



Core Knowledge® MATHEMATICS

Flat Shapes All Around Us



Teacher Guide



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Flat Shapes All Around Us

Table of Contents

Introduction	i
Unit Overview	1
Section Overview	2
Center Overview	7
Lessons Plans and Student Task Statements:	
Section A: Lessons 1–9 Exploring Shapes in Our Environment	26
Section B: Lessons 10–15 Making Shapes	112
Teacher Resources	170
Family Support Materials	
Assessments	
Instructional Masters	



Flat Shapes All Around Us

Teacher Guide

Core Knowledge Mathematics™

Unit 3: Flat Shapes All Around Us

At a Glance

Unit 3 is estimated to be completed in 16-17 days including 2 days for assessment.

This unit is divided into two sections including 14 lessons and 1 optional lesson.

- Section A—Exploring Shapes in Our Environment (Lessons 1-9)
- Section B—Making Shapes (Lessons 10-15)

On pages 5-6 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 ten student centers.

- Picture Books
- Shake and Spill
- Bingo
- Which One?
- Counting Collections
- Build Shapes
- Pattern Blocks
- Geoblocks
- Less Same More
- Match Mine

Unit 3: Flat Shapes All Around Us

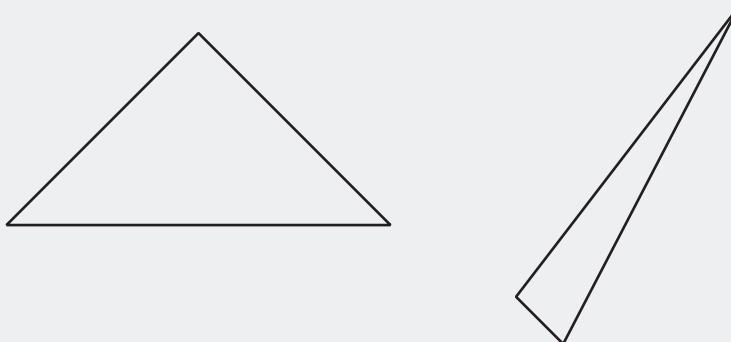
Unit Learning Goals

- Students identify, describe, analyze, compare, and compose two-dimensional shapes.

This unit introduces students to the foundational concepts of geometry, with a focus on familiar flat (two-dimensional) shapes.

Students may initially associate names of shapes with everyday objects. For example, a rectangle is a shape that looks like a door. Students need to see and interact with many examples of a shape to accurately relate what's in their environment to the geometric term.

For instance, students may say that only one of these two shapes is a triangle—the isosceles triangle sitting on its base—because they have seen examples like it being referred to as triangles. They may not consider a scalene triangle sitting on a vertex as a part of the same shape category because, in their experience, a shape like it hasn't been associated with the term "triangle."



Students explore differences in shapes and use informal language to describe, compare, and sort them. Circle, triangle, rectangle, and square are four shapes that students study and name here. (They will not describe what makes each shape so until grade 1.) Students also learn a key idea, that congruent shapes are still "the same" even if they are in different orientations.

Later in the unit, students use pattern blocks to make larger shapes. They reinforce their counting and comparison skills as they count and compare the pattern blocks used to create larger shapes. Students also use positional words (above, below, next to, beside) to describe the shapes they compose.

Section A: Exploring Shapes in Our Environment

Standards Alignments

Building On	K.MD.B.3
Addressing	K.CC.A.1, K.CC.A.3, K.CC.B, K.CC.B.5, K.G, K.G.A.1, K.G.A.2, K.G.B.4, K.G.B.5, K.MD.A.2, K.MD.B.3
Building Towards	K.G.A.1, K.G.A.2

Section Learning Goals

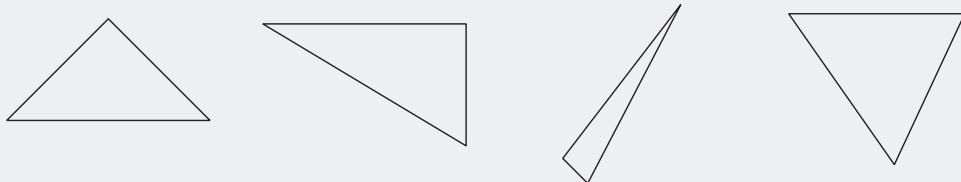
- Recognize and describe shapes in the environment.
- Use informal language to describe and compare shapes and their attributes.

In this section, students work to name, describe, and compare shapes in their environment more precisely. They focus on identifying circles, rectangles, squares, and triangles.

Students begin by identifying objects that look like flat shapes in books and in their surroundings. At this point, they are not yet expected to differentiate flat shapes from solid ones. For example, they may relate a tissue box to a rectangle. The difference between flat and solid shapes will be investigated in a later unit.

Likewise, students may not yet recognize distinctions in flat shapes with some similar features, such as a circle and an oval. Clarify that a shape is or is not as named, while acknowledging the connections students might be making. (“This shape is curved like a circle, but it is not a circle.”)

To help expand students’ mental image of shape categories, the shapes seen here are varied in size, type, and orientation.



When comparing shapes, students use their own language to describe how shapes are the same and different. They also consider the side length of rectangles and use “longer than” and “shorter than” to describe relative length. They learn that a square is a special kind of rectangle with all four sides having the same length (though are not required to know this definition).

 PLC: Lesson 5, Activity 2, Triangle Sort

Section B: Making Shapes

Standards Alignments

Addressing	K.CC, K.CC.A.3, K.CC.B.4.c, K.CC.B.5, K.CC.C, K.CC.C.6, K.G, K.G.A.1, K.G.A.2, K.G.B.6
Building Towards	K.G.A.1, K.G.A.2, K.G.B.6

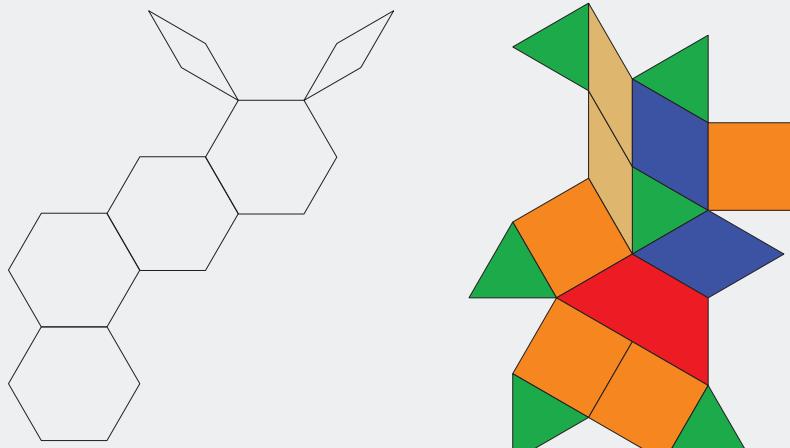
Section Learning Goals

- Explore shapes by putting shapes together to form larger shapes.

In this section, students develop spatial reasoning by manipulating shapes and solving geometric puzzles while using geometric language from earlier work.

Students use pattern blocks to compose geometric figures, explore shapes in different orientations, find shapes that match exactly, and complete puzzles that require reorienting shapes.

Throughout the section, students use their own language to describe how the shapes they are working with are alike and different, including descriptions of the side lengths of shapes in their comparison.



↔ PLC: Lesson 13, Activity 2, Introduce Match Mine, Pattern Blocks

Throughout the Unit

A new routine, Which One Doesn't Belong, is introduced in this unit. In this routine, students compare 4 different images and analyze the characteristics or attributes of the images in order to decide which

image doesn't belong and why. This routine is introduced slowly, starting with only 3 images of recognizable objects. By the end of the unit, students compare 4 images of shapes. It is important to emphasize to students that there is more than one way to answer. The more important part of the routine is explaining why the image doesn't belong.

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 Picture books 	<ul style="list-style-type: none"> none
A.2	<ul style="list-style-type: none"> Materials from previous centers 	<ul style="list-style-type: none"> none
A.3	<ul style="list-style-type: none"> Counters Materials from previous centers Picture books 	<ul style="list-style-type: none"> Shape Cards Grade K (groups of 2) Which One Stage 1 Gameboard (groups of 2)
A.4	<ul style="list-style-type: none"> Materials from a previous lesson Materials from previous centers 	<ul style="list-style-type: none"> none
A.5	<ul style="list-style-type: none"> 5-frames Collections of objects Colored pencils or crayons Counting mats Materials from previous centers 	<ul style="list-style-type: none"> Triangle Sort Cards (groups of 4)
A.6	<ul style="list-style-type: none"> Materials from previous centers 	<ul style="list-style-type: none"> Rectangle Sort Cards (groups of 4)
A.7	<ul style="list-style-type: none"> Bags Materials from a previous activity Materials from previous centers Play dough or modeling clay Straws 	<ul style="list-style-type: none"> Build Shapes Stage 1 and 2 Cards (groups of 2)

