare 5-frame Cards



Compare 5-frame Cards

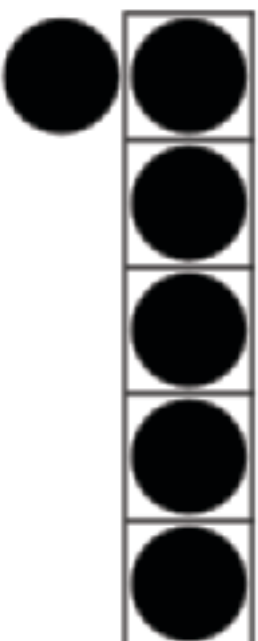


Compare 5-frame Cards

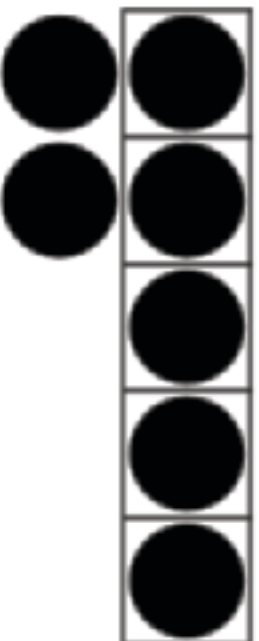
Compare 5-frame Cards



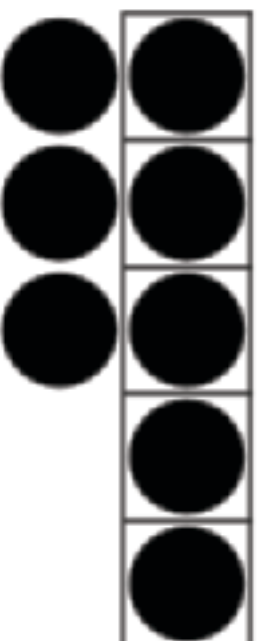
Compare 5-frame Cards



Compare 5-frame Cards

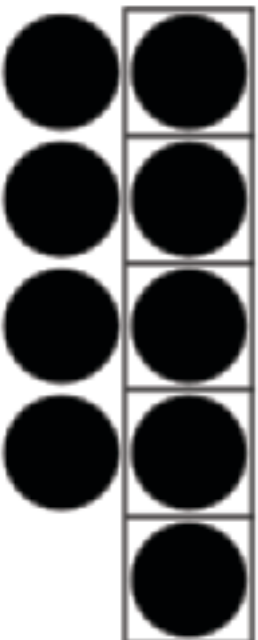


Compare 5-frame Cards

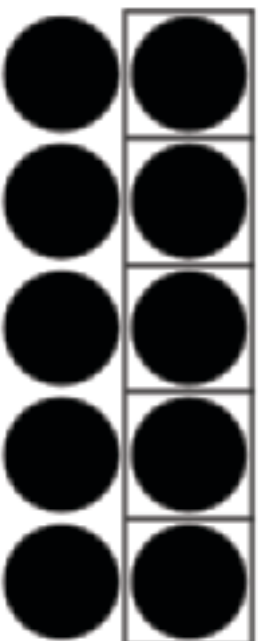


Compare 5-frame Cards

Compare 5-frame Cards



Compare 5-frame Cards



1	2	3	4	5
---	---	---	---	---

6	7	8	9	10
---	---	---	---	----

Image Cards Grade K

Image Cards Grade K



Image Cards Grade K



Image Cards Grade K



Image Cards Grade K



Image Cards Grade K

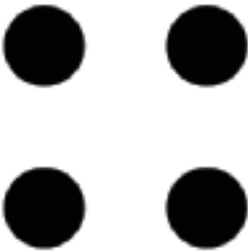


Image Cards Grade K



Image Cards Grade K

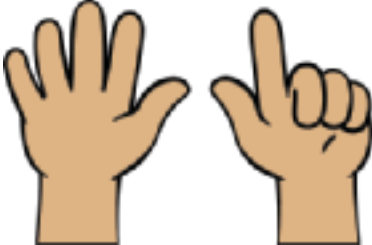


Image Cards Grade K

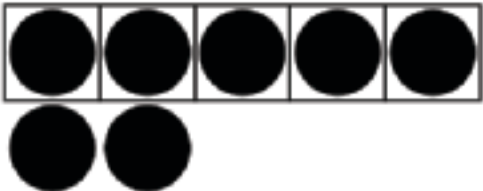


Image Cards Grade K

Image Cards Grade K



Image Cards Grade K



Image Cards Grade K

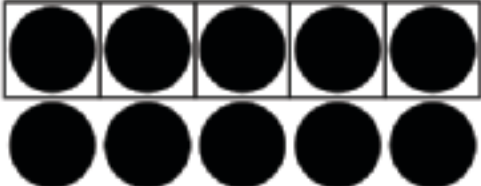


Image Cards Grade K



Image Cards Grade K



Image Cards Grade K



Image Cards Grade K



Image Cards Grade K



Image Cards Grade K

Image Cards Grade K

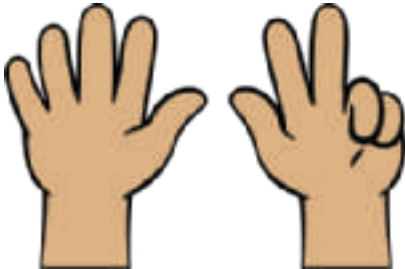


Image Cards Grade K

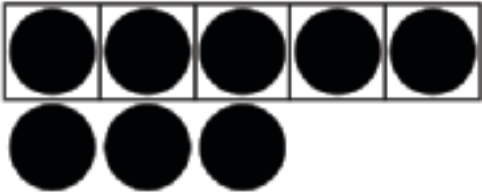


Image Cards Grade K



Image Cards Grade K

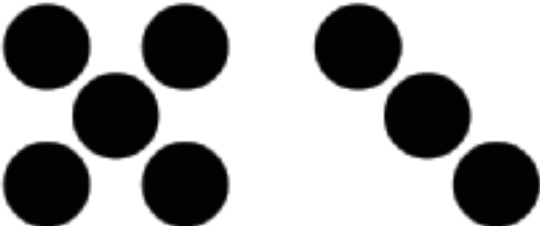


Image Cards Grade K



Image Cards Grade K



Image Cards Grade K

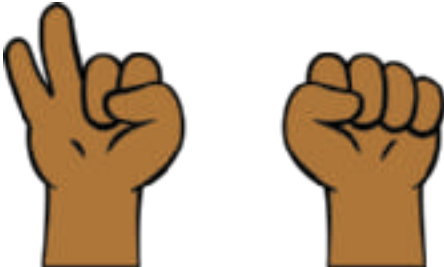


Image Cards Grade K



Image Cards Grade K

Image Cards Grade K

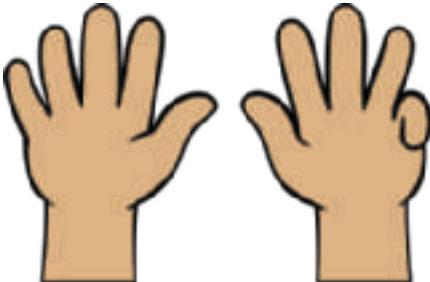


Image Cards Grade K

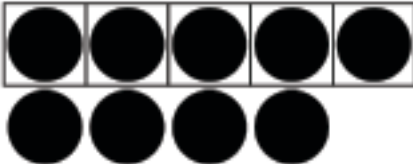


Image Cards Grade K



Image Cards Grade K



Image Cards Grade K



Image Cards Grade K



Image Cards Grade K

Image Cards Grade K



Image Cards Grade K



Image Cards Grade K

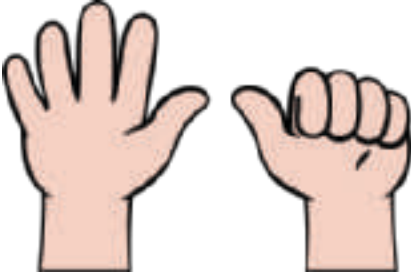


Image Cards Grade K



Image Cards Grade K

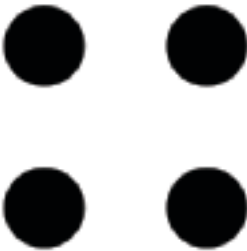


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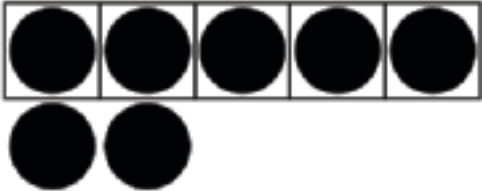


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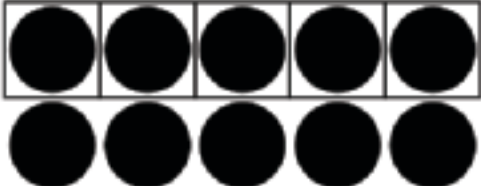


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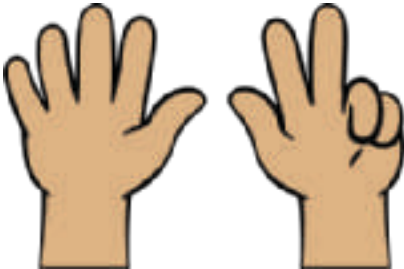


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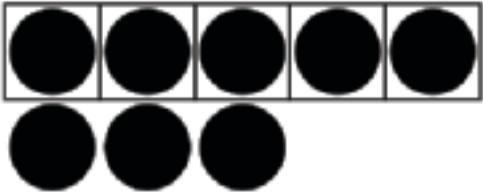


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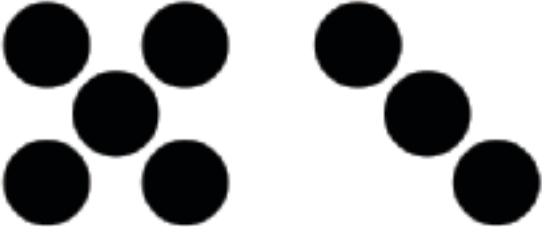


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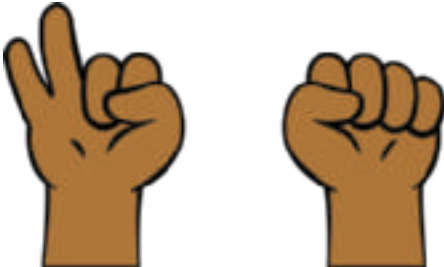


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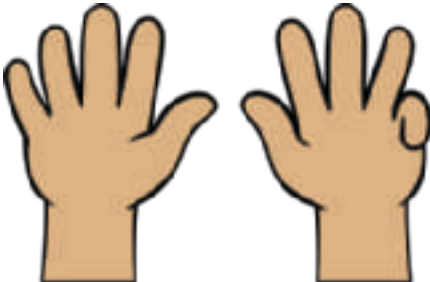


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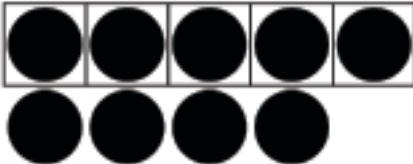


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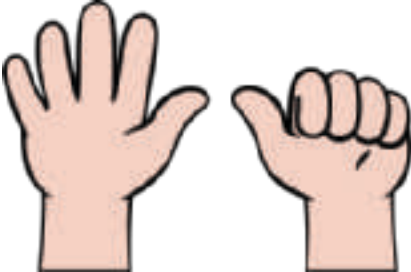


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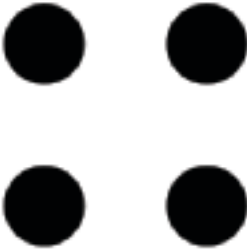


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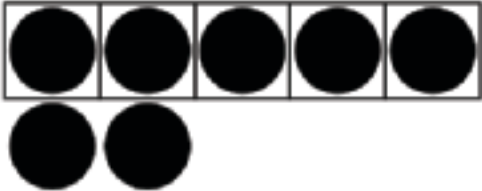


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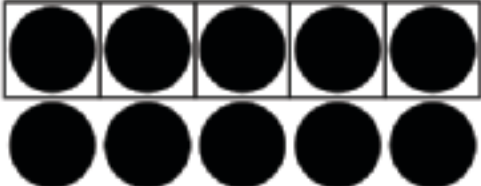


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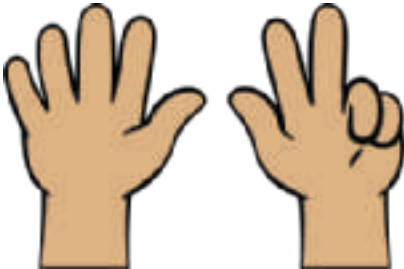


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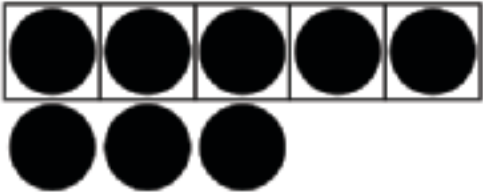


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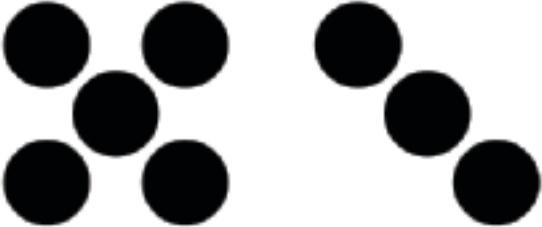


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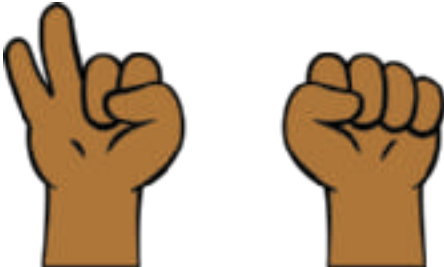


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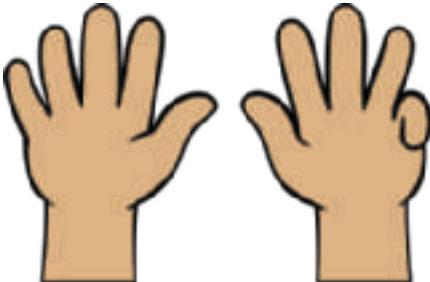


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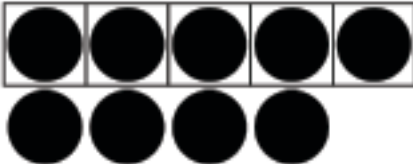


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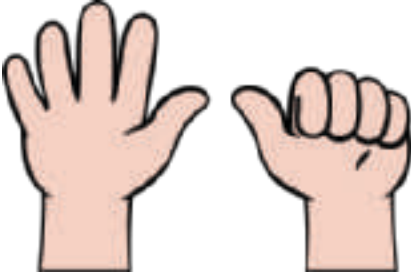


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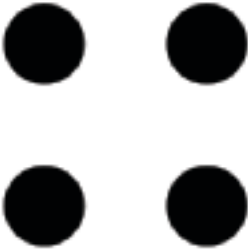


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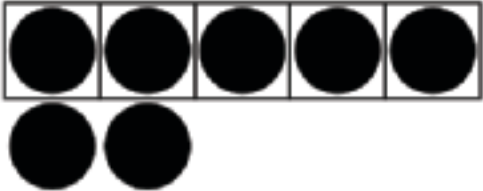


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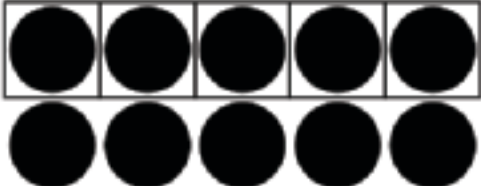


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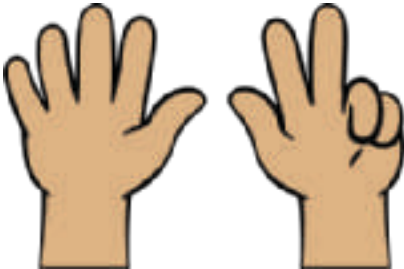


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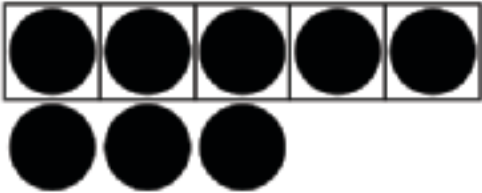


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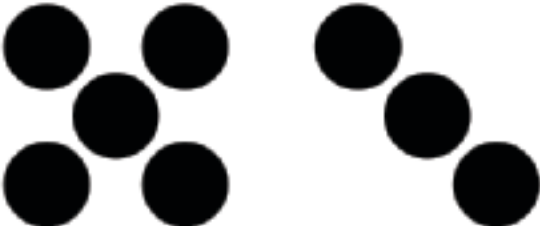


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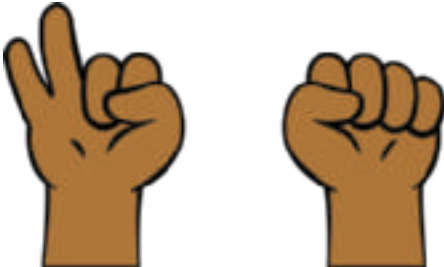


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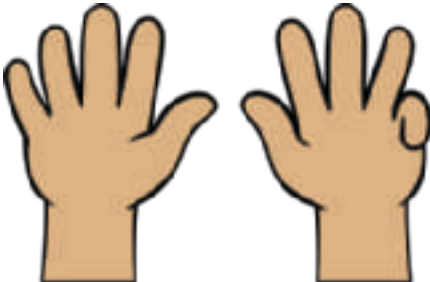


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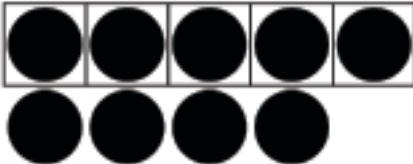


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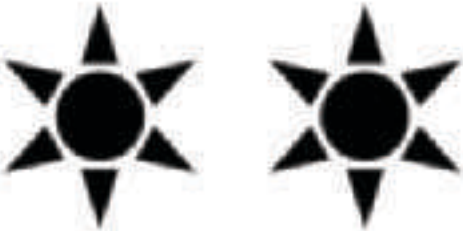
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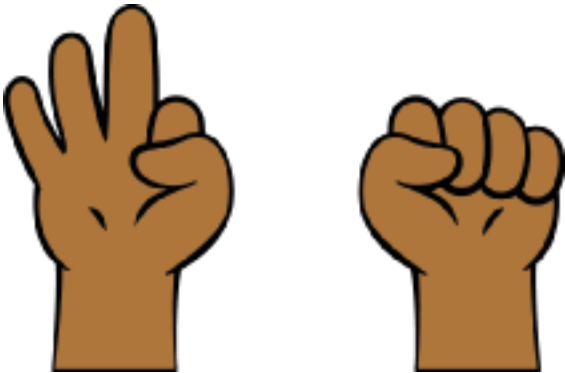
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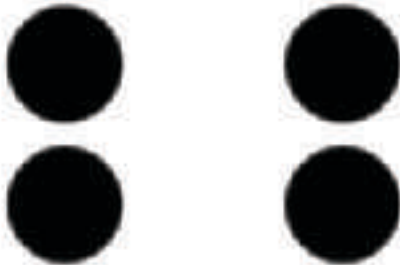
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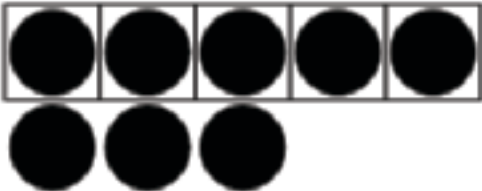
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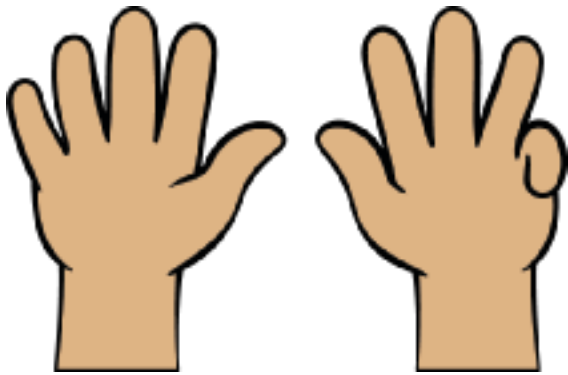
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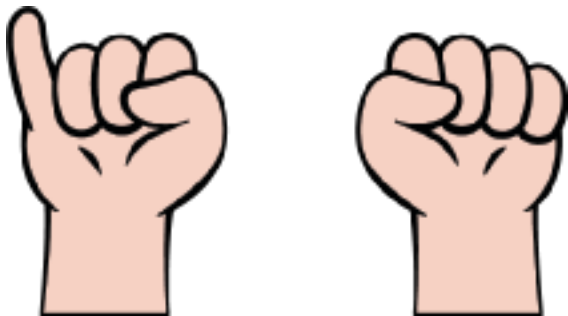
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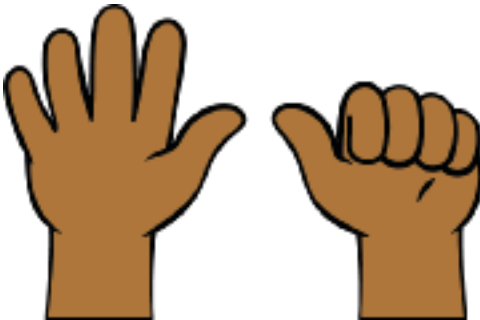
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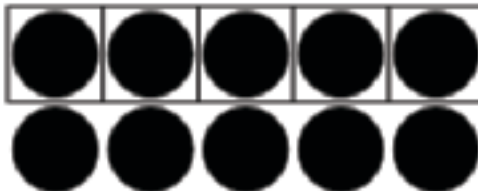
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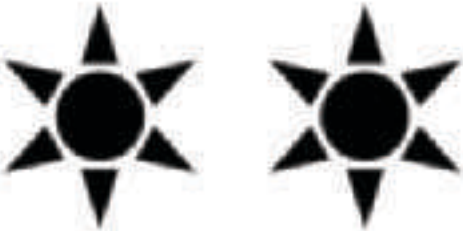
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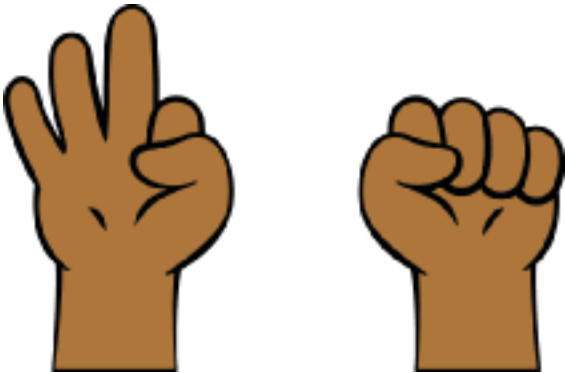
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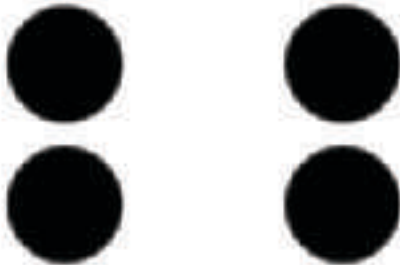
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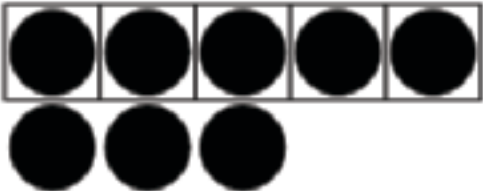
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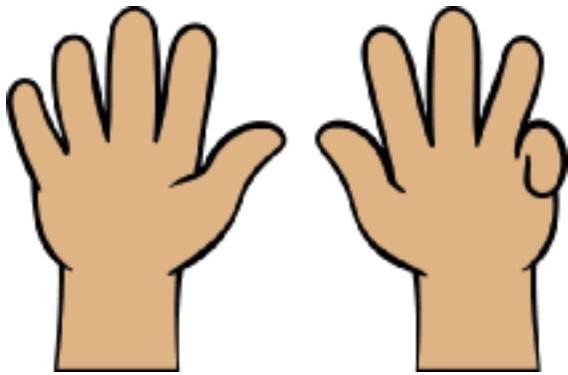
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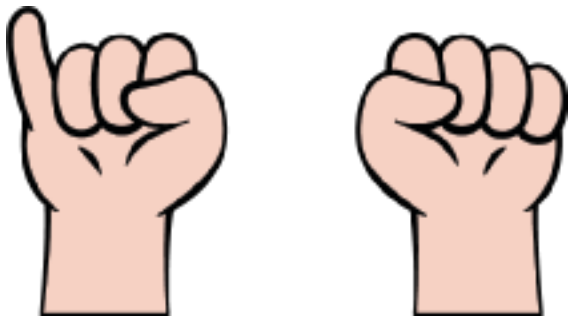
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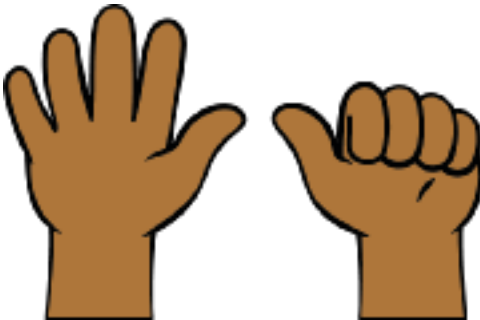
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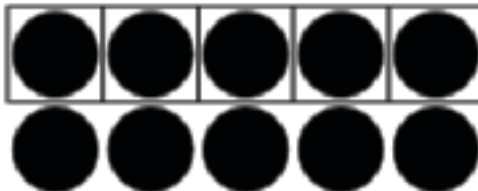
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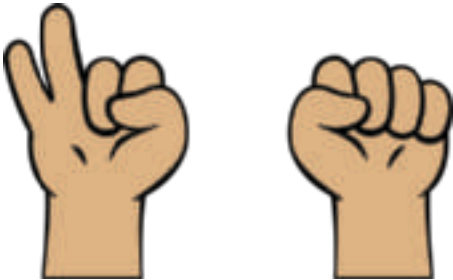