A.8	<ul style="list-style-type: none">Materials from previous centers	<ul style="list-style-type: none">none
A.9	<ul style="list-style-type: none">ClipboardsColored pencils or crayonsMaterials from a previous lessonMaterials from previous centersString	<ul style="list-style-type: none">none
B.10	<ul style="list-style-type: none">Materials from previous centersPattern blocks	<ul style="list-style-type: none">Pattern Blocks Stage 4 Recording Sheets (groups of 1)Pattern Block Puzzles (groups of 1)
B.11	<ul style="list-style-type: none">Colored pencils or crayonsMaterials from previous centersPattern blocks	<ul style="list-style-type: none">none
B.12	<ul style="list-style-type: none">Materials from previous centersPattern blocks	<ul style="list-style-type: none">Pattern Blocks Stage 5 Mat (groups of 2)Pattern Blocks Stage 5 Recording Sheet (groups of 2)
B.13	<ul style="list-style-type: none">Colored pencils or crayonsMaterials from previous centersPattern blocks	<ul style="list-style-type: none">none
B.14	<ul style="list-style-type: none">Colored pencils, crayons, or markersConstruction paperGlueMaterials from previous centers	<ul style="list-style-type: none">Shapes in Art (groups of 7)
B.15	<ul style="list-style-type: none">Card stockPaintPaperPaper platesTape	<ul style="list-style-type: none">none

Center: Picture Books (K-5)

Stage 1: Explore

Activities

- Kindergarten.3.A1.3 (supporting)
- Kindergarten.3.A2.3 (supporting)
- Kindergarten.3.A3.3 (supporting)
- Kindergarten.3.A4.3 (supporting)
- Kindergarten.3.A5.3 (supporting)
- Kindergarten.3.A6.3 (supporting)
- Kindergarten.3.A7.3 (supporting)
- Kindergarten.3.A8.3 (supporting)
- Kindergarten.3.A9.3 (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.3.A1.3 (addressing)
- Kindergarten.3.A2.3 (addressing)
- Kindergarten.3.A2.3 (addressing)
- Kindergarten.3.A3.3 (addressing)
- Kindergarten.3.A4.3 (addressing)
- Kindergarten.3.A5.3 (addressing)
- Kindergarten.3.A6.3 (addressing)
- Kindergarten.3.A7.3 (addressing)
- Kindergarten.3.A8.3 (addressing)
- Kindergarten.3.A9.3 (addressing)

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)

Stage 3: Find Shapes

Activities

- Kindergarten.3.A1.1 (addressing)
- Kindergarten.3.A1.3 (addressing)
- Kindergarten.3.A3.3 (addressing)
- Kindergarten.3.A4.3 (addressing)
- Kindergarten.3.A5.3 (addressing)
- Kindergarten.3.A6.3 (addressing)
- Kindergarten.3.A7.3 (addressing)
- Kindergarten.3.A8.3 (addressing)
- Kindergarten.3.A9.3 (addressing)

Stage Narrative

Students look through picture books and notice and describe shapes they see in the pictures.

Variation:

Students may record the shapes they see with drawings or words.

Standards Alignments

Addressing 1.G.A, 2.G.A, 3.G.A.1, 4.G, 5.G.A, K.G

Materials to Gather

Picture books

Materials to Copy

Picture Books Stage 3 Recording Sheet (groups of 1)

Additional Information

Each group of 2–4 needs at least one picture book that shows a variety of shapes throughout the book.

Center: Shake and Spill (K-2)

Stage 1: Count

Activities

- Kindergarten.3.A1.3 (supporting)
- Kindergarten.3.A2.3 (supporting)
- Kindergarten.3.A3.3 (supporting)
- Kindergarten.3.A4.3 (supporting)
- Kindergarten.3.A5.3 (supporting)
- Kindergarten.3.A6.3 (supporting)
- Kindergarten.3.A7.3 (supporting)
- Kindergarten.3.A8.3 (supporting)
- Kindergarten.3.A9.3 (supporting)

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.3.A1.3 (supporting)
- Kindergarten.3.A2.3 (supporting)
- Kindergarten.3.A3.3 (supporting)
- Kindergarten.3.A4.3 (supporting)
- Kindergarten.3.A5.3 (supporting)
- Kindergarten.3.A6.3 (supporting)
- Kindergarten.3.A7.3 (supporting)
- Kindergarten.3.A8.3 (supporting)
- Kindergarten.3.A9.3 (supporting)

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.CC.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: Bingo (K)

Stage 1: Images

Activities

- Kindergarten.3.A1.3 (supporting)
- Kindergarten.3.A2.3 (supporting)
- Kindergarten.3.A3.3 (supporting)
- Kindergarten.3.A4.3 (supporting)
- Kindergarten.3.A5.3 (supporting)
- Kindergarten.3.A6.3 (supporting)
- Kindergarten.3.A7.3 (supporting)
- Kindergarten.3.A8.3 (supporting)
- Kindergarten.3.A9.3 (supporting)

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.3.A1.3 (supporting)
- Kindergarten.3.A2.3 (supporting)
- Kindergarten.3.A3.3 (supporting)
- Kindergarten.3.A4.3 (supporting)
- Kindergarten.3.A5.3 (supporting)
- Kindergarten.3.A6.3 (supporting)
- Kindergarten.3.A7.3 (supporting)
- Kindergarten.3.A8.3 (supporting)
- Kindergarten.3.A9.3 (supporting)

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: Which One? (K-5)

Stage 1: Grade K Shapes

Activities

- Kindergarten.3.A3.3 (addressing)
- Kindergarten.3.A4.3 (addressing)
- Kindergarten.3.A5.3 (addressing)
- Kindergarten.3.A6.3 (addressing)
- Kindergarten.3.A7.3 (addressing)
- Kindergarten.3.A8.3 (addressing)
- Kindergarten.3.A9.3 (addressing)

Stage Narrative

One partner chooses a shape on the gameboard. The other partner asks questions to figure out what shape they chose. Students may use counters to cover up shapes that have been eliminated. Students work with simple shapes such as circles, rectangles, and triangles.

Standards Alignments

Addressing K.G.B.4

Materials to Gather

Counters

Materials to Copy

Which One Stage 1 Gameboard (groups of 2)

Center: Counting Collections (K-1)

Stage 1: Up to 20

Activities

- Kindergarten.3.A5.3 (addressing)
- Kindergarten.3.A6.3 (addressing)
- Kindergarten.3.A7.3 (addressing)
- Kindergarten.3.A8.3 (addressing)
- Kindergarten.3.A9.3 (addressing)

Stage Narrative

Students are given a collection of up to 20 objects. They work with a partner to figure out how many objects are in their collection and then each partner shows how many. Students may draw pictures or write numbers to represent their collection.

Variation:

In kindergarten, teachers may not want to provide a recording sheet, so that students can explain their count orally.

Standards Alignments

Addressing K.CC.B

Materials to Gather

10-frames, 5-frames, Collections of objects

Materials to Copy

Counting Collections Stages 1 and 2 Recording Sheet (groups of 1)

Additional Information

Create a collection of up to 20 objects per group of 2 students (buttons, two-color counters, linking cubes, paper clips, pattern blocks, square tiles).

Center: Build Shapes (K)

Stage 1: Match the Flat Shape

Activities

- Kindergarten.3.A7.3 (addressing)
- Kindergarten.3.A8.3 (addressing)
- Kindergarten.3.A9.3 (addressing)
- Kindergarten.3.B10.3 (addressing)
- Kindergarten.3.B11.3 (addressing)
- Kindergarten.3.B12.3 (addressing)
- Kindergarten.3.B13.3 (addressing)
- Kindergarten.3.B14.3 (addressing)

Stage Narrative

Students choose a shape card to build. Students check their work with their partner to be sure they both agree they made the shape correctly.

Standards Alignments

Addressing K.G.B.5

Materials to Gather

Play dough or modeling clay, Straws

Materials to Copy

Build Shapes Stage 1 and 2 Cards (groups of 2)

Additional Information

Bag of straws per group of 2 students:

- at least 6 straws in each size:
 - $\frac{1}{2}$ inch
 - 1 inch
 - $1\frac{1}{2}$ inch
 - $2\frac{3}{4}$ inches

Stage 2: Describe the Flat Shape

Activities

- Kindergarten.3.A8.3 (addressing)
- Kindergarten.3.A9.3 (addressing)
- Kindergarten.3.B10.3 (addressing)
- Kindergarten.3.B11.3 (addressing)
- Kindergarten.3.B12.3 (addressing)
- Kindergarten.3.B13.3 (addressing)
- Kindergarten.3.B14.3 (addressing)

Stage Narrative

Students choose a shape card and describe the shape to their partner, who builds the shape based on the description.

Standards Alignments

Addressing K.G.A.1, K.G.B.5

Materials to Gather

Play dough or modeling clay, Straws

Materials to Copy

Build Shapes Stage 1 and 2 Cards (groups of 2)

Additional Information

Bag of straws per group of 2 students:

- At least 6 straws in each size:
 - $\frac{1}{2}$ inch
 - 1 inch
 - $1\frac{1}{2}$ inch
 - $2\frac{3}{4}$ inches

Center: Pattern Blocks (K)

Stage 1: Explore

Activities

- Kindergarten.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (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.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (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.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (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)

Stage 4: Count Out and Build

Activities

- Kindergarten.3.B10.1 (addressing)
- Kindergarten.3.B10.3 (addressing)
- Kindergarten.3.B11.3 (addressing)
- Kindergarten.3.B12.3 (addressing)
- Kindergarten.3.B13.3 (addressing)
- Kindergarten.3.B14.3 (addressing)

Stage Narrative

Students count out a given number of each pattern block and put them together to make larger shapes. They compare the amount or number of different pattern blocks they use to make their shape.

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6, K.CC.C.7, K.G.B.6

Materials to Gather

Pattern blocks

Materials to Copy

Pattern Blocks Stage 4 Recording Sheets (groups of 1)

Stage 5: Puzzle Challenge

Activities

- Kindergarten.3.B12.1 (addressing)
- Kindergarten.3.B12.3 (addressing)
- Kindergarten.3.B13.3 (addressing)
- Kindergarten.3.B14.3 (addressing)

Stage Narrative

Students use pattern blocks to fill in more challenging puzzles that do not show the individual pattern blocks. These puzzles can be filled in in different ways, using different amounts of each pattern block. Students record a number to show how many of each block they used.

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.G.B.6

Materials to Gather

Pattern blocks

Materials to Copy

Pattern Blocks Stage 5 Mat (groups of 2), Pattern Blocks Stage 5 Recording Sheet (groups of 2)

Center: Geoblocks (K-1)

Stage 1: Explore

Activities

- Kindergarten.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (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.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (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: Less Same More (K)

Stage 1: Groups of Objects

Activities

- Kindergarten.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (supporting)

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.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (supporting)

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.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (supporting)

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.3.B10.3 (supporting)
- Kindergarten.3.B11.3 (supporting)
- Kindergarten.3.B12.3 (supporting)
- Kindergarten.3.B13.3 (supporting)
- Kindergarten.3.B14.3 (supporting)

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: Match Mine (K-1)

Stage 1: Pattern Blocks

Activities

- Kindergarten.3.B13.2 (addressing)
- Kindergarten.3.B13.3 (addressing)
- Kindergarten.3.B14.3 (addressing)

Stage Narrative

Students make larger shapes from pattern blocks.

Variation:

Students may use folders to hide their shape.

Standards Alignments

Addressing K.G

Materials to Gather

Folders, Pattern blocks

Section A: Exploring Shapes in Our Environment

Lesson 1: What We Know About Shapes

Standards Alignments

Building On	K.MD.B.3
Addressing	K.G, K.G.B.4
Building Towards	K.G.A.1, K.G.A.2

Teacher-facing Learning Goals

- Use informal language to describe shapes.

Student-facing Learning Goals

- Let's find and talk about shapes.

Lesson Purpose

The purpose of this lesson is for students to use informal language to describe shapes and what they know about different shapes.

Students look for shapes in a picture book as well as a given image. They discuss what shapes they see and what they know about the shapes. This lesson is an opportunity to formatively assess the language students use to share what they know about shapes. In this lesson, there is no expectation that students will name shapes or discuss any specific attributes. Students initially understand shapes visually by connecting them to familiar objects that have the shape. Students may describe shapes as "That shape looks like a door" or "That plate is round."

Throughout this and the next several lessons, students develop language to describe shapes around them. They listen to one another and appreciate that there are different ways to describe the attributes of shapes (MP3, MP6).

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

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

Materials to Gather

- Materials from previous centers: Activity 3
- Picture books: Activity 1

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 whose thinking was heard today. Reflect on whose thinking was not heard but could have enriched the conversations. What prompts or structures might better enable the latter to share their voices and reasoning?

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

⌚ 0 min

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Use informal language to describe shapes.

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

Warm-up

⌚ 10 min

Which One Doesn't Belong: Teddy Bears

Standards Alignments

Building On K.MD.B.3
 Building Towards K.G.A.1

The purpose of this warm-up is to introduce students to a new routine called Which One Doesn't Belong. In this routine, students compare four different images and analyze the characteristics or attributes of the images. It gives the teacher an opportunity to hear how students use terminology and talk about characteristics of the items in comparison to one another. In this warm-up, students only work with three images of teddy bears. By the end of the section, students will compare four images of shapes. Emphasize to students that there is no right answer to the question and that it is important to explain their choice. Listen to how students create an argument and use or revise their language to make their argument clear to others (MP3, MP6).

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement



Which one doesn't belong?

A



B



C

Launch

- Display the image.
- “What is the same and what is different about the teddy bears?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.

Activity

- “Which one doesn’t belong?”
- Display the image.
- 30 seconds: quiet think time
- “Tell your partner which teddy bear doesn’t belong and why.”
- 30 seconds: partner discussion

Synthesis

- Display the image of the white teddy bear with no heart and the image of the blue teddy bear with a heart.
- “Mai said that this teddy bear doesn’t belong



Student Responses

Sample responses:

A doesn't belong because:

- It isn't fuzzy.

B doesn't belong because:

- It isn't holding a heart.

C doesn't belong because:

- It is blue instead of white.

because it's not holding a heart. Diego said that this teddy bear doesn't belong because it is blue, not white. What do you think?" (I think that Mai is correct because both of the other teddy bears have hearts. I think that Diego is correct because both of the other teddy bears are white. They are both correct.)

- If needed, say "There is more than one correct answer. We can find reasons why each teddy bear doesn't belong."

Activity 1

⌚ 15 min

Introduce Picture Books, Find Shapes in Books

Standards Alignments

Addressing	K.G.B.4
Building Towards	K.G.A.1, K.G.A.2

The purpose of this activity is to introduce students to stage 3 of the Picture Books center. Students recognize and describe illustrations and shapes in picture books. Students are not expected to use a recording sheet for this stage in kindergarten. When choosing a picture book for this activity, choose a book with illustrations that include examples of common, recognizable shapes. If students have not heard the story this year, read the book aloud to students as a part of the launch. After hearing the story at least once and making sense of the context, students experience the story again with a focus on describing illustrations and recognizing shapes. If needed, point to a shape in the book and ask, "How would you describe this?" to encourage them to mathematize the situation. Some examples of picture books include:

- *Grandma's Purse* by Vanessa Brantlet-Newton

- *My Heart Fills with Happiness* by Monique Gray Smith
- *Pablo's Tree* by Pat Mora
- *Saturday* by Oge Mora
- *There is a Bird on Your Head* by Mo Willems
- *Last Stop on Market Street* by Matt de la Peña
- *Miss Bindergarten Gets Ready for Kindergarten* by Joseph Slate
- *Big Red Lollipop* by Rukhsana Khan
- *Count on Me* by Miguel Tanco
- *The Girl with the Parrot on Her Head* by Daisy Hirst

Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Synthesis: Students might benefit from alternative options to express their answer to the question "What do you know about these shapes?" Invite students to draw what they know before they verbally share or to use gestures to show what they know about the shapes.

Supports accessibility for: Language, Conceptual Processing

Materials to Gather

Picture books

Student Responses

Sample responses:

- The flower is round.
- The chimney looks like the door.
- The window is a square.

Launch

- Groups of 2
- If students have not already heard the story used in the activity, read the story and discuss the context.
- "We are going to read this story again. This time let's look very closely at the pictures and see what we notice."
- Read the story, stopping at a picture with shapes students can describe.
- "What do you notice in this picture?"
- If needed, point to a specific part of the picture and ask, "How can you describe this?"
- 30 seconds: quiet think time

- 1 minute: partner discussion
- Share responses.

Activity

- Continue reading the story, stopping to ask students to describe different pictures.
- 10 minutes: whole-class discussion
- Monitor for responses that would be helpful to include on the chart made during the synthesis.

Synthesis

- “What do you know about shapes?”
- Create a chart using student language.
- “What questions do you have about shapes?”
- Add questions to the chart.

Activity 2

⌚ 10 min

Shapes in a Picture

Standards Alignments

Addressing	K.G.B.4
Building Towards	K.G.A.1, K.G.A.2

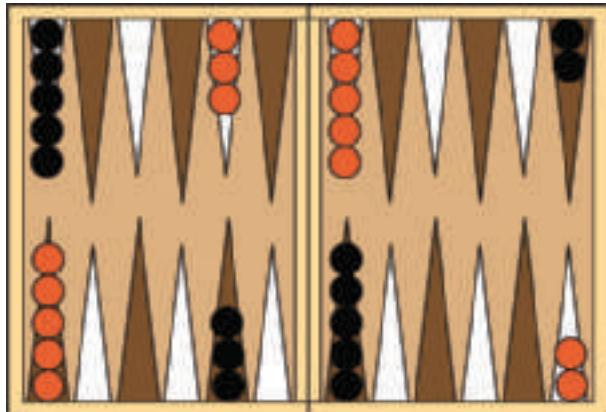
The purpose of this activity is for students to recognize and describe shapes in a picture. As students discuss the shapes they notice, they use informal language and have the chance to learn more from their partner about how shapes can be described.

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

Student-facing Task Statement



Student Responses

Sample responses:

- There are red and black pieces. They are round.
- There are pointy shapes in the middle of the board.
- The board is the same shape as a book. There are long sides and short sides.

Launch

- Groups of 2
- “What games do you play with your family?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- “Backgammon is a popular game in many different countries, such as Iraq, Lebanon, Egypt, and Syria. Lots of people play backgammon in our country, too. Have you ever played this game or a game like this?”
- “Tell your partner about a shape you see in the backgammon game. Take turns describing the shapes you see in the picture with your partner.”
- 30 seconds: quiet think time

Activity

- 5 minutes: partner work time
- Monitor for students who describe shapes.