Math Fingers Cards

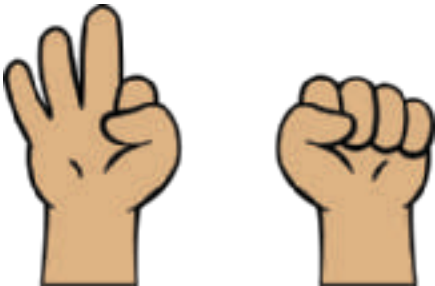
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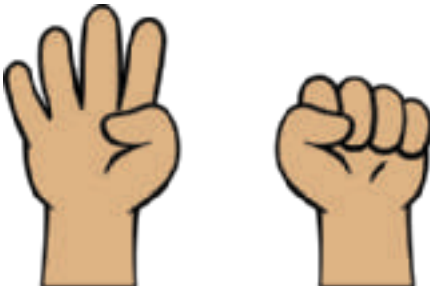
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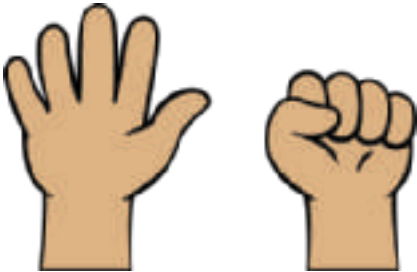
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Math Fingers



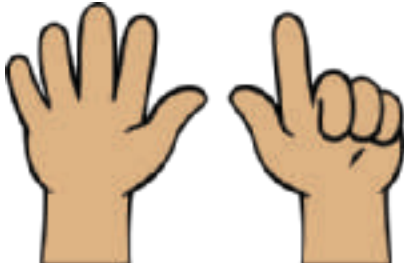
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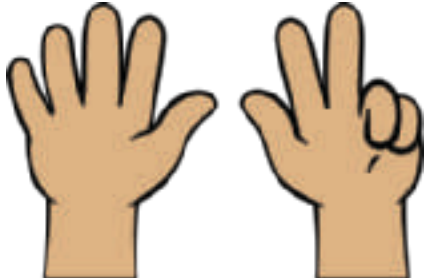
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Math Fingers



Math Fingers

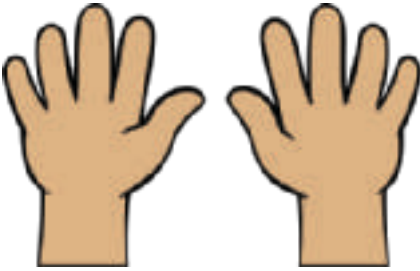


Math Fingers Cards

Math Fingers



Math Fingers

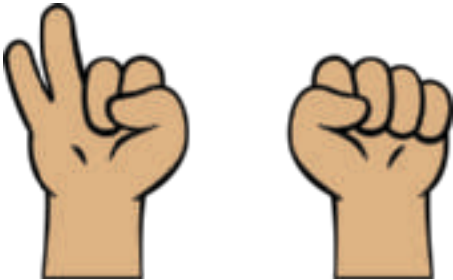


Math Fingers Cards

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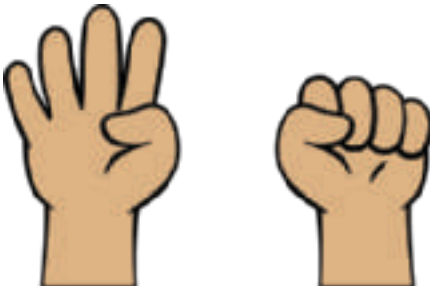
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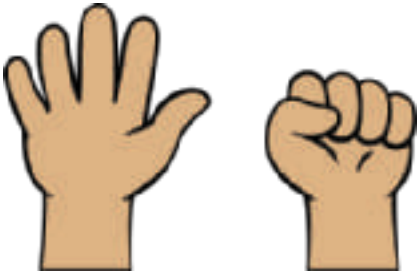
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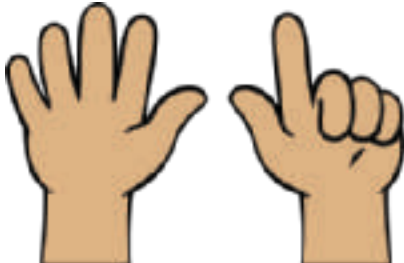
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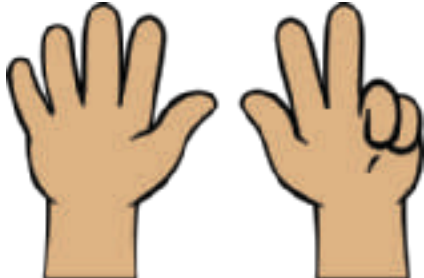
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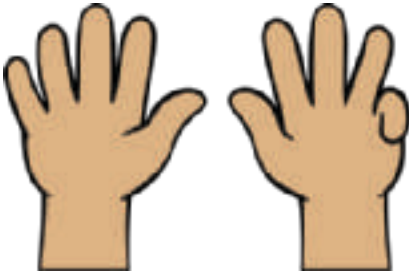


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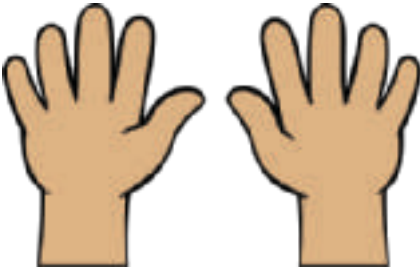


Math Fingers Cards

Math Fingers



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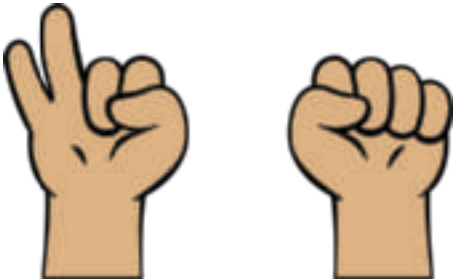


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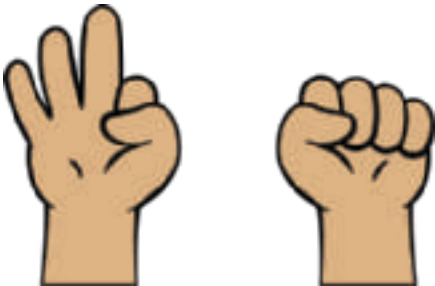
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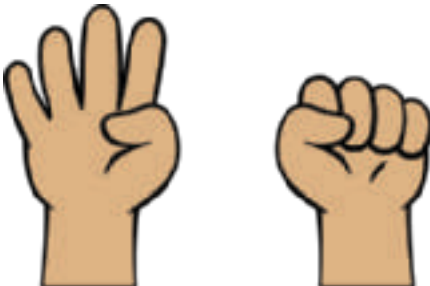
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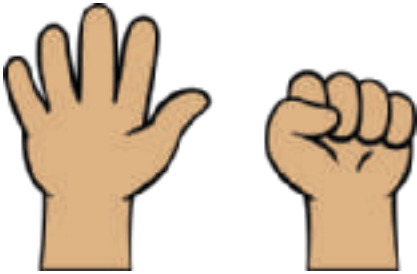
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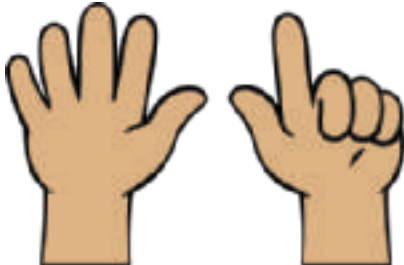
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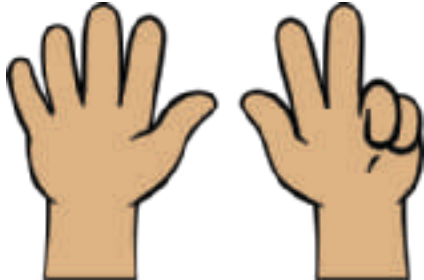
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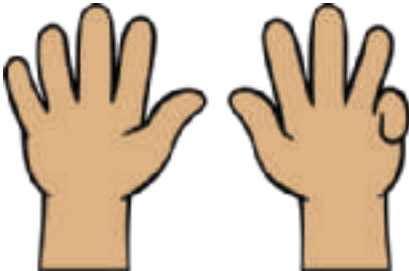


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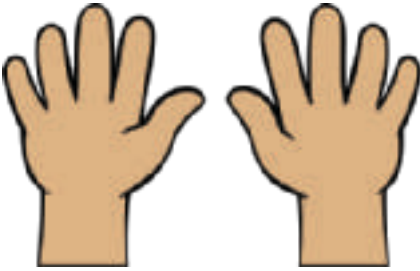


Math Fingers Cards

Math Fingers



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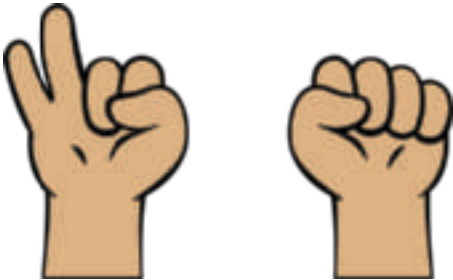


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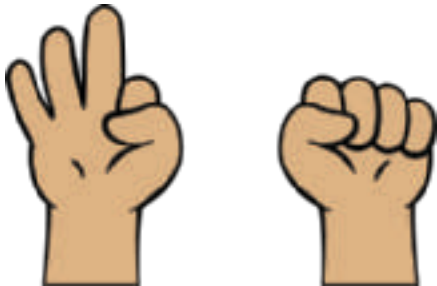
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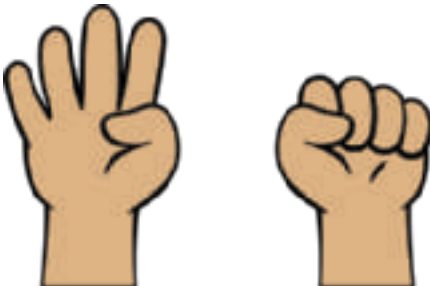
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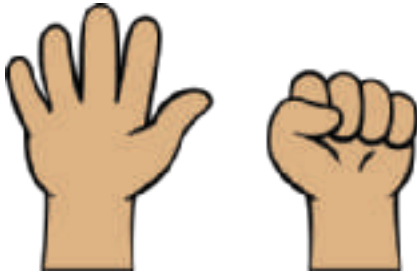
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Math Fingers



Math Fingers



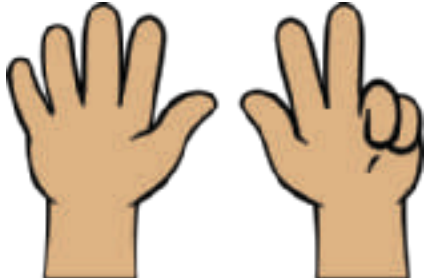
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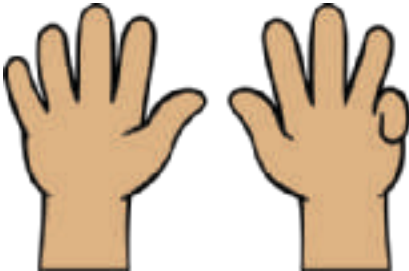


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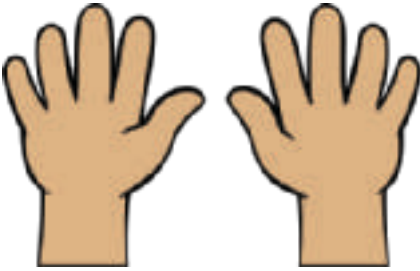


Math Fingers Cards

Math Fingers

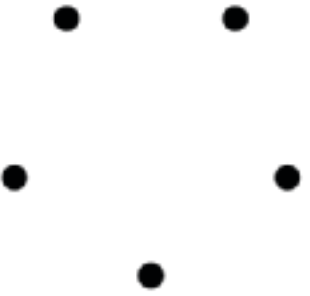


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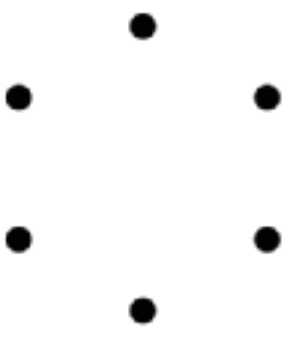


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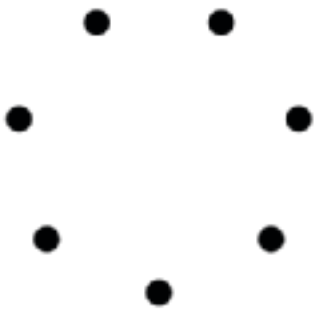
Circle Cards



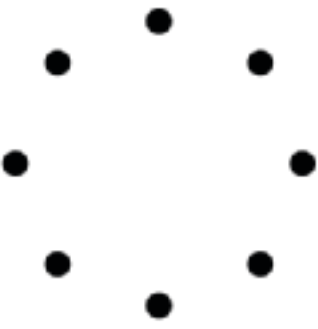
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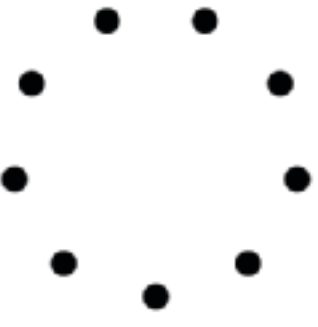
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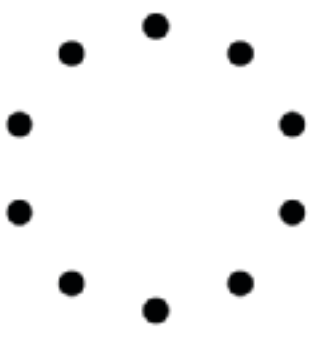
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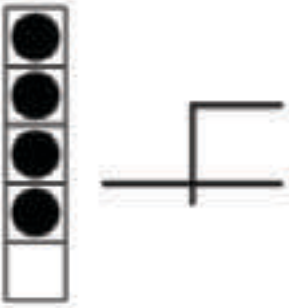
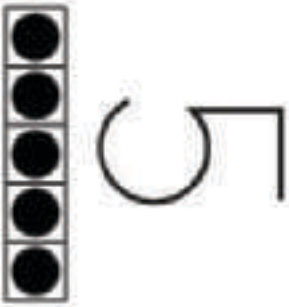
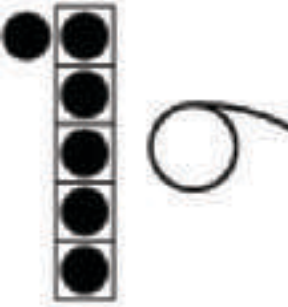
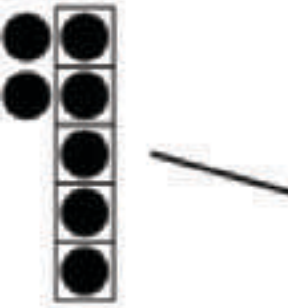


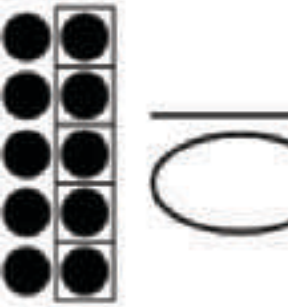





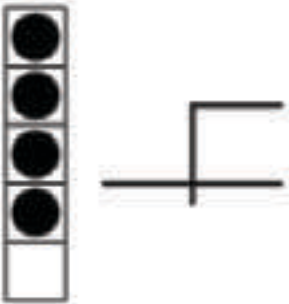
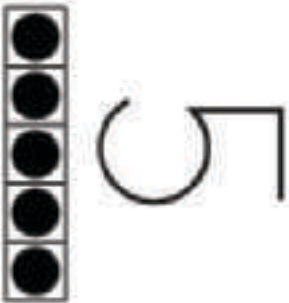
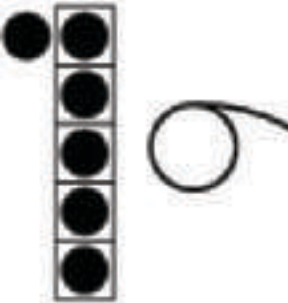
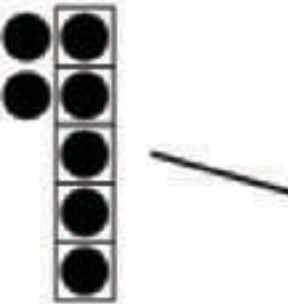
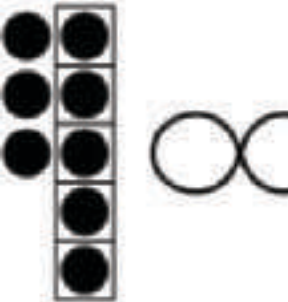
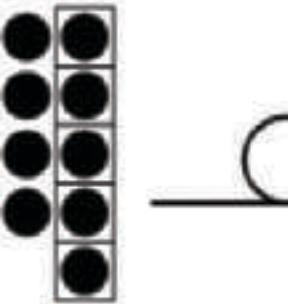
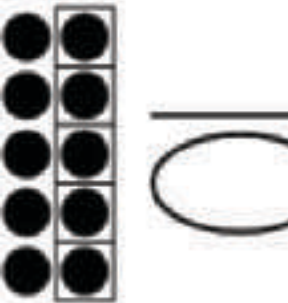
Circle Cards