Synthesis

- Invite previously identified students to share how they described the shapes.
- “How can you describe the black and red pieces that they are playing with?” (They are round. They look like buttons. They are circles. They are small.)

Activity 3

⌚ 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts.

Students choose from any stage of previously introduced centers.

- Picture Books
- Bingo
- Shake and Spill

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:
 - Picture Books, Stages 1-3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

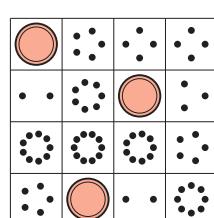
Student-facing Task Statement

Choose a center.

Picture Books



Bingo



Shake and Spill

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



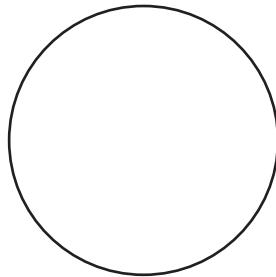
Synthesis

- “What did you learn from the work you did in centers today?”
- “Will you choose a different center tomorrow? Why or why not?”

Lesson Synthesis

⌚ 5 min

Draw or display a circle.



“Today we described shapes we saw in pictures. Where do you see shapes like this?” (the clock, smiley face, pizza, counters, wheels on a car)

Lesson 2: Match Shapes

Standards Alignments

Building On	K.MD.B.3
Addressing	K.G, K.G.A.1, K.G.A.2
Building Towards	K.G.A.1

Teacher-facing Learning Goals

- Identify shapes that are the same.

Student-facing Learning Goals

- Let's find shapes that are the same.

Lesson Purpose

The purpose of this lesson is for students to identify shapes that are the same.

Students make connections between real world objects and flat shapes. For example, students match a plate with a circle. Students also identify shapes that are the same regardless of their size or orientation. Students may identify solid shapes as flat shapes, which is fine for this point in the year. The difference between flat and solid shapes will be investigated in a later unit.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR7 (Activity 2)

Instructional Routines

Which One Doesn't Belong? (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

Teacher Reflection Question

What opportunities outside of math class do you have for encouraging students to see and describe the different shapes that make up objects in the environment?

Activity 3	25 min
Lesson Synthesis	5 min

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

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Use informal language to describe shapes.
- Tell what is the same or different about two or more shapes.

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

Warm-up ⌚ 10 min

Which One Doesn't Belong: Buttons

Standards Alignments

Building On K.MD.B.3

Building Towards K.G.A.1

The purpose of this warm-up is to introduce students to the full Which One Doesn't Belong routine. In this routine, students compare 4 different images and analyze the characteristics or attributes of the images. It gives the teacher an opportunity to hear how students use terminology and talk about characteristics of the items in comparison to one another. In this warm-up, students compare 4 images of buttons. By the end of the section, students will compare 4 images of shapes. Listen to how students

create an argument and use or revise their language to make their argument clear to others (MP3, MP6).

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?

A



B



C



D



Student Responses

Sample responses:

A doesn't belong because:

- It is not blue. It is yellow.

B doesn't belong because:

- It does not have 4 circles in the middle. It only has 2 circles.

C doesn't belong because:

- It is not round. It looks like a flower. It has bumps on the outside.

D doesn't belong because:

- It is not big. It is small.

Launch

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

Activity

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

Synthesis

- Display the button with only two dots.
- "Why does this button not belong?" (It only has two dots. It does not have four dots like the other buttons.)

Activity 1

⌚ 10 min

Match Objects and Shapes

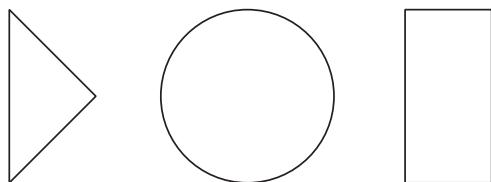
Standards Alignments

Addressing K.G.A.1, K.G.A.2

The purpose of this activity is for students to connect objects in the environment to flat shapes. Students look at an illustration of objects in the environment and match them to the shapes they look like. Students may match each shape with multiple examples in the image. Students discuss how the object and the shape are alike. When students make and describe their own choices for how they represent real-world objects with geometric shapes, they prepare to model real-world problems with mathematics (MP4).

Student-facing Task Statement

Draw a line to match each shape to the object that it looks like.



Student Responses

Students draw lines to match the shapes to examples of the shapes in the image.

Launch

- Groups of 2
- “Draw a line to match each shape to the object that it looks like. Tell your partner how the shape and the object are alike, or the same.”

Activity

- 5 minutes: partner work time

Synthesis

- Invite students to share which objects they matched each shape to.

Activity 2

⌚ 10 min

Which Shape is the Same?

Standards Alignments

Addressing K.G.A.2

The purpose of this activity is for students to identify shapes that are the same regardless of their size or orientation. While students may name the shapes in the activity, students do not need to identify the shapes in order to match the shapes that are the same. When students observe that a shape is the same even though the size, color, and orientation may differ, they identify a common mathematical property of the shapes (MP7).

⌚ Access for English Learners

MLR7 Compare and Connect. Synthesis: To amplify student language and illustrate connections, follow along and point to the relevant part of the displays as students compare the shapes and their rationale for selecting the shape.

Advances: Representing, Conversing

♿ Access for Students with Disabilities

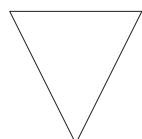
Action and Expression: Develop Expression and Communication. Students may need support identifying which rotated shape is the same. Give students access to shapes that they can rotate to match up with the first shape in each row.

Supports accessibility for: Visual-Spatial Processing

Student-facing Task Statement

Color the shape that is the same as the first shape in each row.

1.

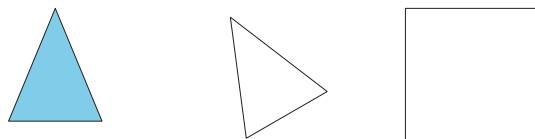


Launch

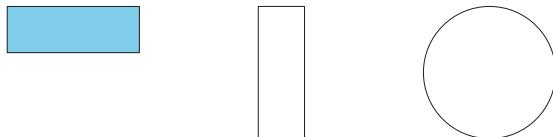
- Groups of 2
- Draw



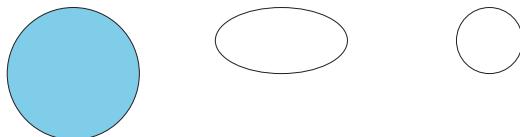
2.



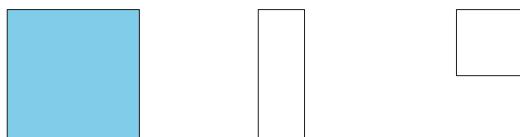
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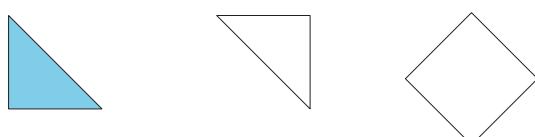
4.



5.



6.

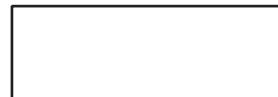


Student Responses

Students color:

1. the second shape
2. the first shape
3. the first shape
4. the second shape
5. the second shape
6. the first shape

and



- "What do you notice about these shapes?" (They are the same shape but 1 is standing up and one is laying down.)
- 30 seconds: quiet think time
- 1 minute partner discussion.
- Share responses.
- "How do you know that they are the same shape?" (They have the same sides and corners. I can imagine flipping the second one up and it would be the same as the first one.)
- "Now you are going to look for more shapes that are the same. Color the shape that is the same as the first shape in each row. Tell your partner how you know they are the same."

Activity

- 5 minutes: partner work time

Synthesis

- Display the problem with a square.
- "Which shape is the same? How do you know they are the same?" (The second one because it isn't stretched out like the first shape. The second one because they are both squares, one is just smaller.)

Activity 3

⌚ 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts.

Students choose from any stage of previously introduced centers.

- Picture Books
- Bingo
- Shake and Spill

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Picture Books, Stages 1-3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Picture Books



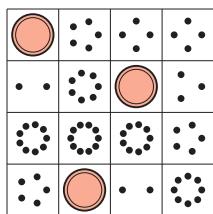
Bingo

Launch

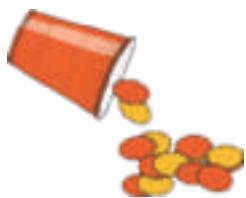
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

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



Shake and Spill



- “Choose what you would like to do next.”
- 10 minutes: center work time

Synthesis

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

Lesson Synthesis

⌚ 5 min

“Today we learned that objects in the world look like shapes we can describe. We also learned that the same shape can look different if it is turned a different way or if it is a different size.”

“Tell your partner about two things in the classroom that look like the same shape.” (The clock and the sticker look like the same shape. The book and the door look like the same shape.)

Lesson 3: Describe and Compare Shapes

Standards Alignments

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

Teacher-facing Learning Goals

- Use informal language to describe and compare shapes and their attributes.

Student-facing Learning Goals

- Let's compare shapes.

Lesson Purpose

The purpose of this lesson is for students to describe and compare shapes.