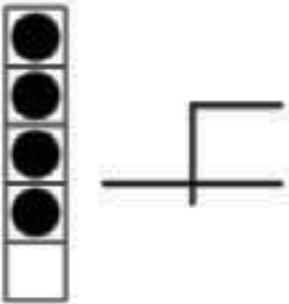
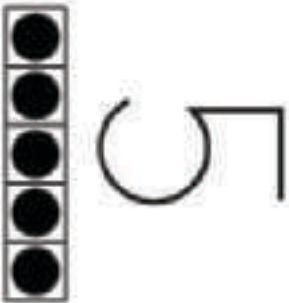
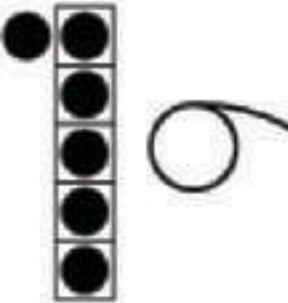
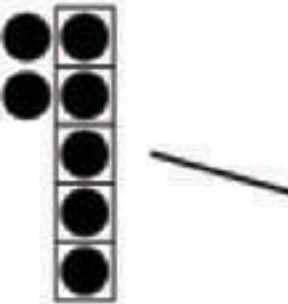
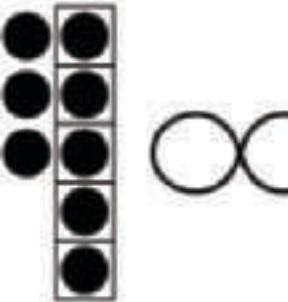
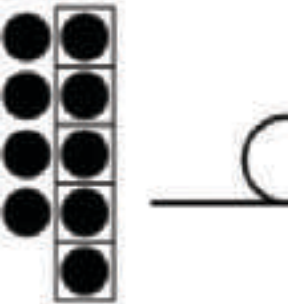
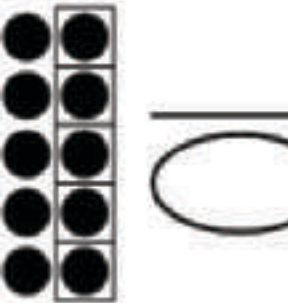








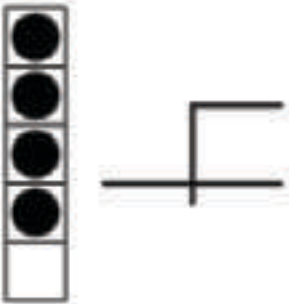

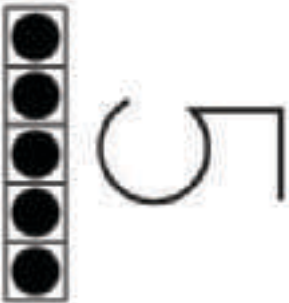

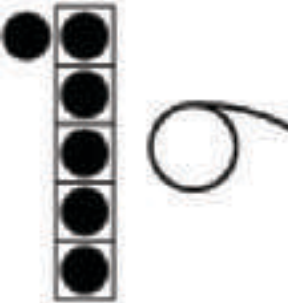

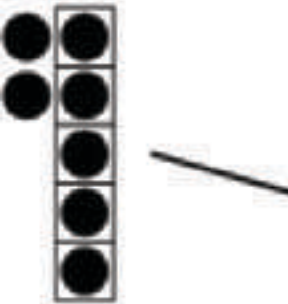

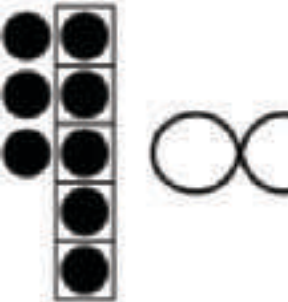

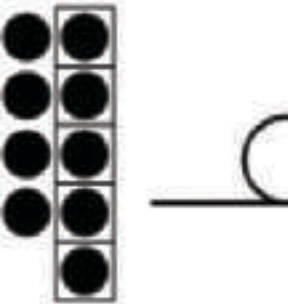

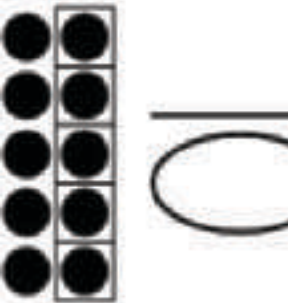

Circle Cards



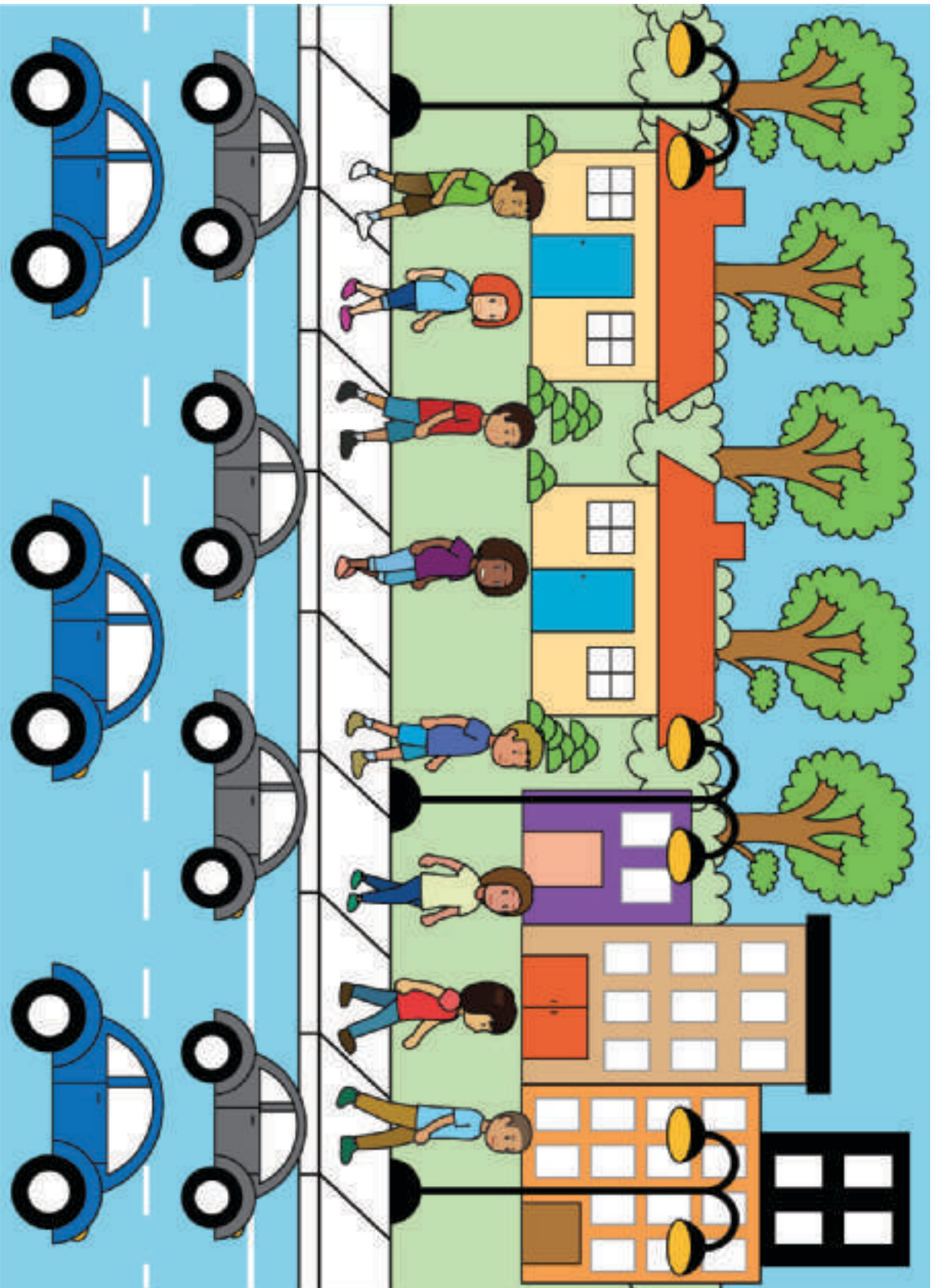
 <p>1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>	 <p>5</p>
 <p>6</p>	 <p>7</p>	 <p>8</p>	 <p>9</p>	 <p>10</p>

 <p>1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>	 <p>5</p>
 <p>6</p>	 <p>7</p>	 <p>8</p>	 <p>9</p>	 <p>10</p>

 <p>1</p>	 <p>2</p>	 <p>3</p>	 <p>4</p>	 <p>5</p>
 <p>6</p>	 <p>7</p>	 <p>8</p>	 <p>9</p>	 <p>10</p>

 <p>1</p> 	 <p>2</p> 	 <p>3</p> 	 <p>4</p> 	 <p>5</p> 
 <p>6</p> 	 <p>7</p> 	 <p>8</p> 	 <p>9</p> 	 <p>10</p> 

Picture A



Picture B



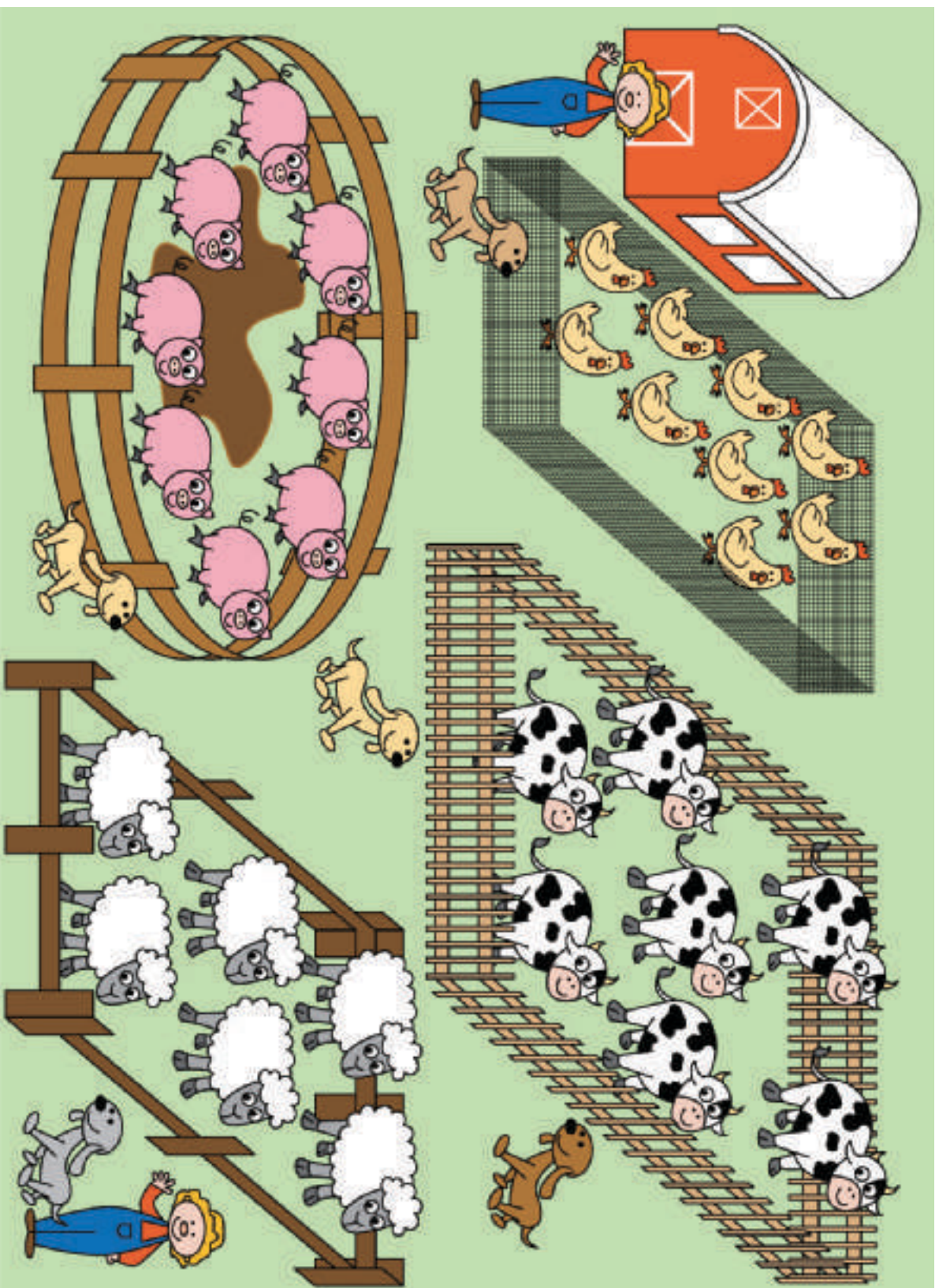
Picture C



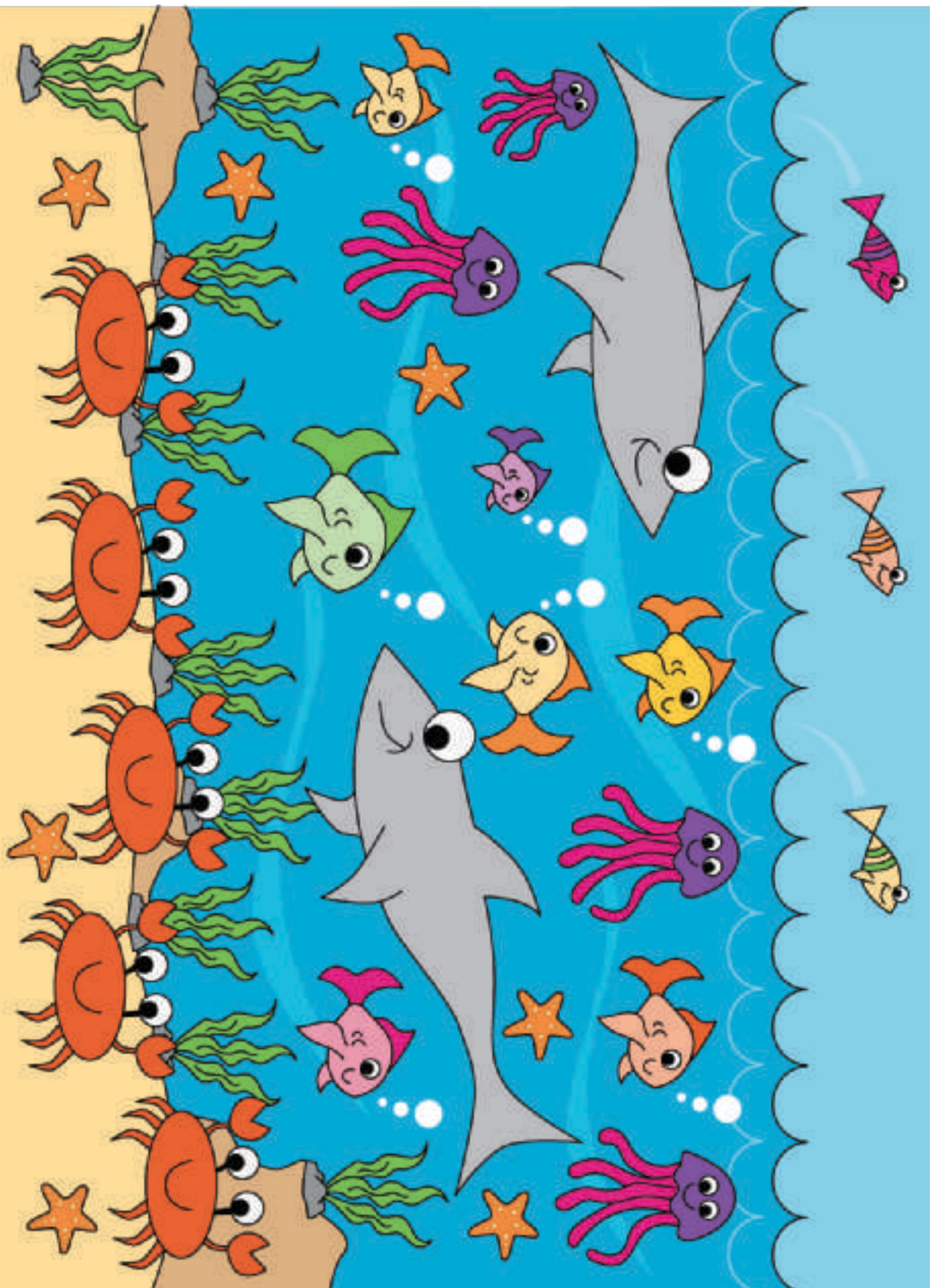
Picture D



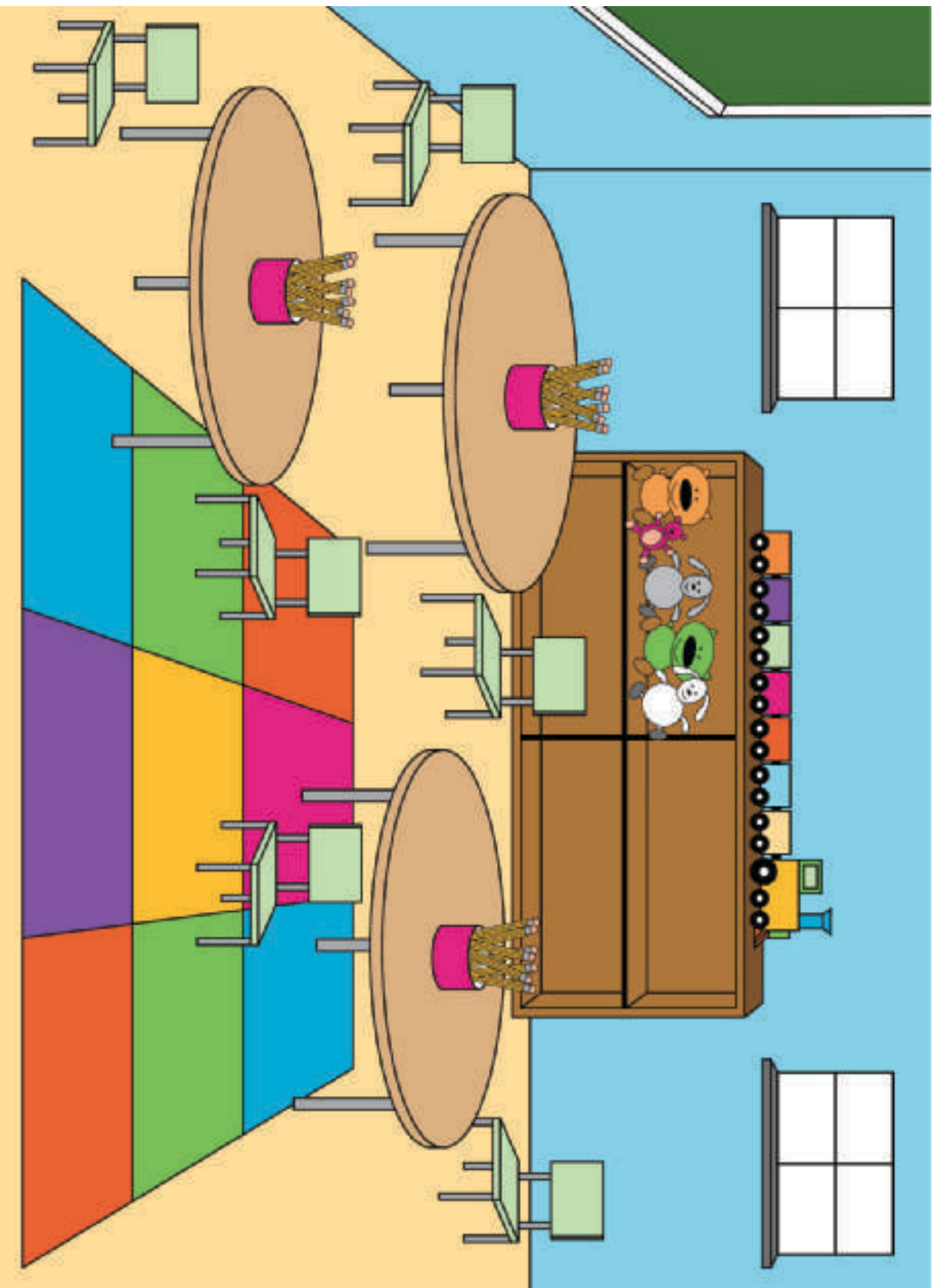
Picture E



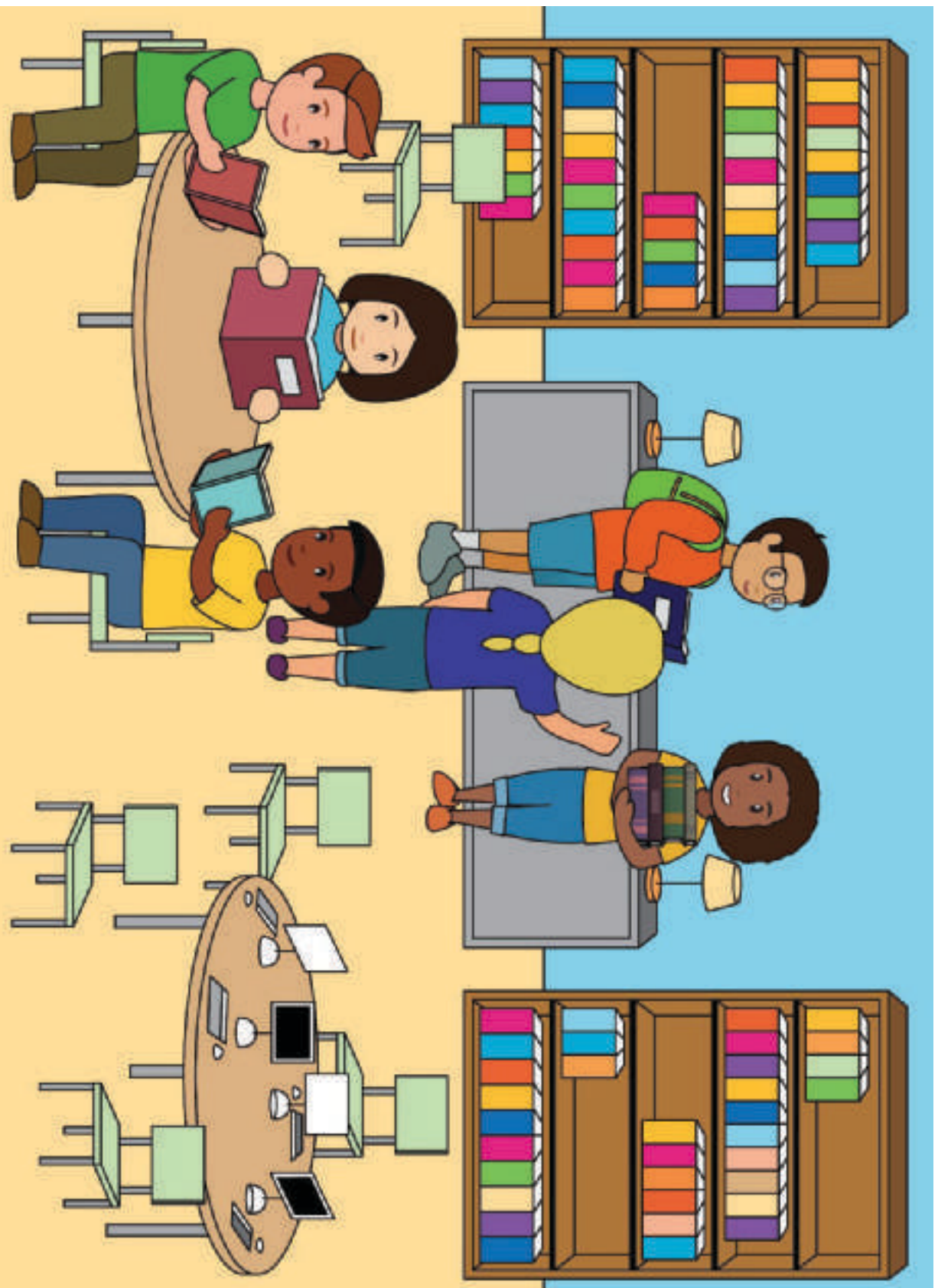
Picture F



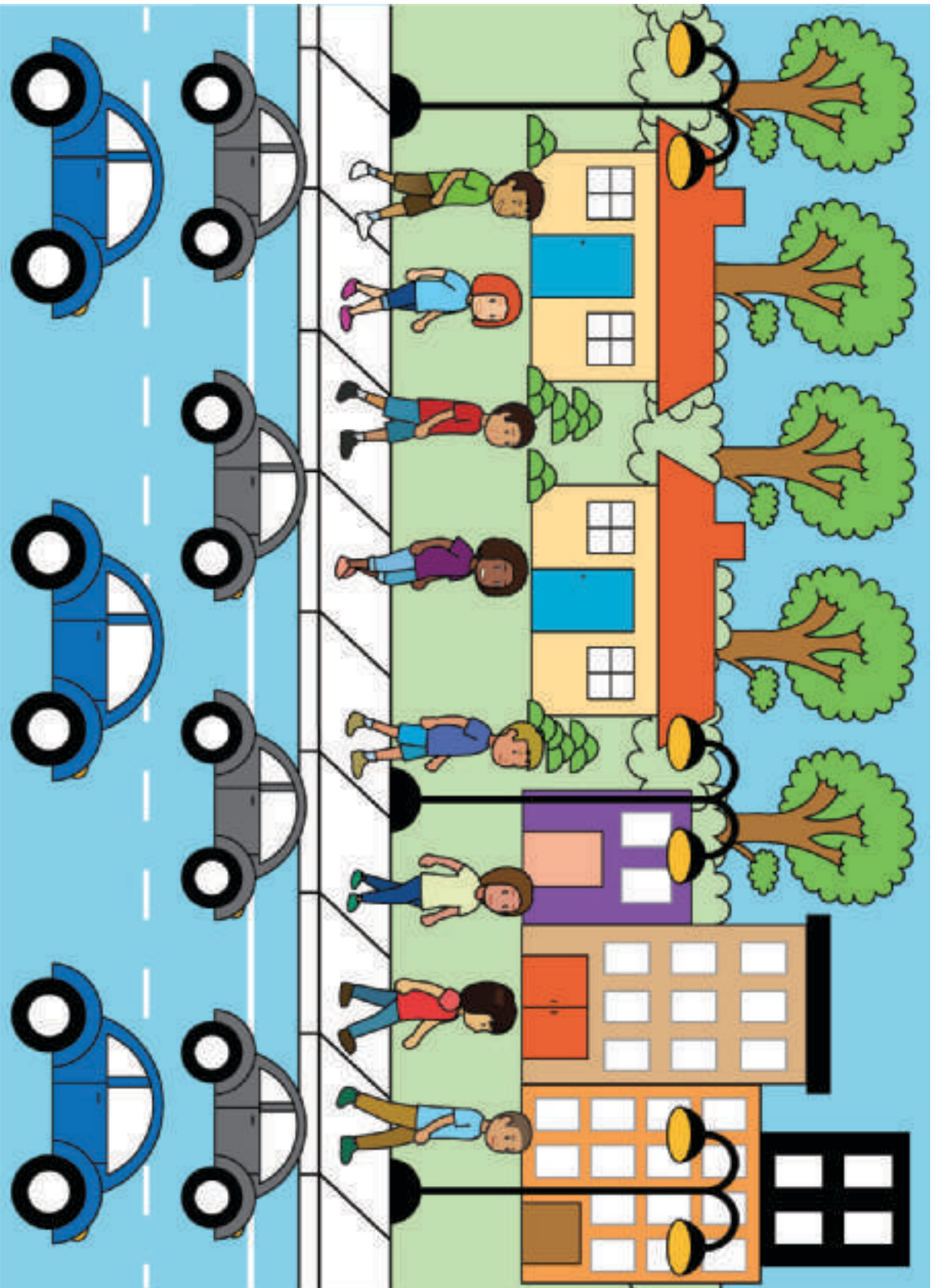
Picture G



Picture H



Picture A



Picture B



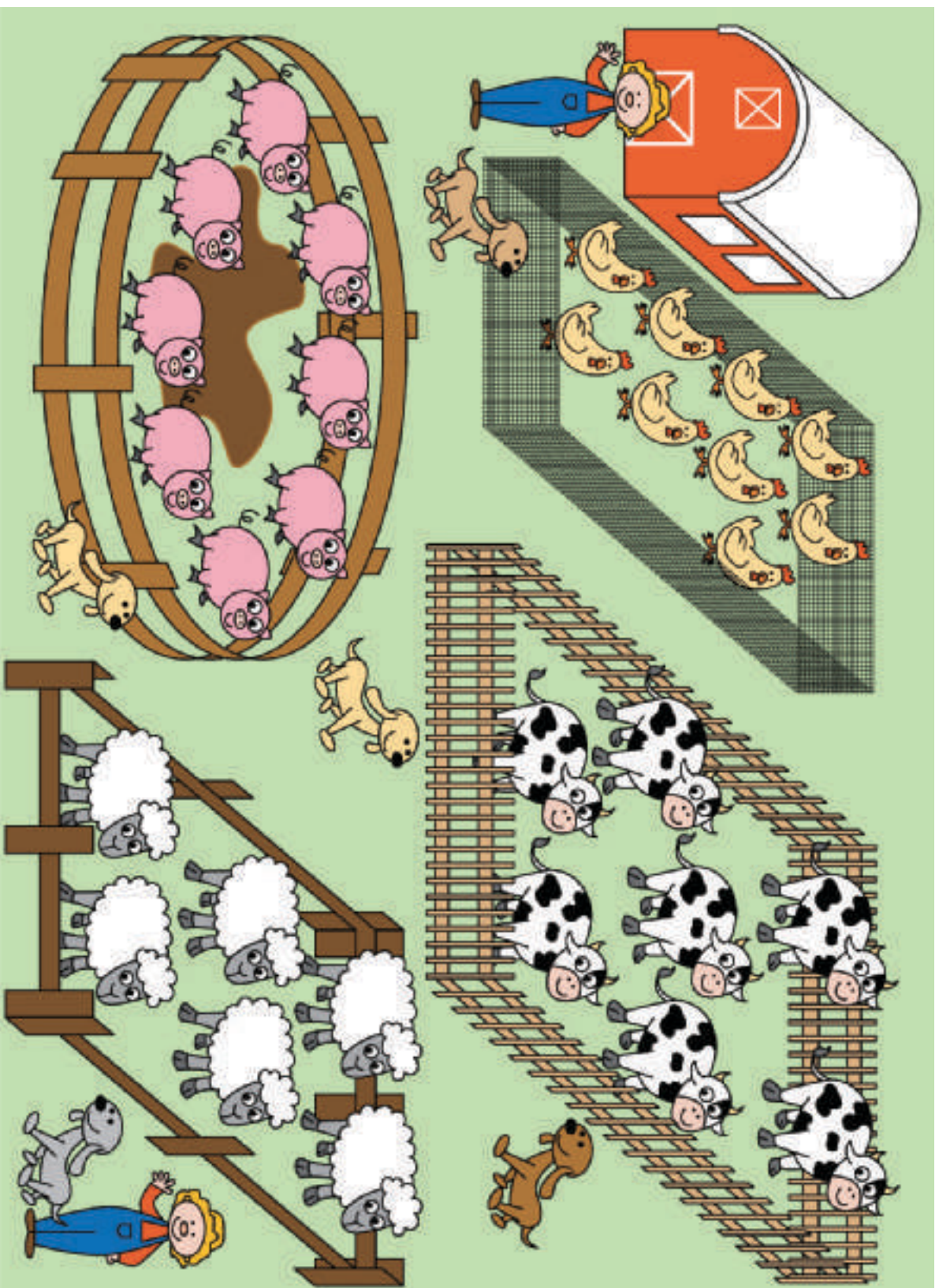
Picture C



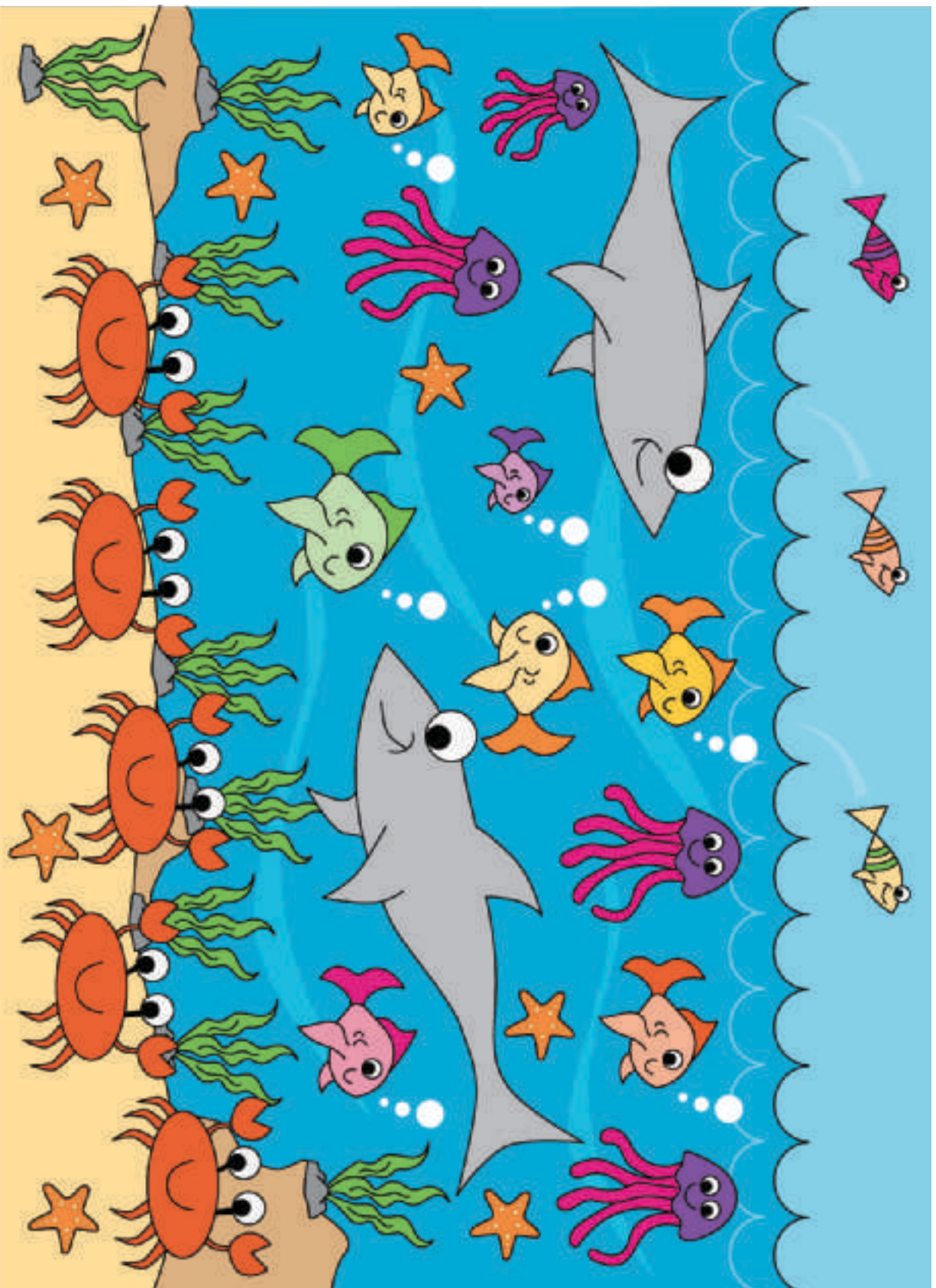
Picture D



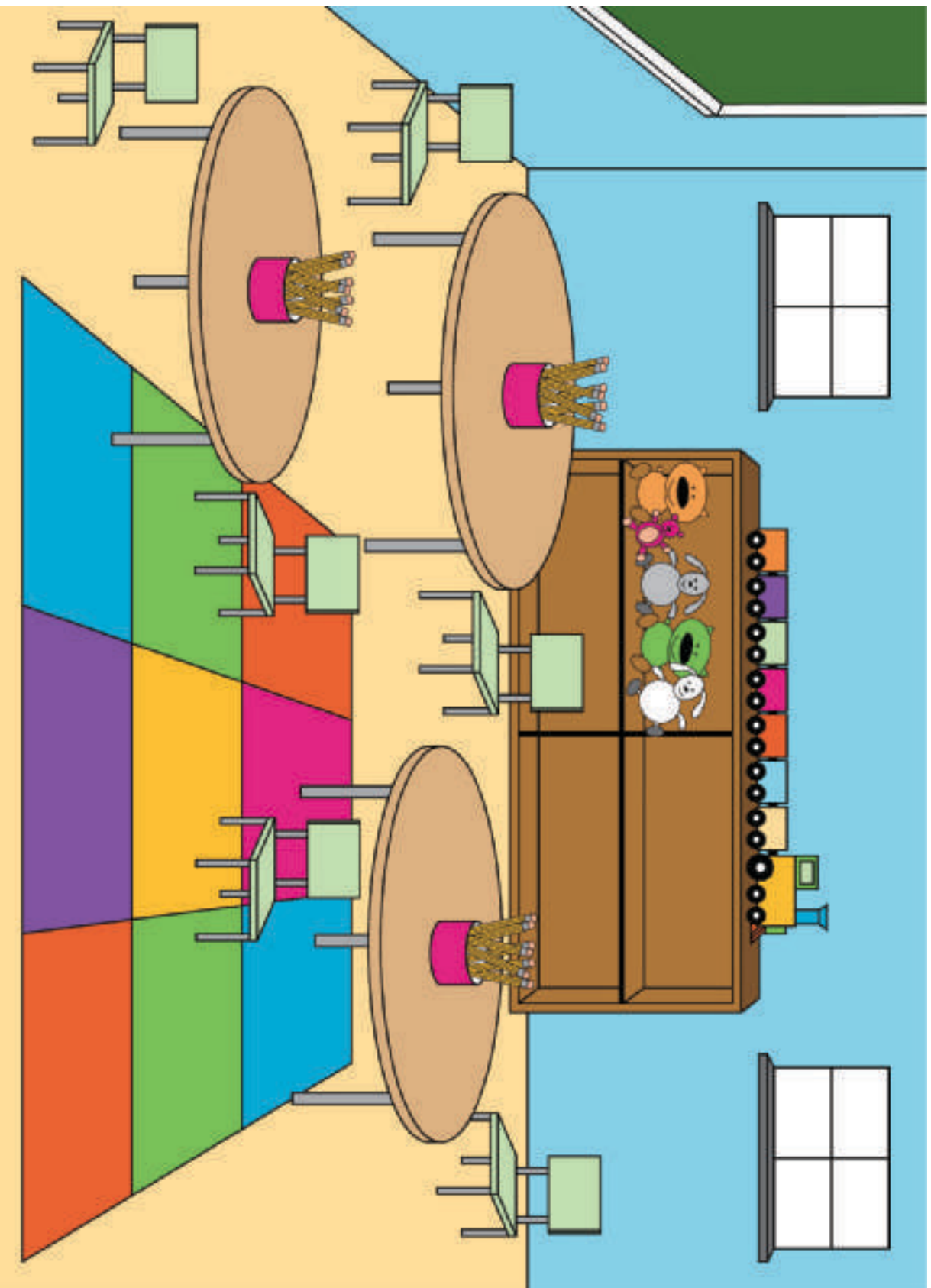
Picture E



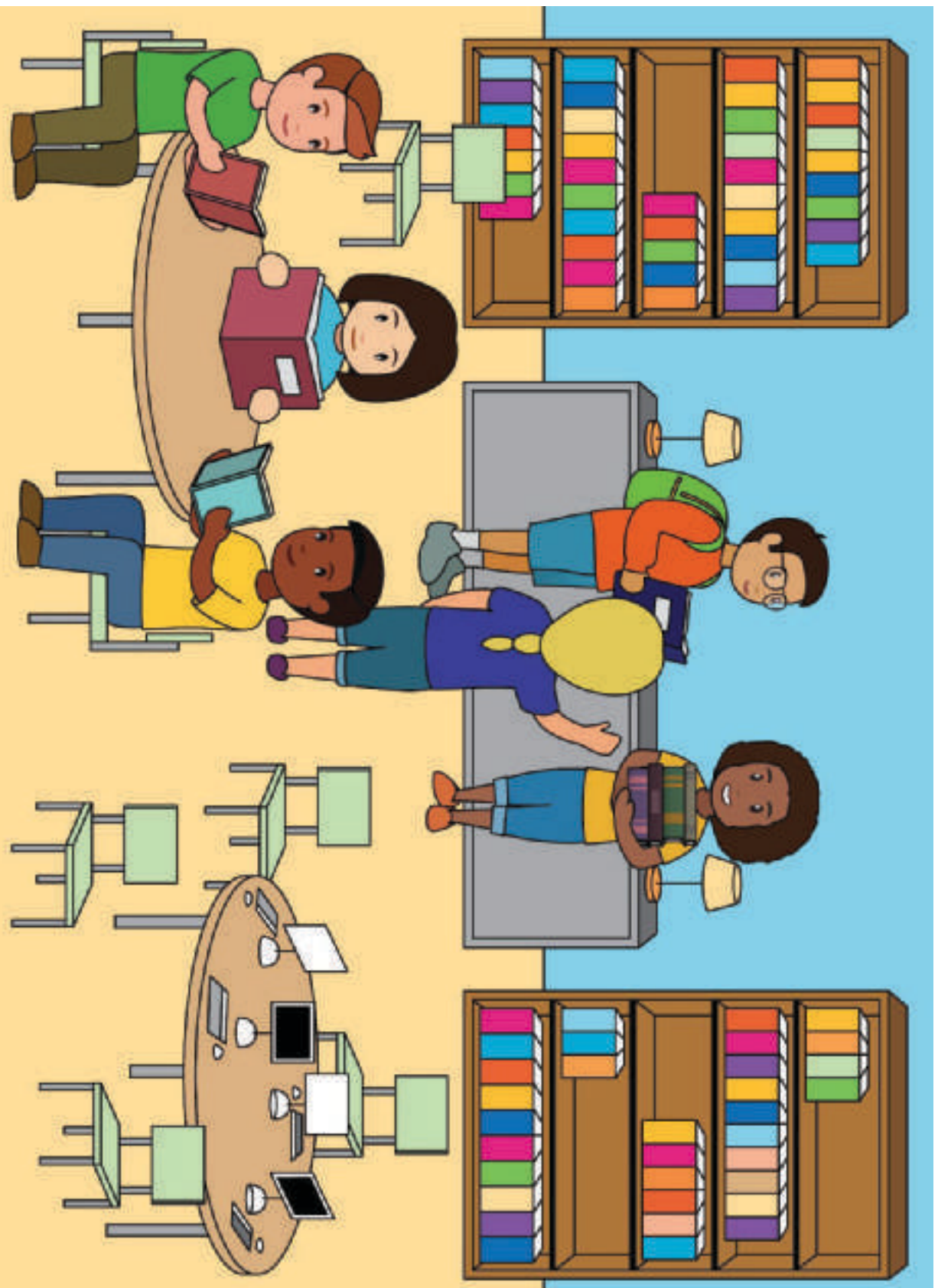
Picture F



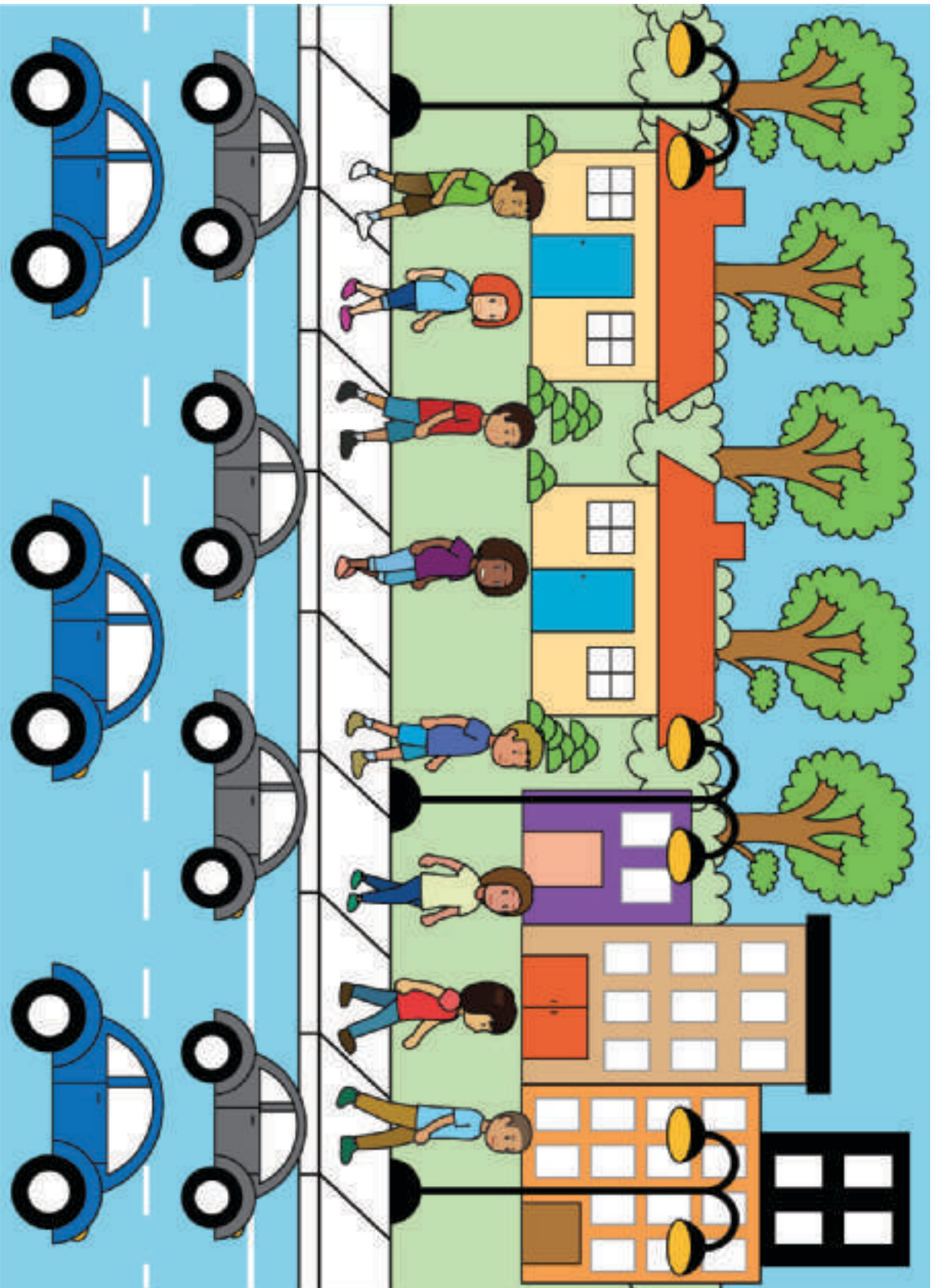
Picture G



Picture H



Picture A



Picture B



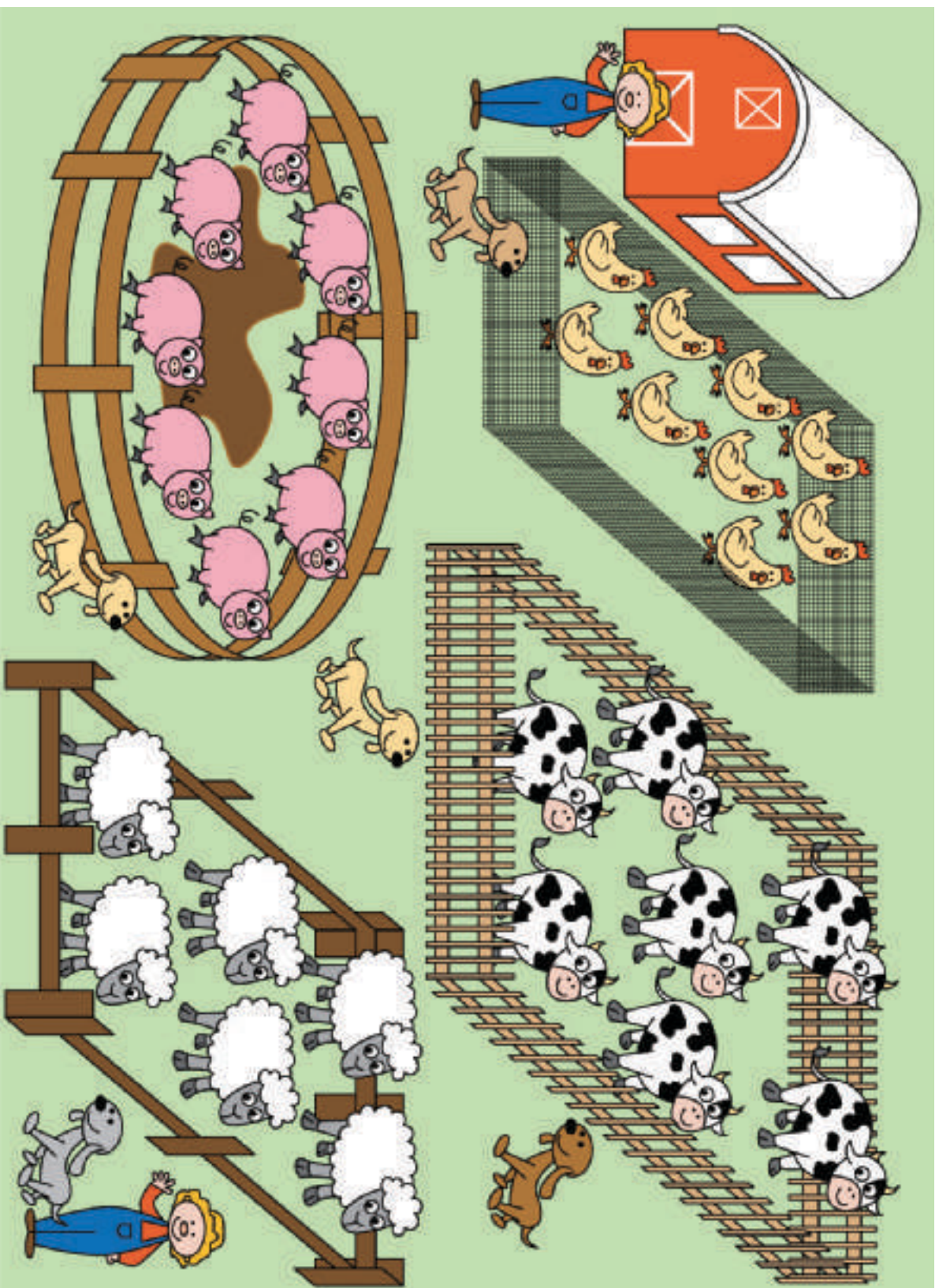
Picture C



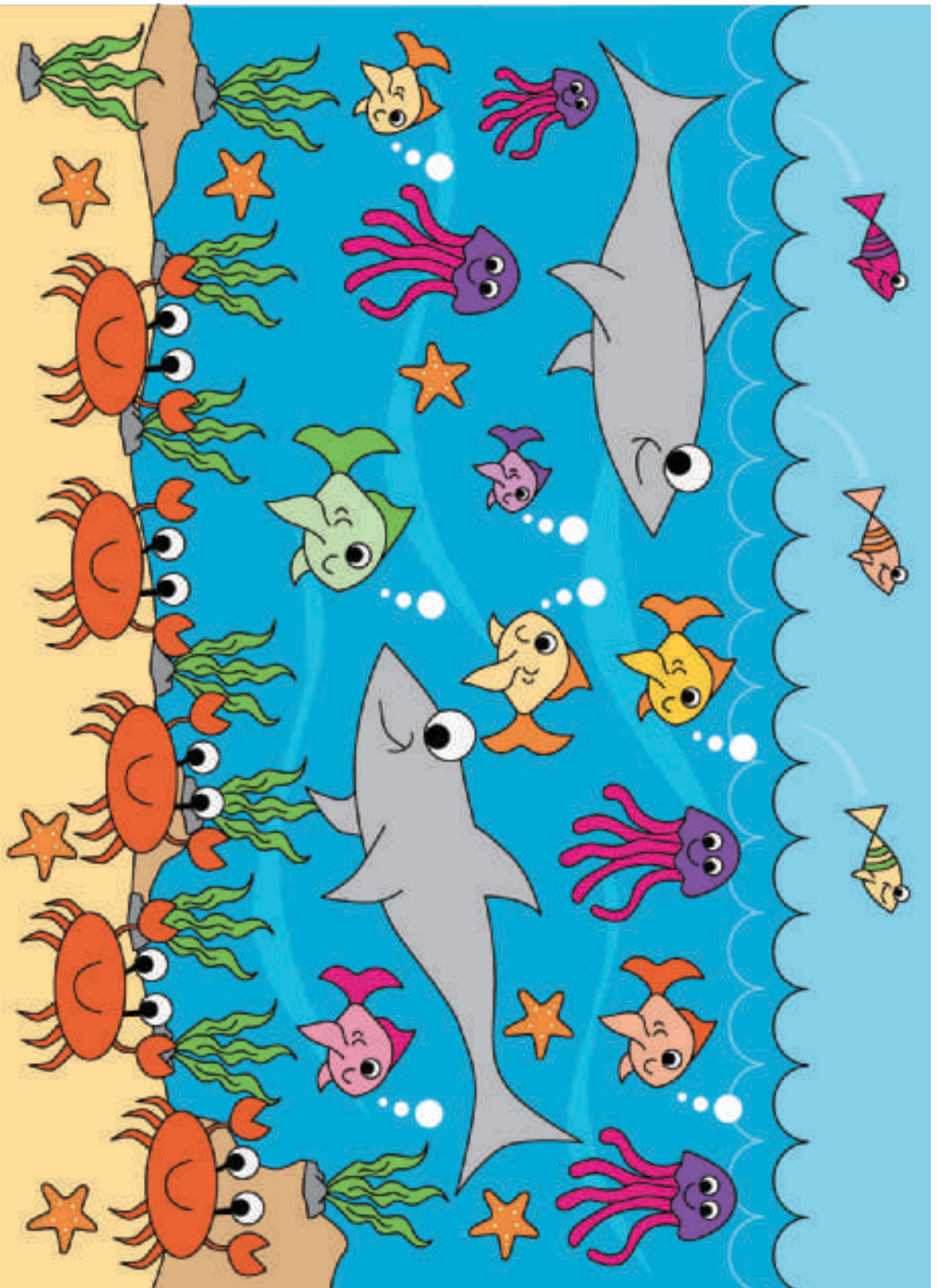