Students look at pictures of objects in the environment as well as common flat shapes. They describe and compare shapes. This lesson is an opportunity to see what attributes of shapes students notice and attend to. Students notice and describe both defining (number of sides and corners, flat or straight sides) and non-defining (size, color, orientation) attributes of shapes. This allows teachers to see the vocabulary students use to describe shapes (MP6). In grade 1 students will distinguish between these defining and non-defining attributes of shapes.

The shape cards in this lesson will be used again in future lessons.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

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

Materials to Gather

- Counters: Activity 3
- Materials from previous centers: Activity 3
- Picture books: Activity 1

Materials to Copy

- Shape Cards Grade K (groups of 2): Activity 2
- Which One Stage 1 Gameboard (groups of 2): 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 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Use informal language to describe shapes.
- Tell what is the same or different about two or more shapes.

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

Warm-up
 10 min

Which One Doesn't Belong: Compare Shapes

Standards Alignments

Addressing K.G.B.4

This warm-up prompts students to carefully compare 4 shapes. The shapes are designed so that students may compare the color of the shapes as well as geometric attributes.

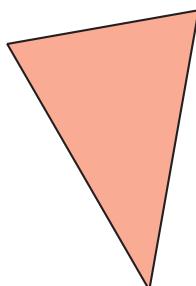
Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?

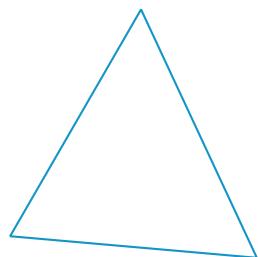
A



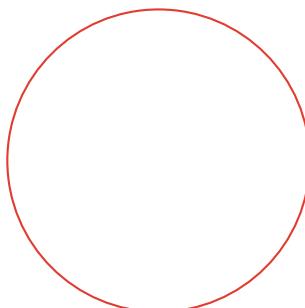
B



C



D



Launch

- Groups of 2
- Display the image.
- “Pick one that doesn’t belong. Be ready to share why it doesn’t belong.”

Activity

- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.

Synthesis

- Display shapes A and B.
- “What is alike, or the same, about these shapes?” (They both have three sides. They are both triangles. They are both red.)
- “What is different about these shapes?” (One is colored in and one is not. One is smaller or skinnier.)

Student Responses

Sample responses:

A doesn't belong because:

- It is colored in. It's not just an outline.

B doesn't belong because:

- It is small or skinny.

C doesn't belong because:

- It is blue. It is not red.

D doesn't belong because:

- It doesn't have straight lines. It is not a triangle. It is a circle.

Activity 1

⌚ 10 min

Hunt for Shapes to Compare

Standards Alignments

Addressing K.G.B.4

The purpose of this activity is for students to find shapes that are alike and different. The shapes students compare are shapes found in the environment, as they look at pictures of real-world objects in picture books. Students use informal language to compare the shapes.

🌐 Access for English Learners

MLR8 Discussion Supports. Synthesis: Use choral repetition to provide all students with an opportunity to produce language. Restate students' observations ("____ and ____ are alike because . . ." or "____ and ____ are different because . . ."), then invite all students to repeat the sentence.

Advances: Listening, Speaking

Materials to Gather

Picture books

Student Responses

Students describe and compare different shapes they find in picture books.

Launch

- Groups of 2
- Display a page from a picture book. Point to 2 shapes on the page.
- "What is alike, or the same, about these shapes?"
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- "What is different about these shapes?"

- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- “While you and your partner look through your picture book, you will each choose a shape that you see on the same page. Share the shapes you see. Then talk about how the 2 shapes are alike and different.”

Activity

- 5 minutes: partner work time

Synthesis

- Display a picture in a picture book that looks like a triangle.
- “Find a shape in your book that looks like this shape. How are the shapes alike?”
- Share responses.
- “Find a shape in your book that is different than this shape. How are the shapes different?”
- Share responses.

Activity 2

⌚ 15 min

Alike and Different

Standards Alignments

Addressing K.G.B.4

The purpose of this activity is for students to informally describe attributes of shapes by comparing shapes. Students attend to the attributes of shapes and describe them informally when identifying things that are alike and different. In this activity, students describe and compare flat shapes rather than objects in the environment. The activity synthesis highlights the number of sides and corners in shapes. As students continue to compare shapes they begin to

identify corners and sides and use these to distinguish different shapes (MP8).

ⓘ Access for Students with Disabilities

Representation: Access for Perception. Students might benefit from using gestures to connect the meaning of words describing shapes with the attributes they see. Invite students to mimic gestures during the launch when using words like round, point, square, flat, etc.

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

Materials to Copy

Shape Cards Grade K (groups of 2)

Required Preparation

Cut cards from the Introduction master to create a set of cards for each group of 2.

Student Responses

Sample responses for how shapes are alike:

- They both have 3 sides.
- They both have straight sides.
- They are both flat on the bottom.
- They are both triangles.

Sample responses for how shapes are different:

- One shape is round and one is not.
- One shape is tall and the other shape is short.
- One shape looks like it's straight and one shape looks like it's tilted.
- One shape has 3 sides and one shape has 4 sides.

Launch

- Groups of 2
- "We are going to play a game that lets us think about how shapes are alike and how they are different."
- Display cards N and P.
- "What is alike about these two shapes?" (They both have some straight sides. They both have corners.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- "What is different about these two shapes?" (One has a curved side and the other only has straight sides.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- Give each group a set of shape cards.
- "Each of you will turn over a card. With your partner, look carefully at the two shapes. Find one thing that is alike about your shapes and one thing that is different."

Activity

- 8 minutes: partner work time
- Monitor for students who count the number of sides or corners on the shapes.

Synthesis

- Display cards A and H.
- “What is alike about these two shapes? What is different about them?” (They both have straight sides. They both have corners. One has 3 sides and 3 corners. The other has 4 sides and 4 corners. One has a straight line on the top and the other is slanted.)
- If needed, ask:
 - “How many sides does each shape have?”
 - “How many corners does each shape have?”

Activity 3

⌚ 20 min

Introduce Which One, Shapes

Standards Alignments

Addressing K.G.B.4

The purpose of this activity is for students to learn stage 1 in the Which One center. Students ask their partner yes or no questions in order to determine their partner’s shape. Questions students ask should be based on the attributes of the shape. For example, students may ask, “Does your shape have three sides?” The Which One Gameboard is printed in the student book for this activity. The Which One Gameboard Introduction master is available for students to use during center activities in future lessons.

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

centers.

- Picture Books
- Bingo
- Shake and Spill

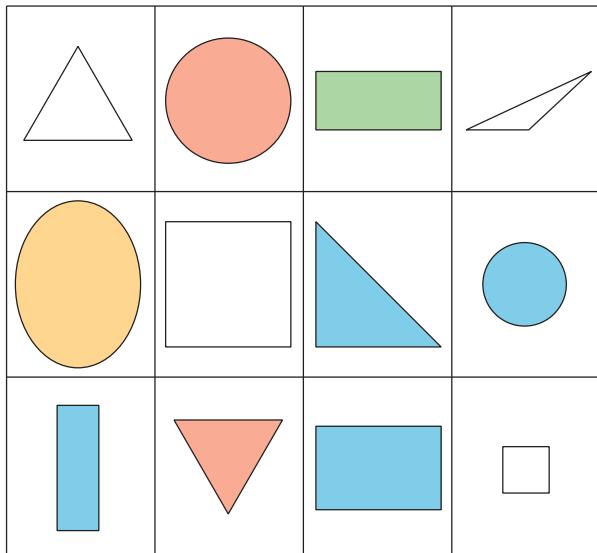
Materials to Gather

Counters, Materials from previous centers

Required Preparation

- Gather materials from:
 - Picture Books, Stages 1-3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

Student-facing Task Statement



Choose a center.

Which One

Picture Books



Materials to Copy

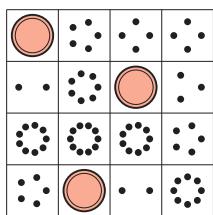
Which One Stage 1 Gameboard (groups of 2)

Launch

- Groups of 2
- "We are going to learn a center called Which One. Let's play one round together."
- Pick a shape on the board to be your mystery shape.
- "I've chosen a shape that is on the board. Your job is to ask me questions that will help you figure out which shape I chose. You can only ask questions that I can answer with a 'yes' or a 'no.' For example, you cannot ask, 'How many sides does your shape have?' but you can ask, 'Does your shape have more than 3 sides?'"
- Invite students to ask a question. Help students adjust their questions if they are not yes or no questions.
- Answer each yes or no question.
- After each question, ask students to share which shapes they can rule out based on the question and place a counter on those shapes.



Bingo



Shake and Spill



- When students feel ready to guess your shape, invite students to guess the shape, asking them to explain why they think it's your shape.
- “Take turns choosing a mystery shape and asking questions with your partner.”

Activity

- 5 minutes: partner work time
- “Now you can choose another center. You can also continue playing Which One.”
- 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.

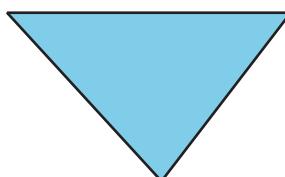
Synthesis

- Display the Which One Gameboard with the oval and the two circles covered with counters.
- “If this was the board you were playing with, what question would you ask next?”

Lesson Synthesis

⌚ 5 min

Draw a triangle.



“Today we described shapes in different ways. Tell your partner something about this shape.”

If needed, ask “What can you tell about the number of sides and corners this shape has?”

Lesson 4: Describe, Compare, and Sort Shapes

Standards Alignments

Addressing K.CC.A.1, K.G, K.G.A.1, K.G.B.4, K.MD.B.3

Teacher-facing Learning Goals

- Sort shapes into groups.
- Use informal language to describe and compare shapes and their attributes.

Student-facing Learning Goals

- Let's describe and sort shapes.

Lesson Purpose

The purpose of this lesson is for students to describe, compare, and sort shapes.

In this lesson, students are introduced to sorting shapes based on attributes. Students sort objects from the classroom as well as shapes they have worked with in previous lessons. Students describe attributes of shapes as they determine and explain which groups shapes should be sorted into. Because students are just starting to develop an understanding of shapes, students may say that three-dimensional objects look like a two-dimensional shape (for example, the clock looks like a circle.) This is fine for now, as students will learn about the difference between flat and solid shapes in a later unit.

As students explore, observe how students sort the objects and shapes, and use geometric language to describe them (MP6).

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

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

Lesson Timeline

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

Teacher Reflection Question

In grade 1, students distinguish between defining and non-defining (color, orientation, size) attributes of shapes. How does the work of this lesson lay the foundation for the work that students will do in grade 1?

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

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Use informal language to describe shapes.
- Tell what is the same or different about two or more shapes.
- Sort shapes into groups.

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

Warm-up
 10 min

Choral Count: Extend the Count Sequence

Standards Alignments

Addressing K.CC.A.1

The purpose of this warm-up is for students to extend the verbal count sequence to 30. It builds on previous experiences with counting to 20. This is an opportunity to see if students are able to say the number sequence in order. Students also see the numbers written as they say each number. This deepens their understanding of the structure of the counting sequence (MP7).

Instructional Routines

Choral Count

Student Responses

Students count to 30.

Launch

- Groups of 2
- “Let’s count to 30.”

Activity

- Count to 30 together.
- Record as students count.
- Count to 30 1–2 times. Point to the numbers as students count.

Synthesis

- Point to the number
- “What number is 1 more than 8?” (9).
- “Count to 9 with your partner.”

Activity 1

⌚ 15 min

Classroom Shape Hunt

Standards Alignments

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

The purpose of this activity is for students to describe and compare shapes they see in the classroom. Students are given a shape to look for in the classroom. In the synthesis, students are

introduced to what it means to sort. Students work in groups to sort shapes into groups in the next activity.

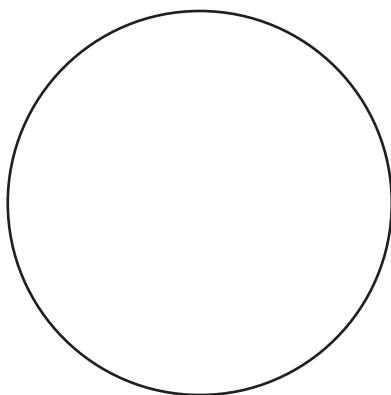
ⓘ Access for Students with Disabilities

Representation: Access for Perception. Students might need extra support determining objects around the room that look like their shape. Encourage students to hold their shape and the object next to each other to determine if they look alike.

Supports accessibility for: Visual-Spatial Processing

Student-facing Task Statement

Shape A



Shape B



Student Responses

Students find objects in the classroom that look like circles and rectangles.

Launch

- Groups of 2
- Assign half of the class to Shape A and the other half to Shape B.
- Display the student page.
- “We are going on a shape hunt in our classroom. There is a special shape you are looking for.”
- Point to Shape A.
- “If you are looking for Shape A, you will look around the classroom for an object that looks like this shape.”
- Point to Shape B.
- “If you are looking for Shape B, you will look around the classroom for an object that looks like this shape.”
- “When you find an object that looks like your shape, bring it back to the group.”

Activity

- 3 minutes: partner work time

Synthesis

- “If you found an object that looks like Shape A, place it here.”
- Invite students to place their object on one part of the carpet or table.

- “If you found an object that looks like Shape B, place it here.”
- Invite students to place their objects on a different part of the carpet or table.
- “What is the same about the objects in this group?” (They all look like Shape A. They are all circles. They all have round sides.)
- “What is the same about the objects in this group?” (They all look like Shape B. They are all rectangles. They have straight sides.)
- “We put our objects into two groups based on things that are the same about the shapes. When we put things in groups based on things that are alike, or the same, it is called sorting.”
- “Let’s figure out how many shapes are in each group.”
- Invite students to count the shapes in each group. Demonstrate writing a number to show how many objects are in each group.
- Display an object that looks like a rectangle, such as a pencil holder.
- “Which group do you think I should put this object in? Why do you think that?” (It should go in this group because it looks like a rectangle. It has straight sides.)

Activity 2

 10 min

Shape Sort

Standards Alignments

Addressing K.G.B.4, K.MD.B.3

The purpose of this activity is for students to consider and describe attributes of shapes as they

sort shapes into categories. Students were introduced to sorting in the previous activity. This is the first time students sort into categories of their choosing. The standards ask students to sort shapes into given categories, so if groups are having trouble coming up with categories to use to sort, suggest two categories that students can use (for example, has four sides and does not have four sides). Students will sort shapes into given categories in future lessons. When students choose categories for their sort they identify and describe shape attributes (MP6).

Access for English Learners

MLR8 Discussion Supports. Students should take turns picking a shape to sort and explaining their reasoning to their partner. Display the following sentence frames for all to see: “I noticed _____, so I put the shape in the _____ category.” Encourage students to challenge each other when they disagree.

Advances: Speaking and Conversing

Materials to Gather

Materials from a previous lesson

Required Preparation

Each group of 2 needs a set of shape cards from the previous lesson.

Student-facing Task Statement

Launch

- Groups of 2
- Give each group a set of shape cards.
- “In the last activity we sorted our objects into groups. We put the objects together based on something that was the same about them.”
- Display a couple of shape cards.
- “You and your partner will sort the shape cards into two groups. You can decide how to sort the shapes. Put each shape in one of your groups. Talk to your partner about why each shape fits in the group.”

Activity

- 5 minutes: partner work time
- Monitor for groups that sort the shapes in

different ways.

- “Write a number to show how many shapes are in your groups.”
- 2 minutes: independent work time
- “Which group has more shapes? How do you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion

Synthesis

- Invite at least two groups of students to share their sorts.
- “Why did they put these shapes together? What is the same about these shapes?”

Student Responses

Students:

- sort by number of sides.
- sort by number of corners.
- sort into round and straight sides.

Activity 3

⌚ 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with

number and shape concepts.

Students choose from any stage of previously introduced centers.

- Which One
- Picture Books
- Bingo
- Shake and Spill

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Which One, Stage 1
 - Picture Books, Stages 1–3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

Student-facing Task Statement

Choose a center.

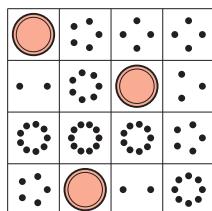
Which One



Picture Books



Bingo



Shake and Spill



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

- “How did you and your partner work together to decide which centers to choose?”

Lesson Synthesis

⌚ 5 min

Display two groups of shape cards: A, I, J, O and F, H, N.

“Today we sorted shapes into groups. We know that we sort shapes into groups based on something that is the same about the shapes.”

Display shape card D.

“Which group would you put this shape in? Why does it belong in that group?” (I would put it in the first group because it has 4 sides like the other shapes in the group.)

Lesson 5: Circles and Triangles

Standards Alignments

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

Teacher-facing Learning Goals

- Identify, describe, and compare circles and triangles.

Student-facing Learning Goals

- Let's learn the names of some shapes.

Lesson Purpose

The purpose of this lesson is for students to identify, describe, and compare circles and triangles.

Students are also introduced to the geometric terms **circle** and **triangle**. Students develop their intuitive understanding of circles and triangles. They may incorrectly identify shapes in this activity, such as identifying an oval as a circle. If this happens, acknowledge the similarities between the shapes ("This shape is curved like a circle, but it is not a circle.") As students sort examples and non-examples of triangles in the second activity, they continue to build their informal understanding of what a triangle is.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

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

Materials to Gather

- 5-frames: Activity 3
- Collections of objects: Activity 3
- Colored pencils or crayons: Activity 1
- Counting mats: Activity 3
- Materials from previous centers: Activity 3

Materials to Copy

- Triangle Sort Cards (groups of 4): 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 did students think of triangles as they came into the lesson? In what ways did their understanding of triangles change upon completing the lesson?

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

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Use informal language to describe shapes.
- Tell what is the same or different about two or more shapes.

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

Warm-up
 10 min

Which One Doesn't Belong: Shape Attributes

Standards Alignments

Addressing K.G.B.4

This warm-up prompts students to carefully analyze and compare the attributes of four shapes. In making comparisons, students have a reason to use language precisely (MP6). The activity also enables the teacher to hear the terminologies students know and how they talk about attributes of shapes.