Picture D



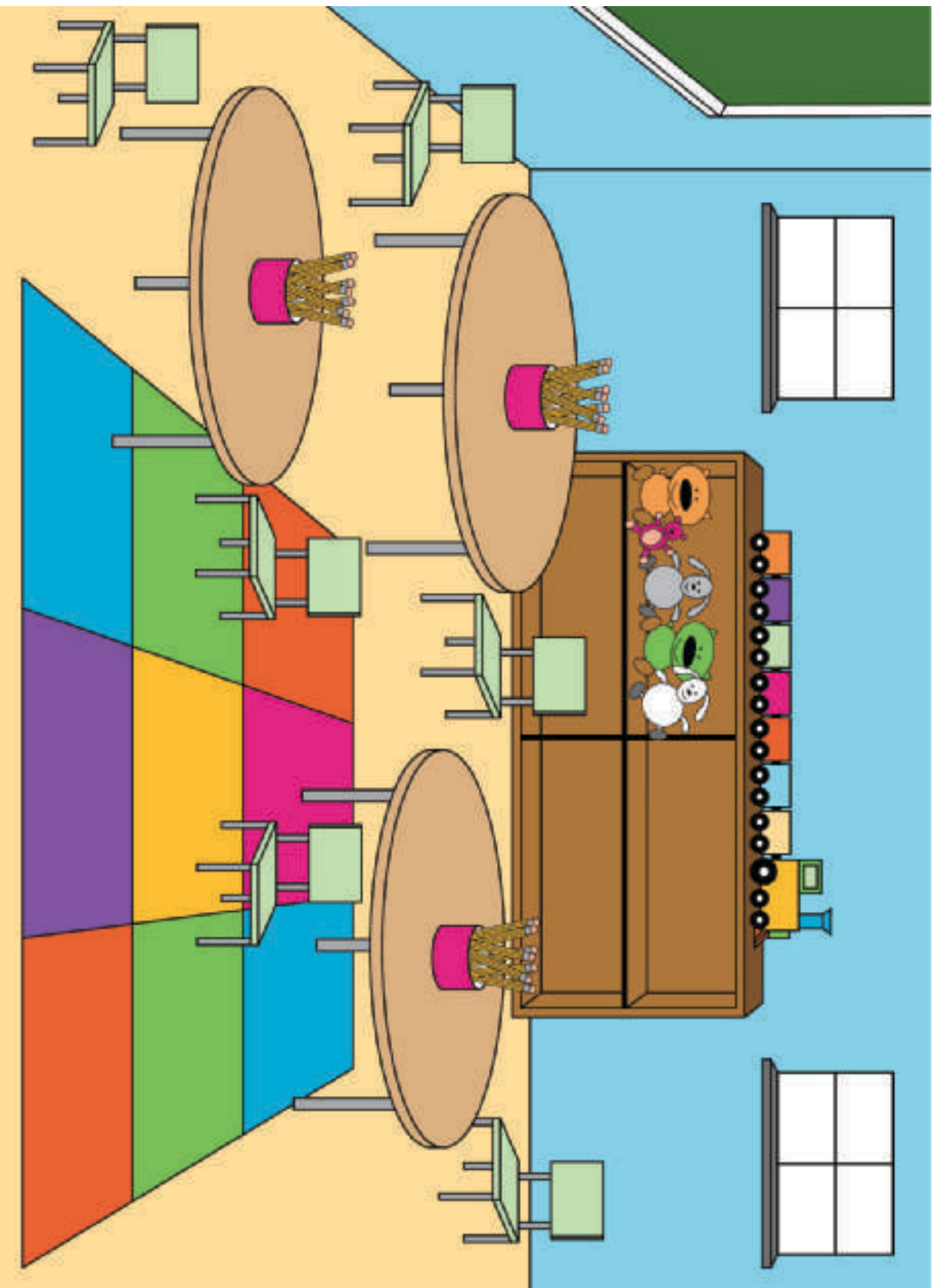
Picture E



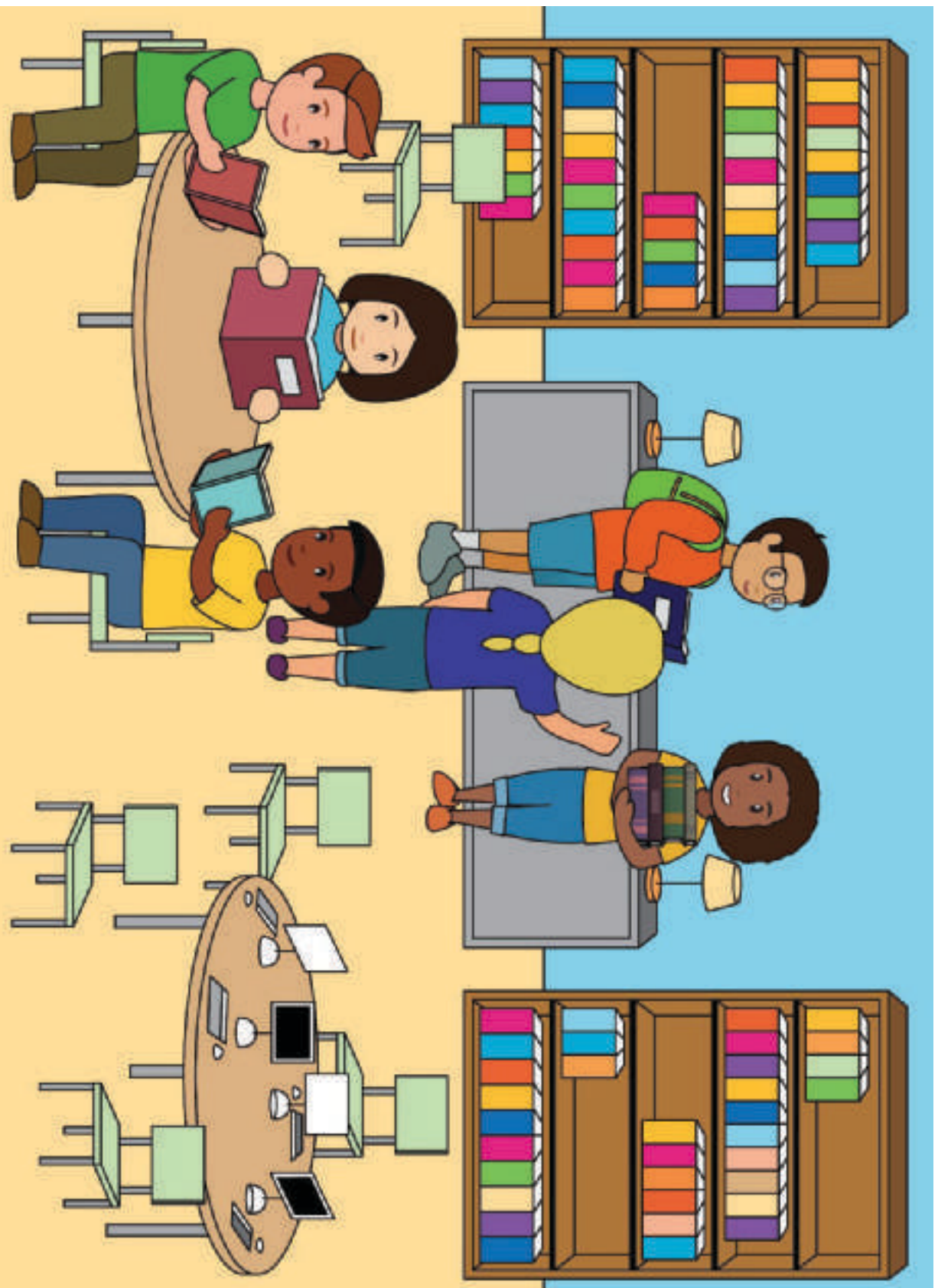
Picture F



Picture G



Picture H



2	7	9	1	8
3	4	10	5	6

2	7	9	1	8
3	4	10	5	6

2	7	9	1	8
3	4	10	5	6

2	7	9	1	8
3	4	10	5	6

2	7	9	1	8
3	4	10	5	6

2	7	9	1	8
3	4	10	5	6

Order 1

Pepperoni



Sausage



Olive



Bell Pepper



Pineapple



Order 2

Pepperoni



Sausage



Olive



Bell Pepper



Pineapple



Order 3

Pepperoni



Sausage



Olive



Bell Pepper



Pineapple



Order 4

Pepperoni



Sausage



Olive



Bell Pepper



Pineapple



Number Cards (0-10)

1

2

3

4

5

6

Number Cards (0-10)

7

8

9

1

2

3

Number Cards (0-10)

4

5

6

7

8

9

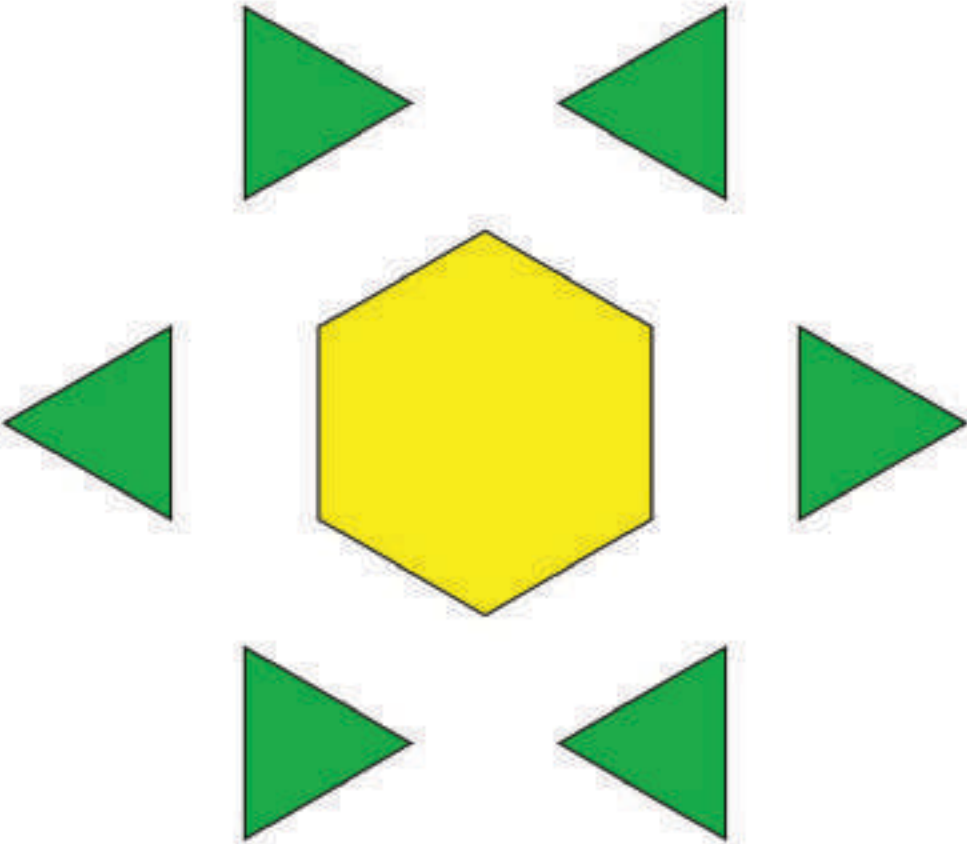
Number Cards (0-10)