Instructional Routines

Which One Doesn't Belong?

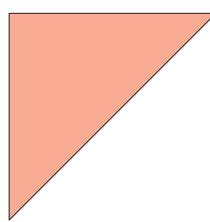
Student-facing Task Statement

Which one doesn't belong?

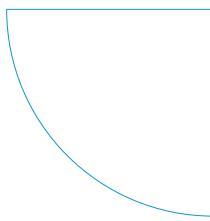
A



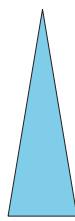
B



C



D



Student Responses

Sample responses:

A doesn't belong because:

- It is a rectangle. It does not have 3 sides.

B doesn't belong because:

- It is red. It is not blue.

C doesn't belong because:

- It does not have all straight sides. It has one side that is curved.
- It is not colored in.

D doesn't belong because:

- It is not flat on top. It has a point on top.

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."

Activity

- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.

Synthesis

- Display image C.
- "What is different about this shape?" (It has a side that is curved.)
- "Do you know any other shapes that have curved sides?" (A circle.)

Activity 1

⌚ 10 min

Color Circles and Triangles

Standards Alignments

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

The purpose of this activity is for students to identify examples of circles and triangles. The geometric terms **circle** and **triangle** are formally introduced, though some students may already be familiar with the terms and may have heard or used them in previous lessons. This activity exposes students to a wider variety of circles and triangles than they may have seen previously, which encourages students to expand their concepts of the shapes. Students may incorrectly identify some shapes as triangles or circles, particularly distractors, such as a shape that looks like a triangle but has 4 sides. These shapes can be discussion points and are expected throughout kindergarten. Students distinguish between defining and non-defining attributes of shapes in grade 1.

🌐 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: circles, triangles.

Advances: Listening, Speaking

♿ Access for Students with Disabilities

Representation: Access for Perception. Synthesis: Students might need extra support determining that the oval and the pizza slice shapes are not circles or triangles. Hold up a triangle and circle next to the shapes to visually show that the oval and pizza slice shapes do not match the triangle and circle.

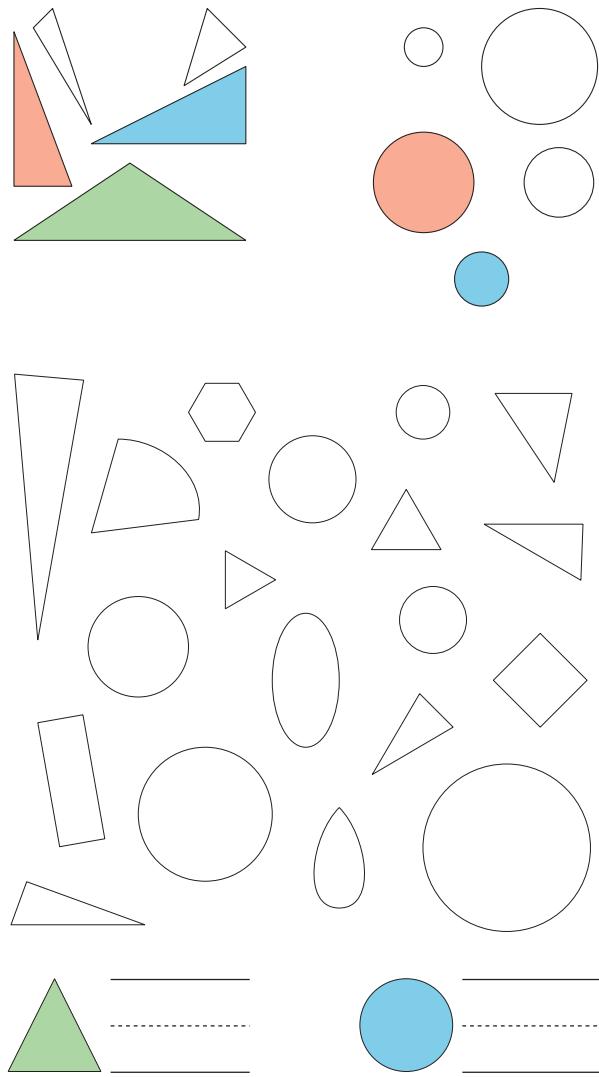
Supports accessibility for: Visual-Spatial Processing

Materials to Gather

Colored pencils or crayons

Required Preparation

Each student needs at least 2 different colored crayons or colored pencils.

Student-facing Task Statement**Student Responses**

Students color 6 circles and 7 triangles.

Launch

- Groups of 2
- Give each student access to 2 different color crayons or colored pencils.
- Display the image from the book.
- "Mai put her shapes into 2 groups. What do you notice? Why do you think Mai put these shapes together?"
- 30 seconds: quiet think time
- Share responses.
- "What can we name each group?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- "We can call this group **circles**. All of the shapes in this group are circles. We can call this group **triangles** because all of the shapes in this group are triangles."
- "What do you know about circles?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.
- "What do you know about triangles?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.
- Display student workbook.
- "Color all of the circles that you find with 1 color. Then color all of the triangles that you find with another color."

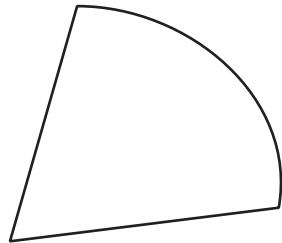
Activity

- 4 minutes: independent work time
- "Choose 1 triangle that you colored in. Tell your partner 1 thing that you know about that shape."
- 30 seconds: quiet think time

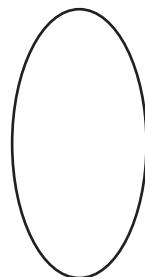
- 30 seconds: partner discussion
- “Write a number to show how many triangles you colored. Write a number to show how many circles you colored.”
- 1 minute: independent work time
- “Did you color more triangles or more circles? How do you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion

Synthesis

- Display shape from student book or draw shape:



- “Did you color this shape? Why or why not?” (I didn’t color the shape. It looks like a triangle but one of the sides is round.)
- Display shape from student book or draw shape:



- “Did you color this shape? Why or why not?” (I didn’t color this shape. It looks like a circle but it is stretched out.)

Activity 2

⌚ 15 min

Triangle Sort

👤 ↔👤 PLC Activity

Standards Alignments

Addressing K.G.B.4

The purpose of this activity is for students to begin to distinguish triangles from other shapes. By working with variants and non-examples of triangles, students begin to develop their understanding of what makes a shape a triangle. Students may more easily identify equilateral triangles as triangles but may also identify other examples as triangles. When students discuss with their group which group a shape should be placed in, students informally describe the attributes of the shape (MP6).

Materials to Copy

Triangle Sort Cards (groups of 4)

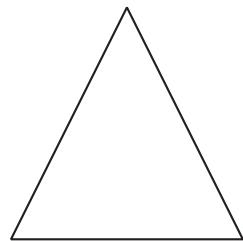
Required Preparation

- Cut out triangle cards from the Introduction master. Each group of 4 needs 1 set of cards.

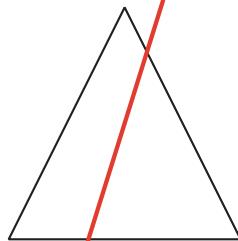
Student-facing Task Statement

Let's put the shapes into 2 groups.

Triangle



Not a Triangle



Launch

- Groups of 4
- Give each group a set of cards.
- “Work with your group to sort the shapes into 2 groups. Put the shapes that are triangles on the left side of your page. Put the shapes that are not triangles on the right side of your page. When you place a shape, tell your group why you think the shape belongs in that group.”

Activity

- 4 minutes: small-group work time
- Monitor for students who discuss attributes of triangles when sorting.

- “Write a number to show how many shapes are in each group.”
- 1 minute: independent work time
- “Walk around to see how the other groups organized their shapes. Did they organize them the same way that your group did?”
- 6 minutes: work time

Synthesis

- Display cards O, K, and G next to each other.
- “Noah says that the shape in the middle is not a triangle because it is pointing down and triangles have to point up. Do you agree with Noah? Why or why not?”

Student Responses

- Students sort examples and non-examples of triangles.
- Students informally describe attributes when explaining their sort:
 - It is a triangle because it has 3 corners.
 - It isn’t a triangle because one side is curved.

Advancing Student Thinking

If students put shapes other than triangles into the group of triangles, consider asking:

- “How did you choose which group to put this shape in?”
- “What is alike, or the same, about all of the shapes in this group?”

Activity 3

⌚ 20 min

Introduce Counting Collections, Up To 20

Standards Alignments

Addressing K.CC.B

The purpose of this activity is for students to learn stage 1 of the Counting Collections center. Most students should be given collections with 6–10 objects. Based on formative assessment data collected in previous sections, adjust the number of objects in collections for individual students. Provide students with counting mats and 5-frames to help them accurately count or organize their collections. Students use appropriate tools strategically as they choose which tools help them count their collections (MP5). In a future variation of this center, students will draw pictures or write numbers to represent their collection.

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

- Which One
- Picture Books
- Bingo
- Shake and Spill

Materials to Gather

5-frames, Collections of objects, Counting mats, Materials from previous centers

Required Preparation

- Gather materials from:
 - Which One, Stage 1
 - Picture Books, Stages 1-3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

Student-facing Task Statement

Choose a center.