0

0

10

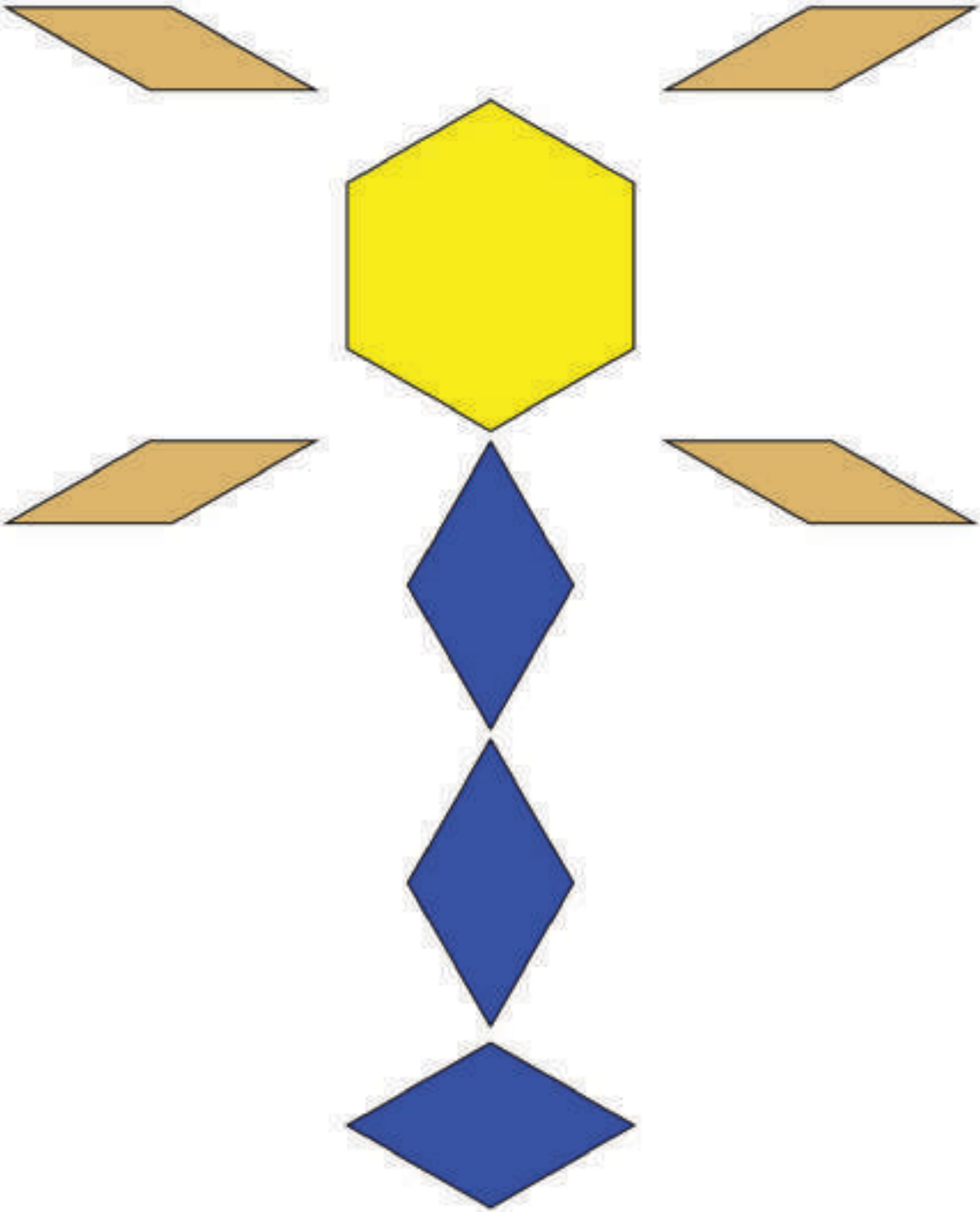
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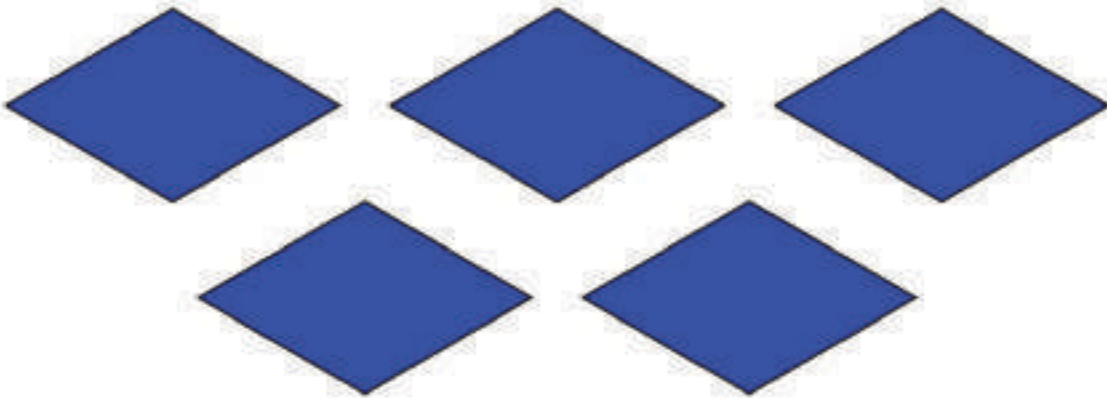
Pattern Blocks Stage 2 Mat



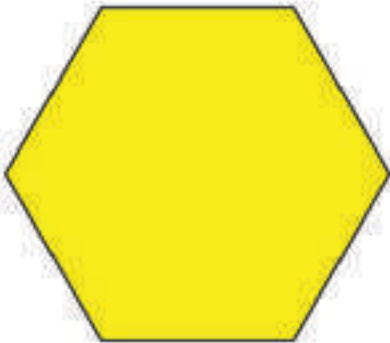
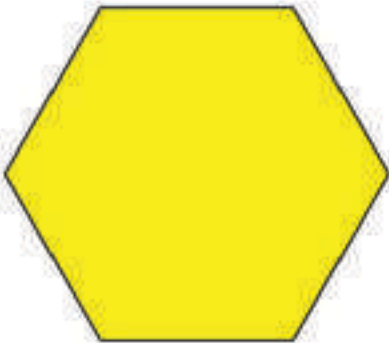
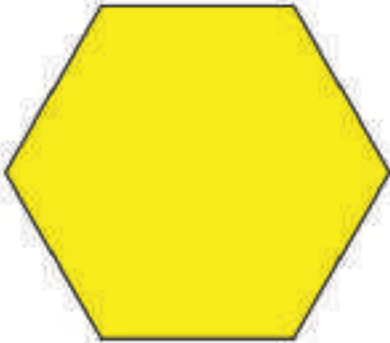
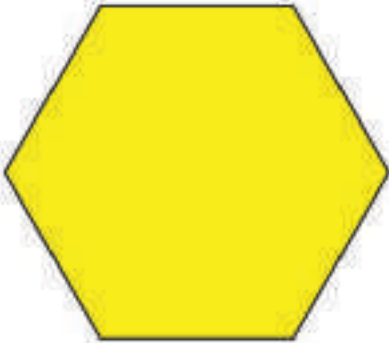
Pattern Blocks Stage 2 Mat



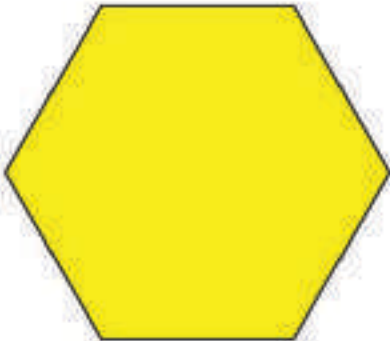
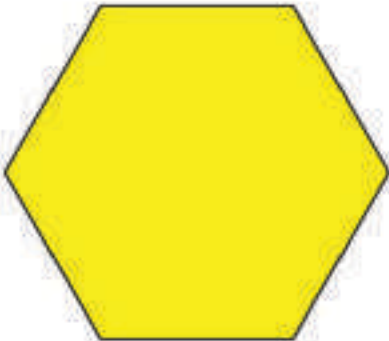
Pattern Blocks Stage 2 Mat



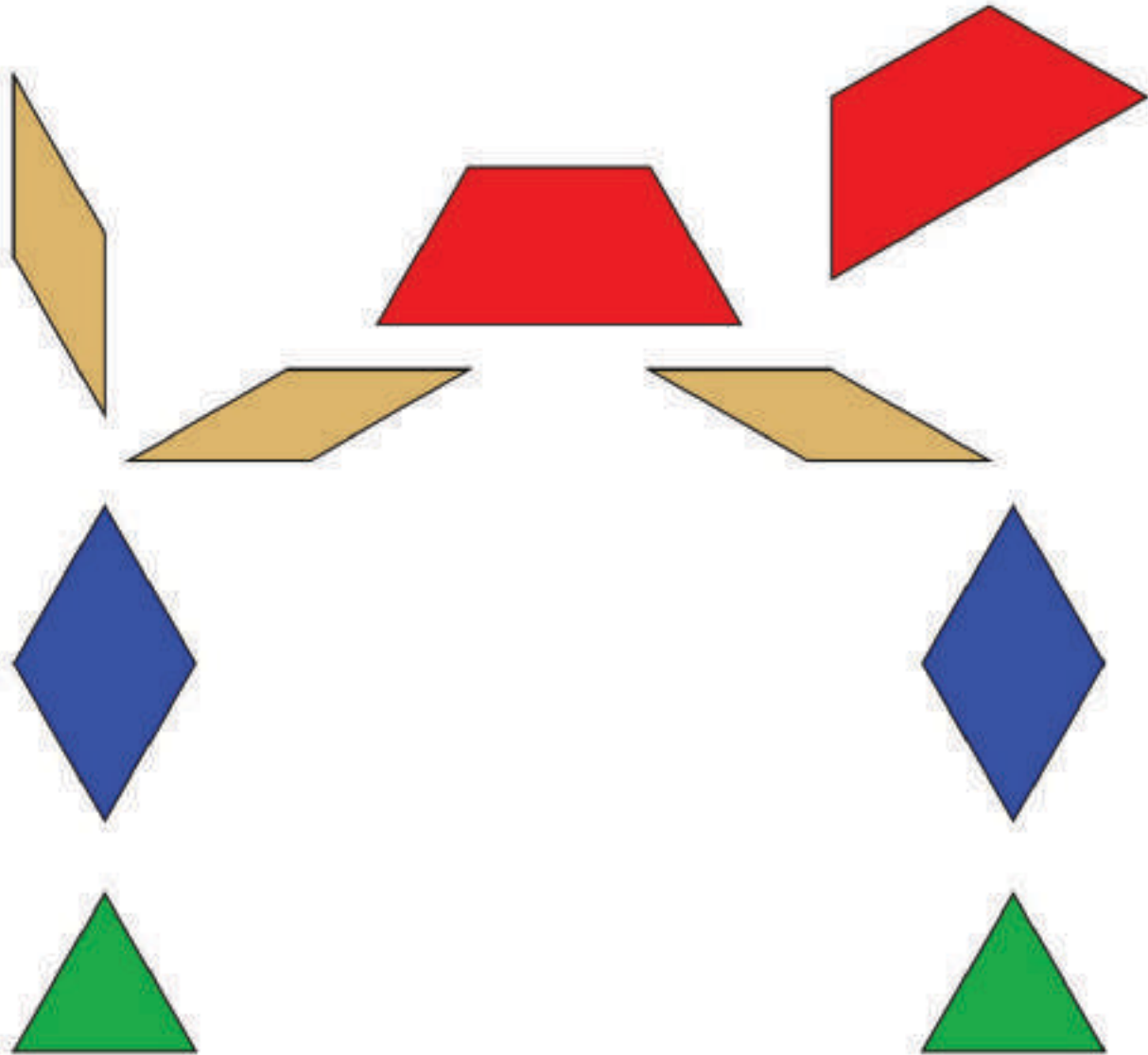
Pattern Blocks Stage 2 Mat



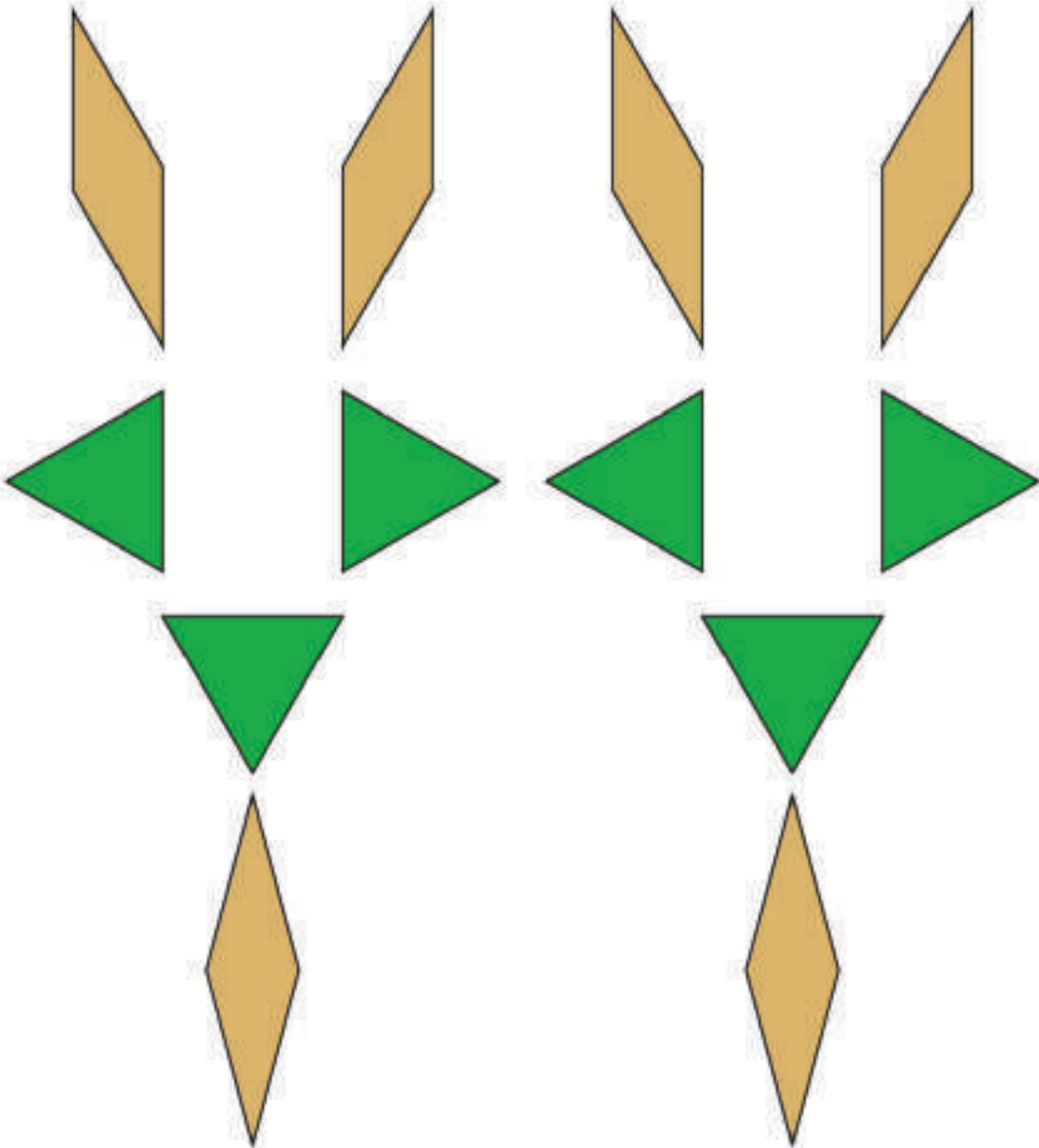
Pattern Blocks Stage 2 Mat



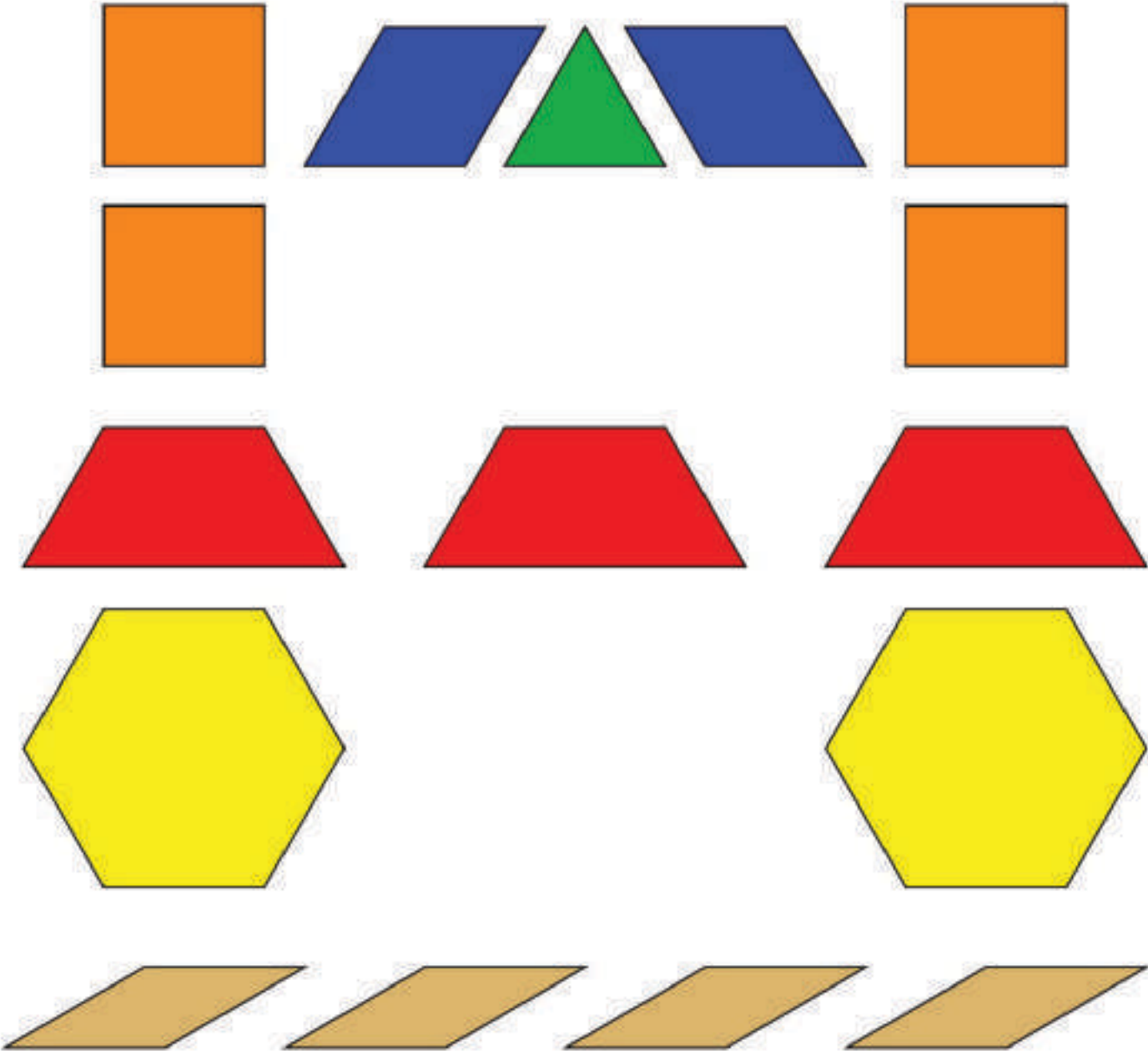
Pattern Blocks Stage 2 Mat



Pattern Blocks Stage 2 Mat



Pattern Blocks Stage 2 Mat

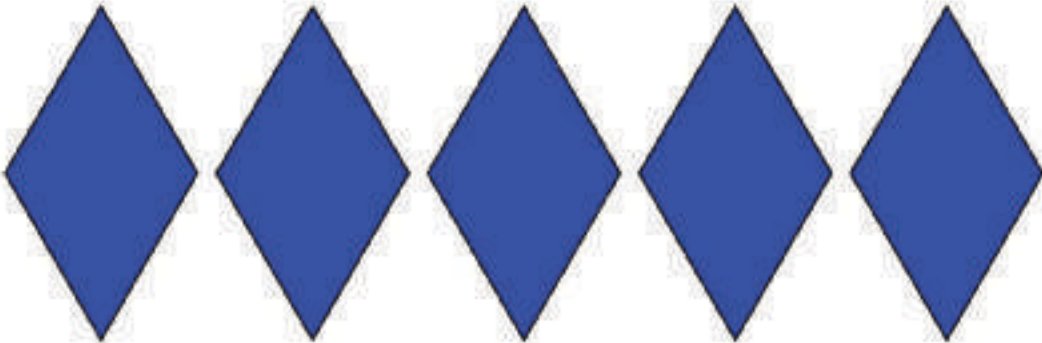


Pattern Blocks Stage 2 Mat

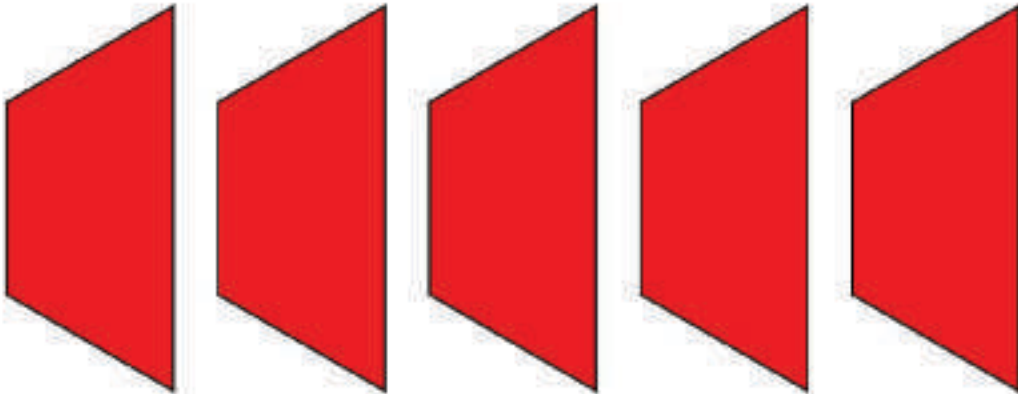


Pattern Blocks Stage 3 Directions

5



5



Pattern Blocks Stage 3 Directions



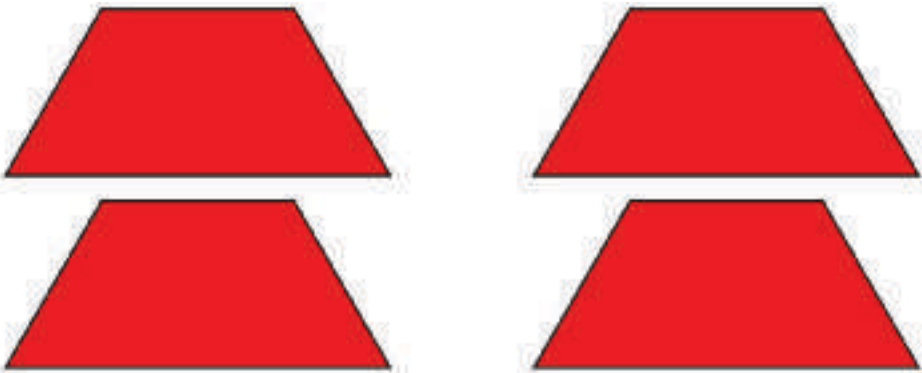
3



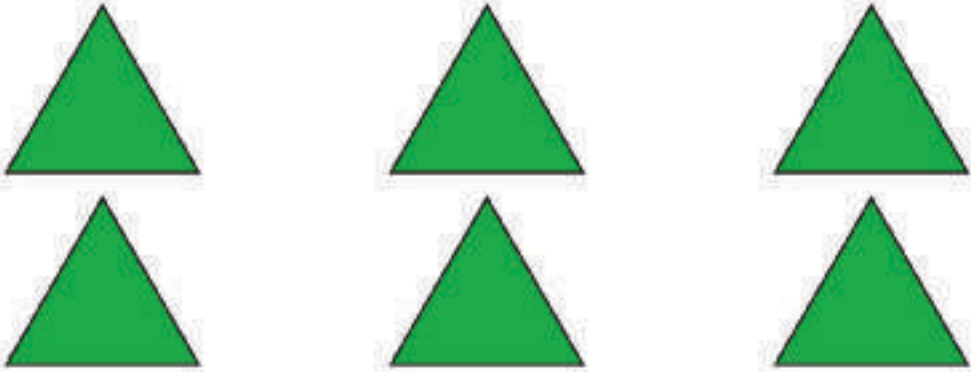
4

Pattern Blocks Stage 3 Directions

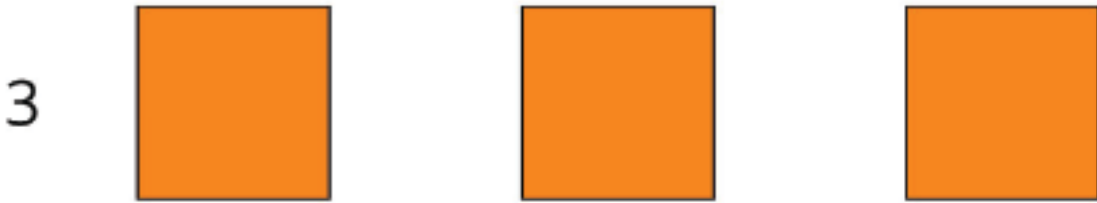
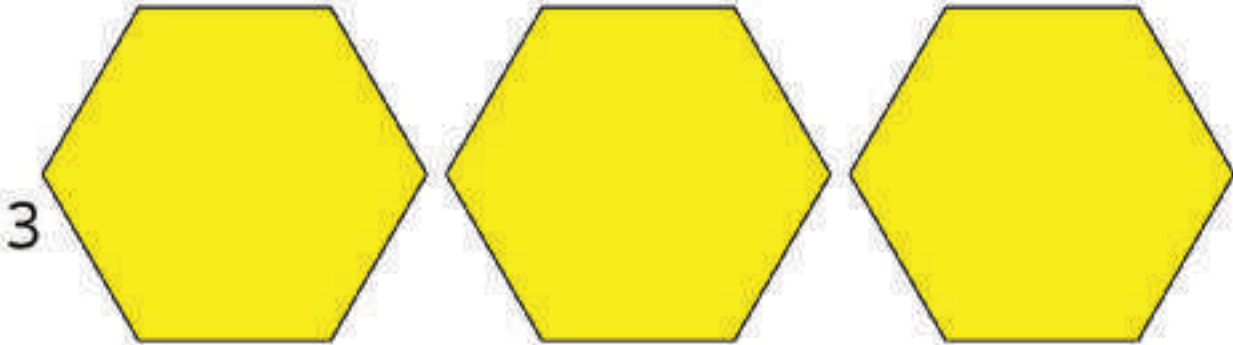
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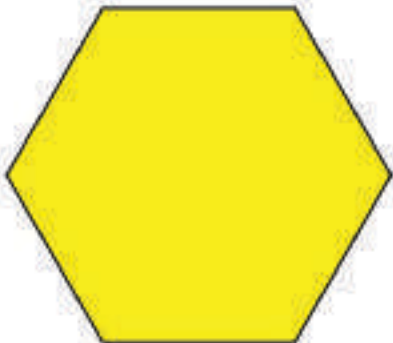
6



Pattern Blocks Stage 3 Directions



Pattern Blocks Stage 3 Directions



2



2



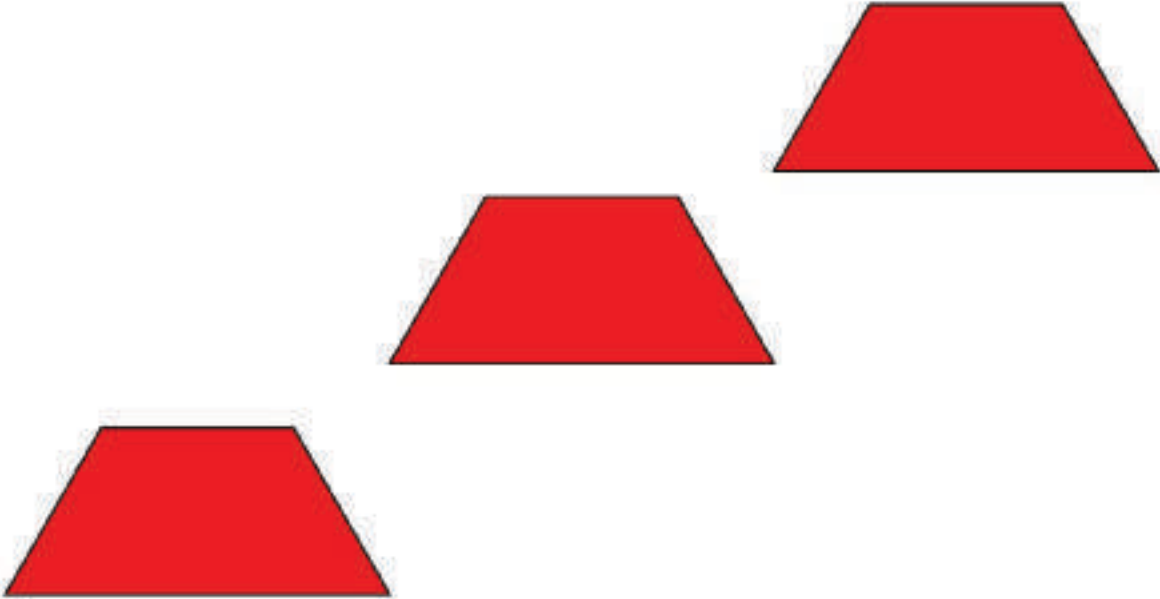
2



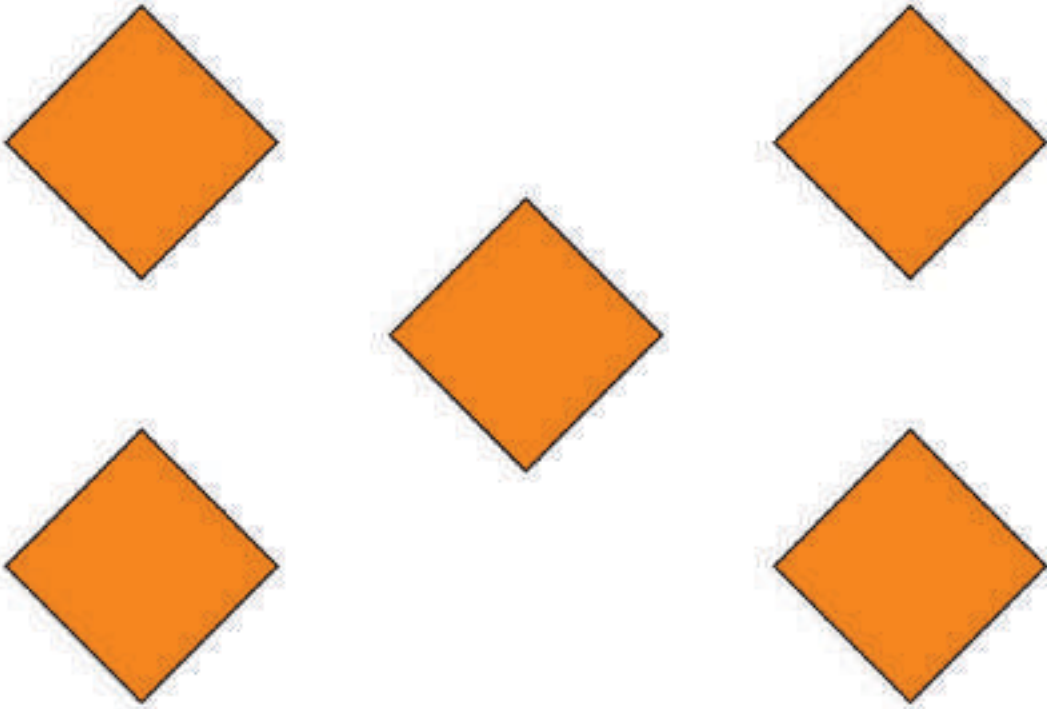
3

Pattern Blocks Stage 3 Directions

3



5

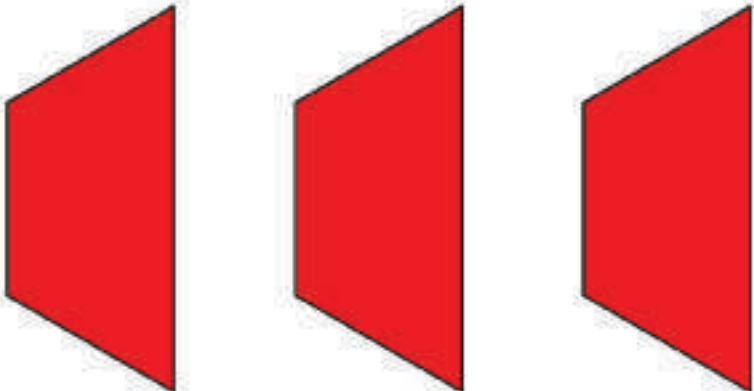


Pattern Blocks Stage 3 Directions

4



3



2



1

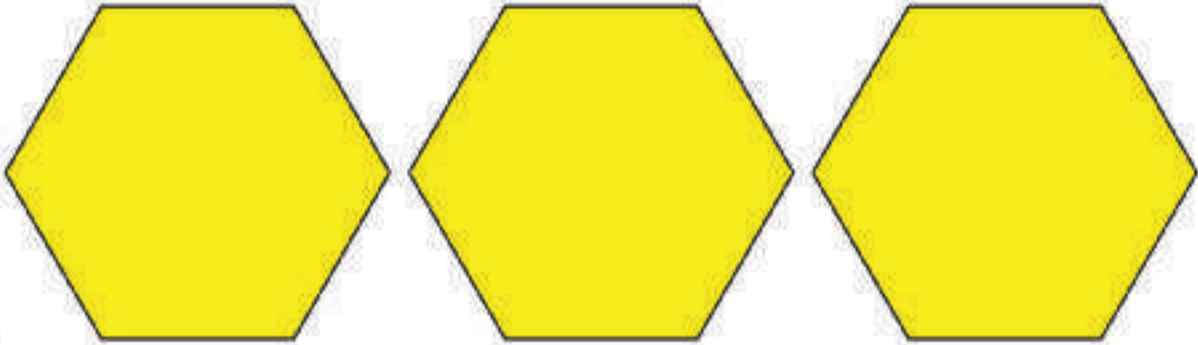


Pattern Blocks Stage 3 Directions



Pattern Blocks Stage 3 Directions

5

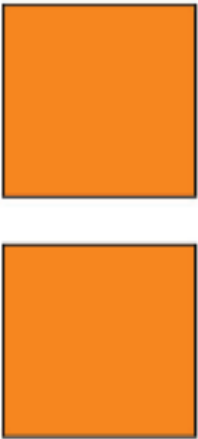
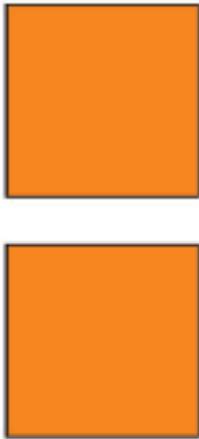


1



Pattern Blocks Stage 3 Directions

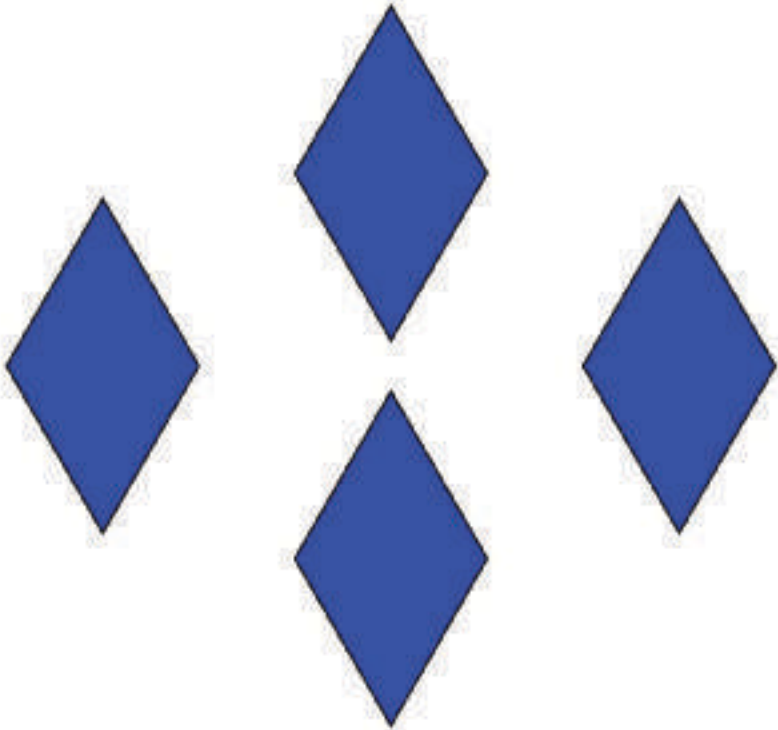
4



4



4



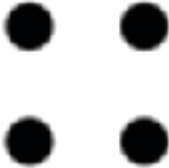


2 . .

3



Picture Books Stage 2 Recording Sheet

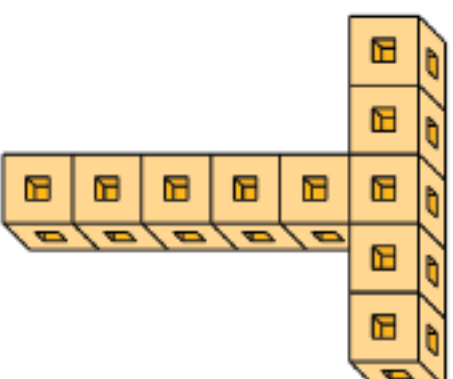


Connecting Cubes Stage 2 Cards

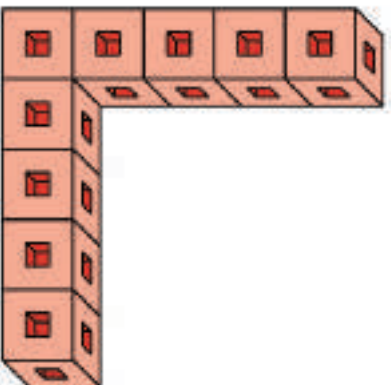
Connecting Cubes Stage 2



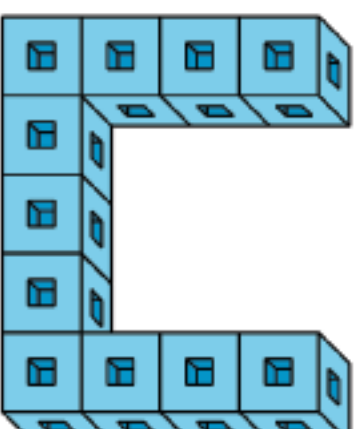
Connecting Cubes Stage 2



Connecting Cubes Stage 2

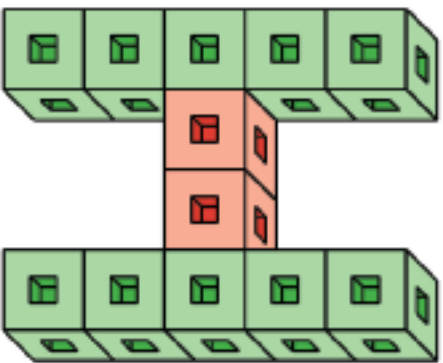


Connecting Cubes Stage 2

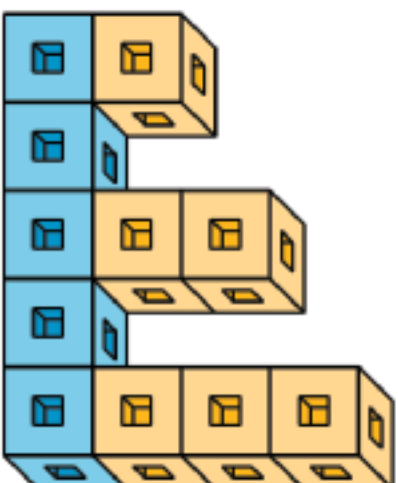


Connecting Cubes Stage 2 Cards

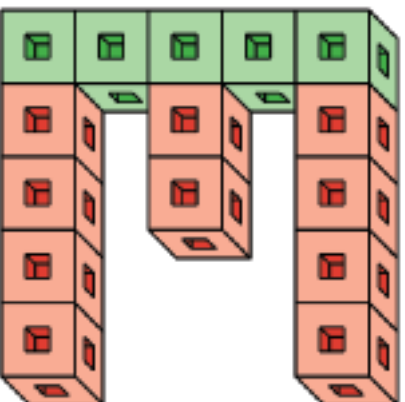
Connecting Cubes Stage 2



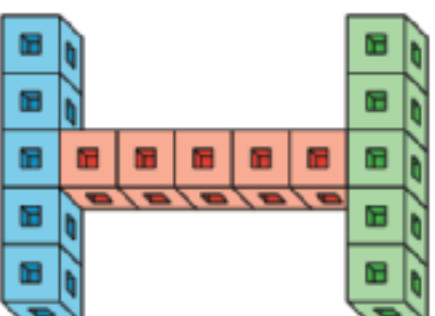
Connecting Cubes Stage 2



Connecting Cubes Stage 2

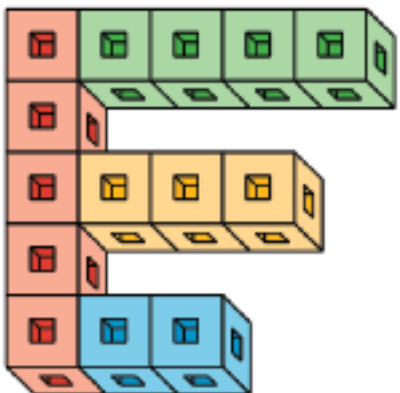


Connecting Cubes Stage 2



Connecting Cubes Stage 2 Cards

Connecting Cubes Stage 2



Connecting Cubes Stage 2

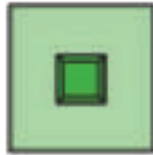
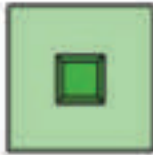
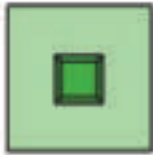
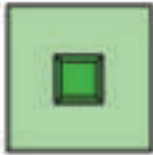
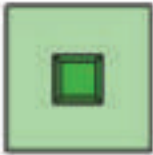


Connecting Cubes Stage 3 Directions

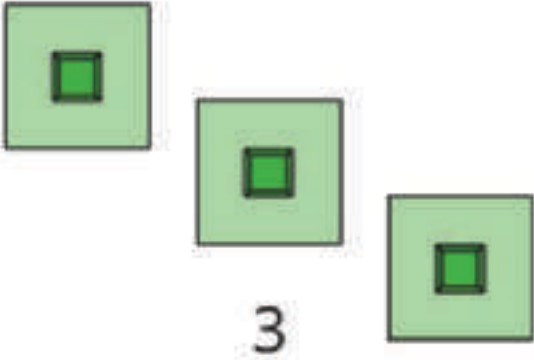
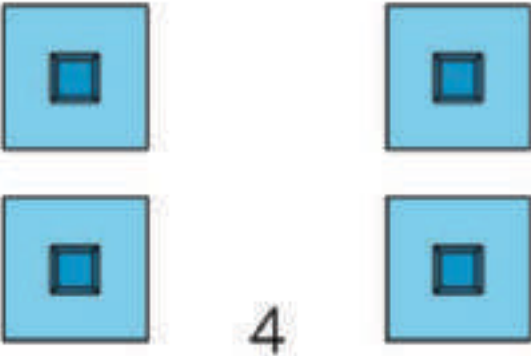
4



5



Connecting Cubes Stage 3 Directions



Connecting Cubes Stage 3 Directions

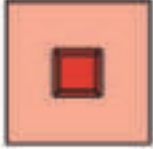


8

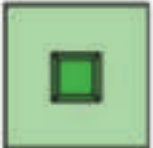
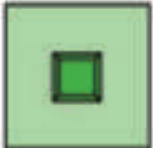


2

Connecting Cubes Stage 3 Directions

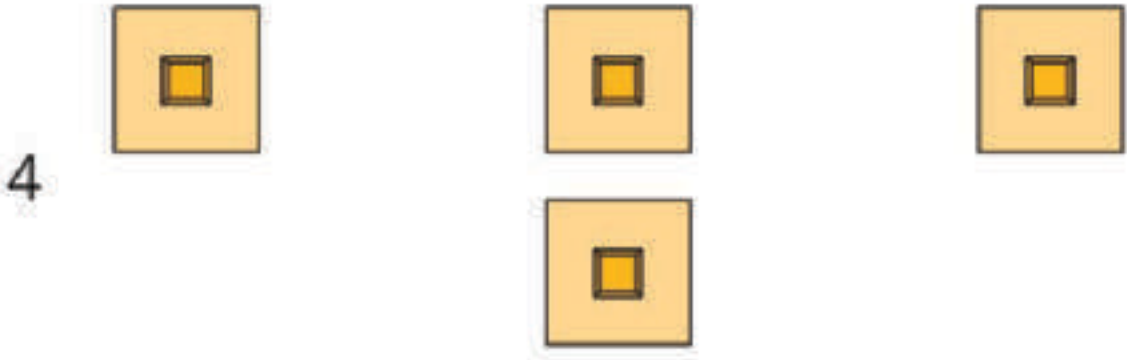
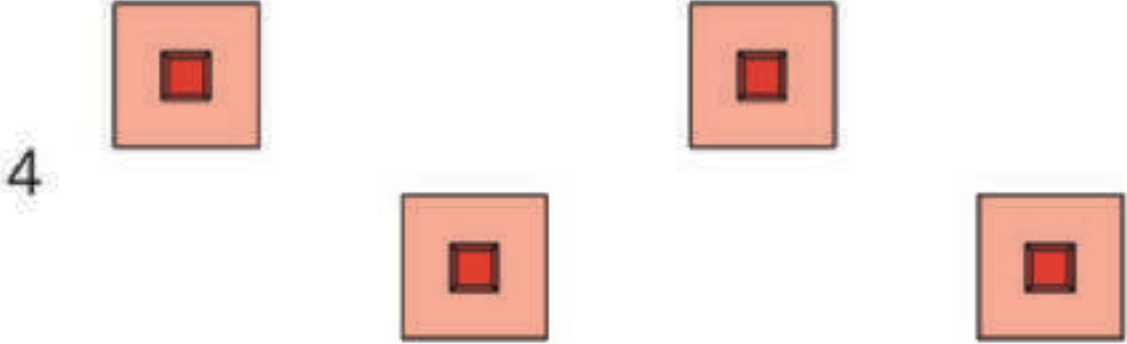


5

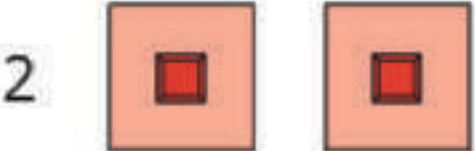
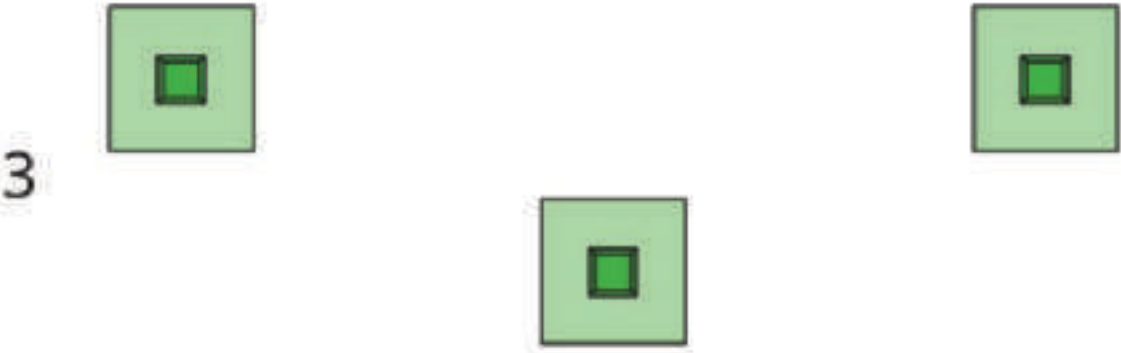


5

Connecting Cubes Stage 3 Directions



Connecting Cubes Stage 3 Directions

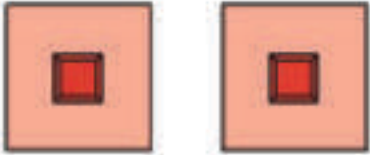


Connecting Cubes Stage 3 Directions

3



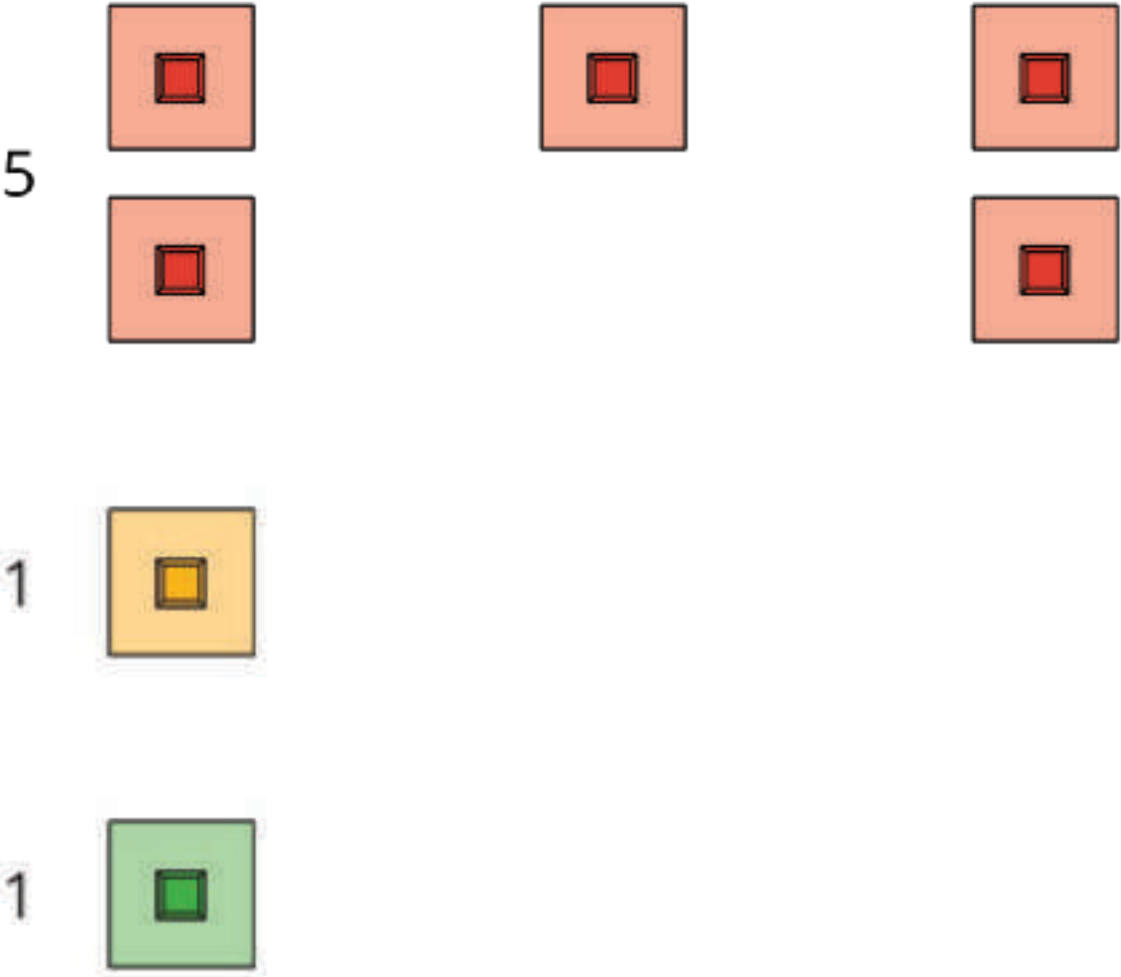
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5

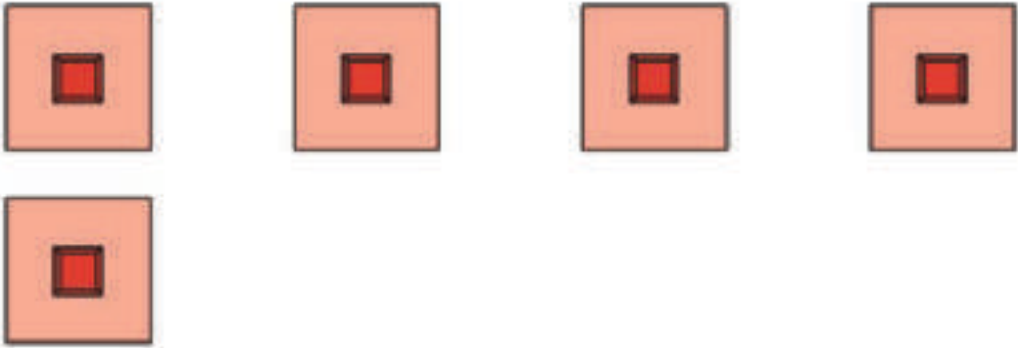


Connecting Cubes Stage 3 Directions

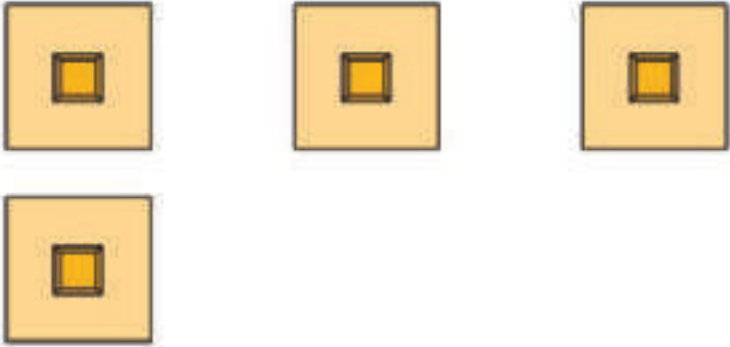


Connecting Cubes Stage 3 Directions

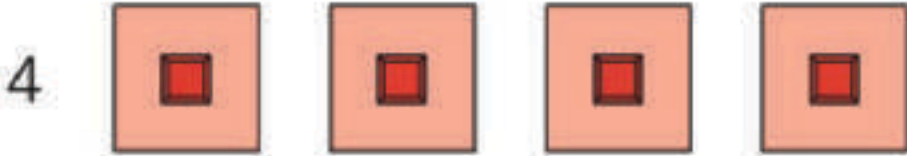
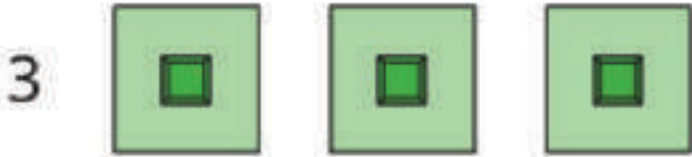
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4



Connecting Cubes Stage 3 Directions

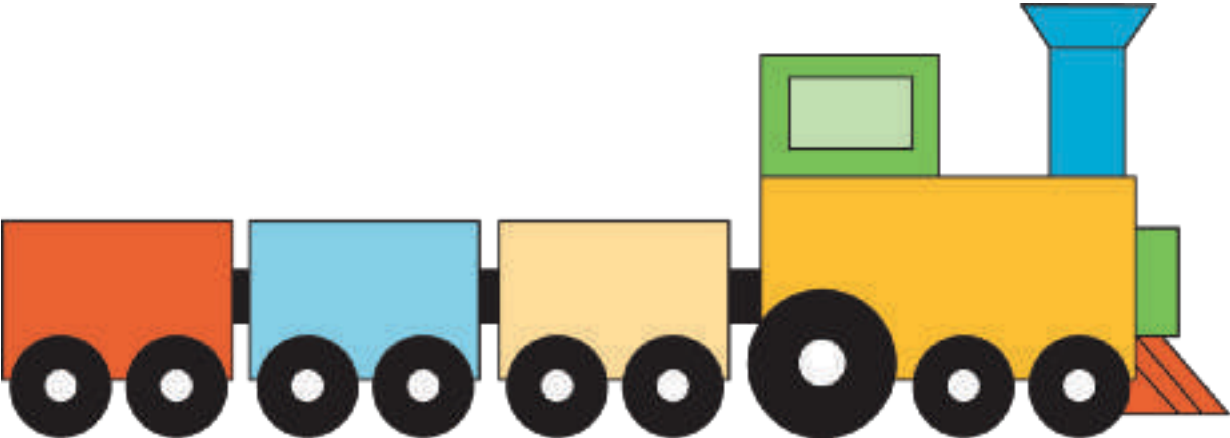


Picture A

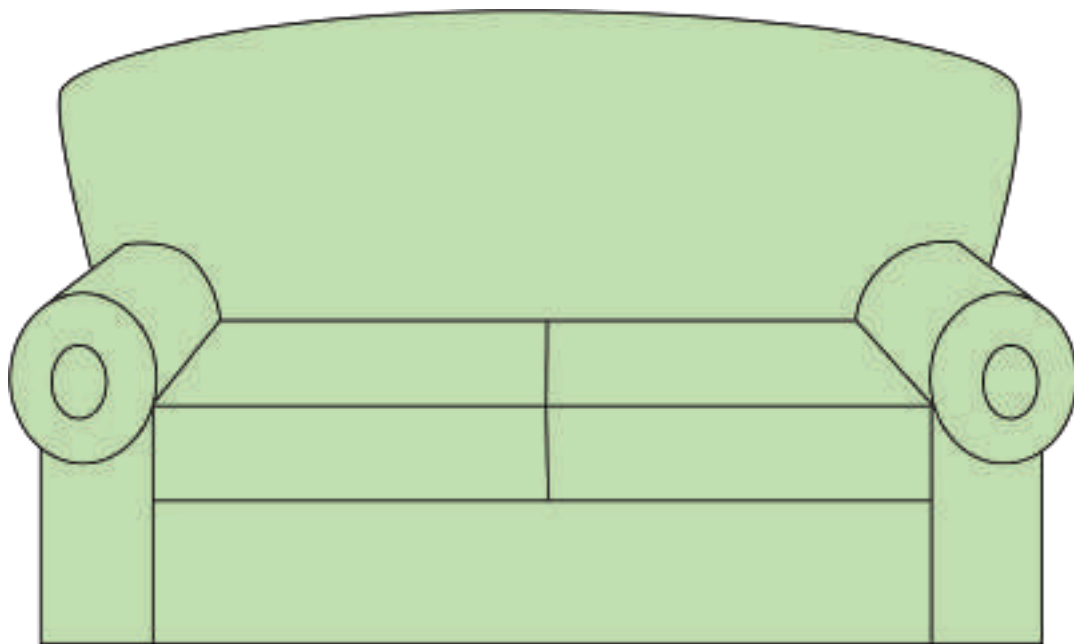
Use blocks to build a house.



Use blocks to build a train.



Use blocks to build a couch.



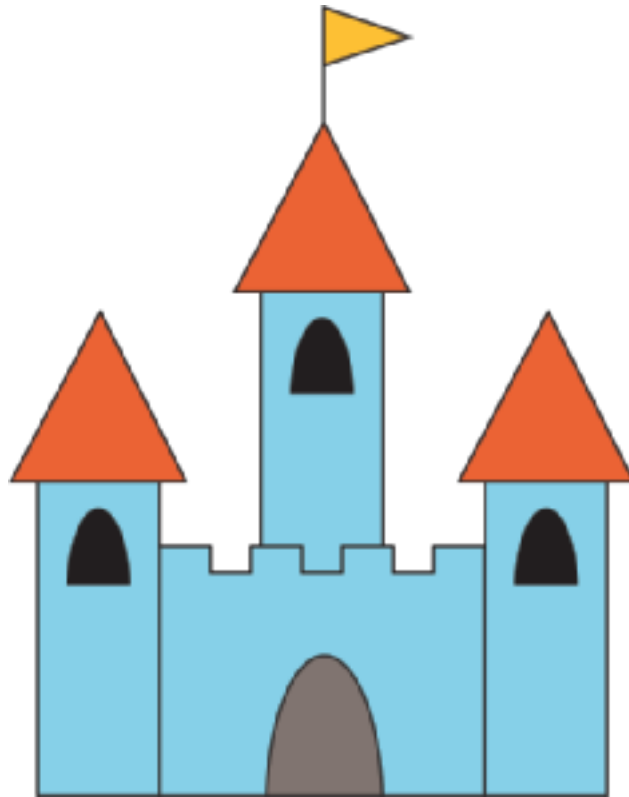
Use blocks to build a bus.



Use blocks to build a school.



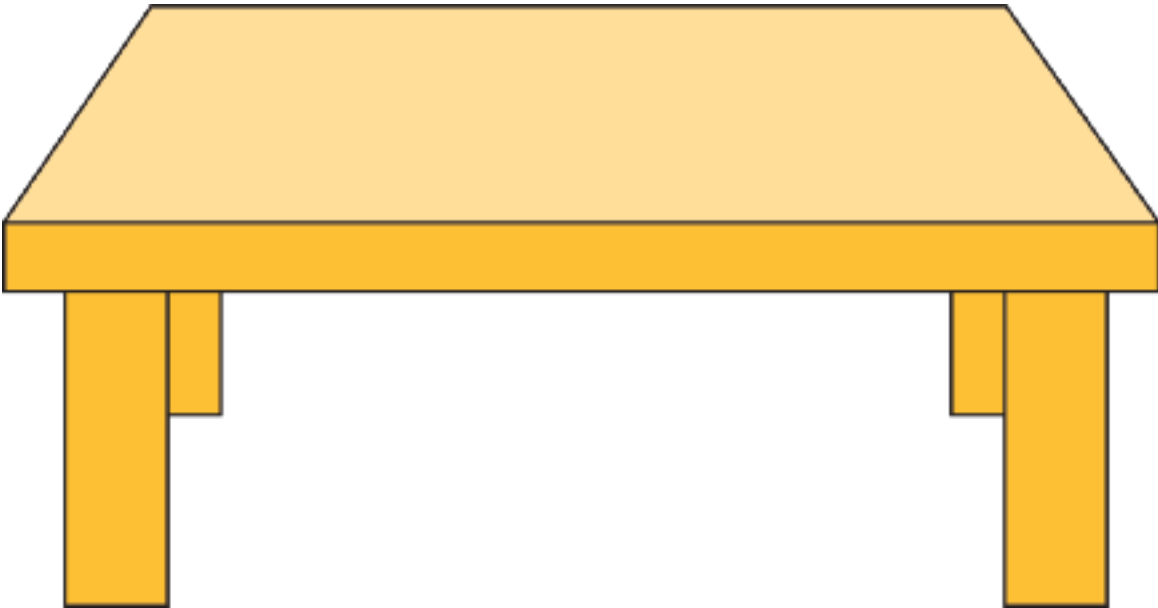
Use blocks to build a castle.



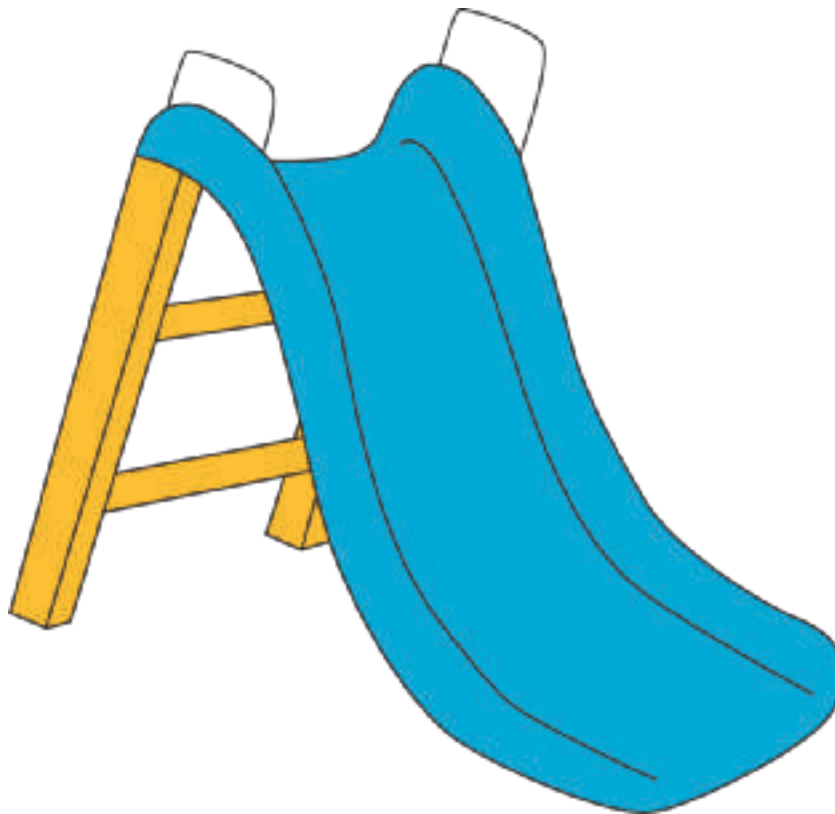
Use blocks to build a road.



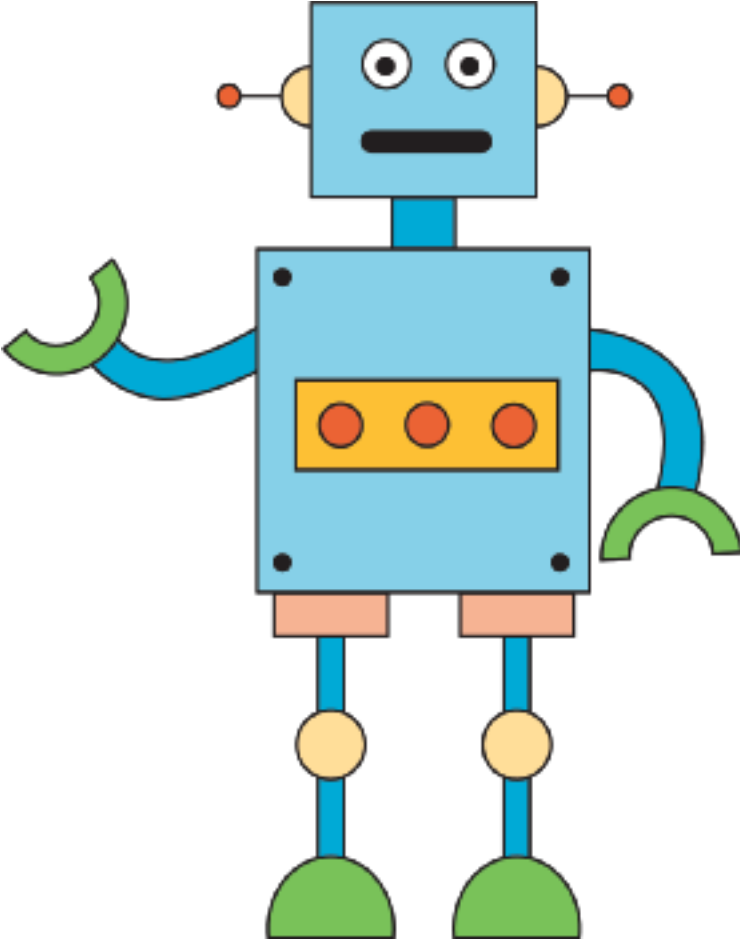
Use blocks to build a table.



Use blocks to build a slide.



Use blocks to build a robot.



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