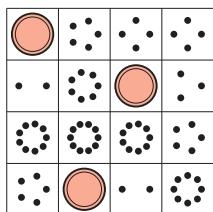
Counting Collections Which One



Picture Books



Bingo



Shake and Spill



Launch

- Groups of 2
- "We are going to learn a new center called Counting Collections. Work with your partner to figure out how many objects are in your collection. Use the tools if they are helpful. When you and your partner agree on how many objects are in the collection, you can choose another collection."

Activity

- 8 minutes: partner work time
- "Now you can choose another center. You can also continue doing Counting Collections."
- 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

- "Did you and your partner do the same thing to figure out how many objects were in your collection? What did you do the same? What did you do differently?"

Lesson Synthesis

⌚ 5 min

"Today we named circles and triangles. How are circles and triangles different? What words can you use to describe triangles? What words can you use to describe circles?"

"Where at home do you see circles or objects that look like circles? Where do you see triangles?"

Lesson 6: Rectangles and Squares

Standards Alignments

Addressing K.G, K.G.B.4, K.MD.A.2

Teacher-facing Learning Goals

- Compare the lengths of two shapes.
- Identify, describe, and compare rectangles and squares.

Student-facing Learning Goals

- Let's learn the names of some more shapes.

Lesson Purpose

The purpose of this lesson is for students to identify, describe, and compare rectangles and squares.

Students are introduced to the geometric terms **rectangle** and **square**. While some students may be familiar with these terms, they are formally introduced in this lesson, and all students have an opportunity to use the terms when identifying shapes in the classroom. Students consider the relative length of the sides of rectangles and describe them as **longer**, **shorter**, or the same length. In kindergarten, it is not important that students articulate the difference between squares and rectangles, only that they can identify examples of each shape. Refer to squares as “a special type of rectangle with four sides that are the same length,” but do not hold students responsible for the definition. In grade 1, students will distinguish between defining and non-defining attributes of shapes, which will allow them to discuss how squares and rectangles are the same and different.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

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

Materials to Gather

- Materials from previous centers: Activity 3

Materials to Copy

- Rectangle Sort Cards (groups of 4): 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

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

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

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Sort shapes into groups.
- Compare the length of objects.
- Use informal language to describe shapes.
- Identify circles, triangles, rectangles, and squares.

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

Warm-up 10 min

What Do You Know About Triangles?

Standards Alignments

Addressing K.G.B.4

The purpose of this warm-up is to introduce students to a new routine called What Do You Know About ____? In this routine, students share what they know about triangles. Students may share examples of objects in the world that look like triangles or may describe attributes of triangles.

Instructional Routines

What Do You Know About ____?

Student-facing Task Statement

What do you know about triangles?

Student Responses

Sample responses:

- A slice of pizza looks like a triangle.
- Triangles have 3 sides.
- Triangles have 3 corners.
- Triangles have straight sides.

Launch

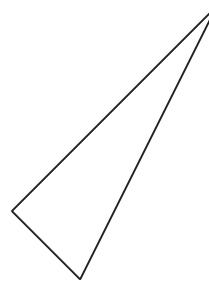
- Groups of 2
- “What do you know about triangles?”
- 30 seconds: quiet think time
- 1 minute: partner discussion

Activity

- Record responses.

Synthesis

- “Where do you see triangles in your community?”
- Draw or display a triangle and a rectangle:



- “How are these shapes different?”

Activity 1

⌚ 10 min

Sort Rectangles

Standards Alignments

Addressing K.G.B.4

The purpose of this activity is for students to begin to distinguish rectangles from other shapes. By working with variants and non-examples of rectangles, students begin to develop their understanding of what makes a shape a rectangle. When they discuss which group a shape should be placed in, students informally describe the attributes of the shape.

🌐 Access for English Learners

MLR8 Discussion Supports. Students should take turns finding a match and explaining their reasoning to their partner. Display the following sentence frames for all to see: “I noticed _____, so I matched” Encourage students to challenge each other when they disagree.

Advances Conversing, Listening

Materials to Copy

Rectangle Sort Cards (groups of 4)

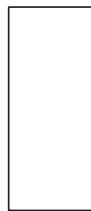
Required Preparation

- Cut out rectangle cards from the Introduction master. Each group of 4 needs 1 set of cards.

Student-facing Task Statement

Let's put the shapes into 2 groups.

Rectangle

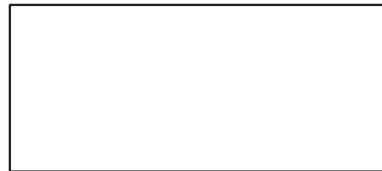


Not a Rectangle

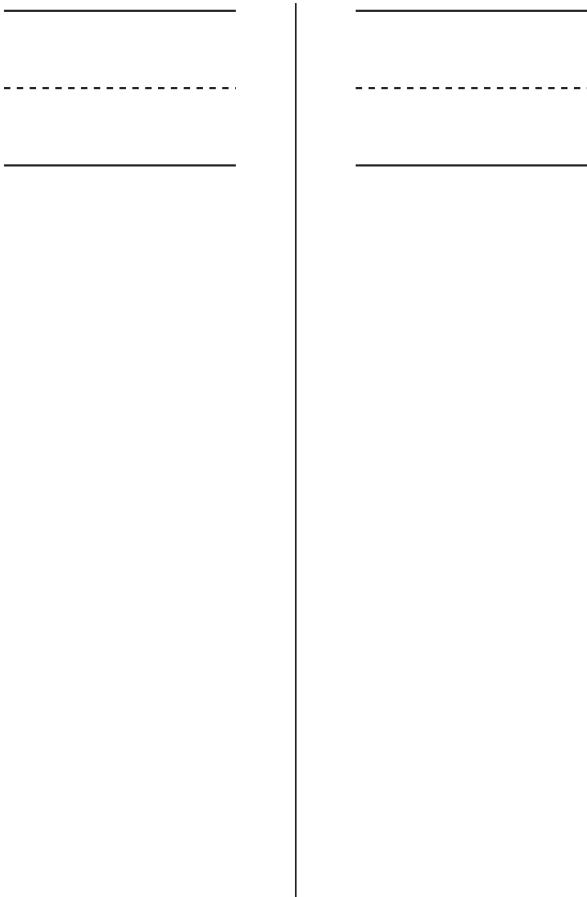


Launch

- Groups of 4
- Give each group a set of cards.
- Draw or display a rectangle:



- “Tell your partner two things you know about this shape.” (There are 4 sides. It looks like a door. It is a rectangle. It is long



Student Responses

- Students sort examples and non-examples of rectangles.
- Students informally describe attributes when explaining their sort:
 - It is a rectangle because it has straight sides.
 - It isn't a rectangle because it has 5 sides instead of 4.

and flat.)

- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.
- If needed, ask “What is the name of this shape?”
- 30 seconds: quiet think time
- “This shape is a **rectangle**.”

Activity

- “Work with your group to sort the shapes into two groups. Put the shapes that are rectangles on the left side of your page. Put the shapes that are not rectangles on the right side of your page. When you place a shape, tell your group why you think the shape belongs in that group.”
- 4 minutes: small-group work time
- “Write a number to show how many shapes are in each group.”
- 1 minute: independent work time
- “Which group has fewer shapes? How do you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion

Synthesis

- Invite 1–2 groups to share how they sorted the shapes.
- Draw or display a square:



- “Which group did you put this shape in?” (We put it with the rectangles because it has 4 sides. We didn’t put it with the rectangles because it is a square.)

- “This shape is a **square**, which is a special rectangle because all four sides are the same length.”

Advancing Student Thinking

If students put shapes other than rectangles into the group of rectangles, consider asking:

- “How did you choose which group to put this shape in?”
- “What is alike, or the same, about all of the shapes in this group?”

Activity 2

⌚ 10 min

Compare Length of Rectangles

Standards Alignments

Addressing K.MD.A.2

The purpose of this activity is for students to use longer and shorter to compare the length of rectangles. Because the endpoints are lined up, students should be able to visually see which rectangle is longer, which allows them to practice using language as they develop their understanding of length (MP6).

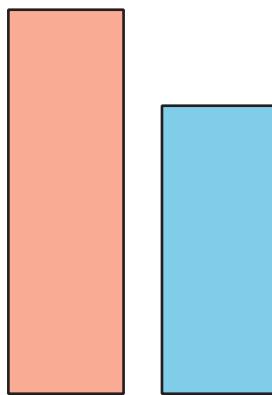
⌚ Access for Students with Disabilities

Representation: Access for Perception. To support access for students with color blindness, use verbal emphasis, gestures, and labeled displays to differentiate between colors and objects.
Supports accessibility for: Visual-Spatial Processing, Conceptual Processing

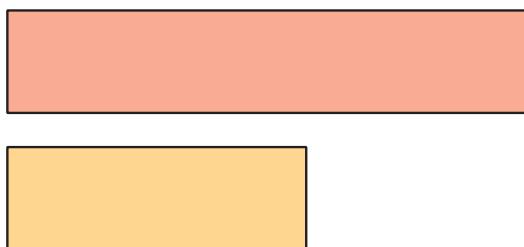
Student-facing Task Statement

Launch

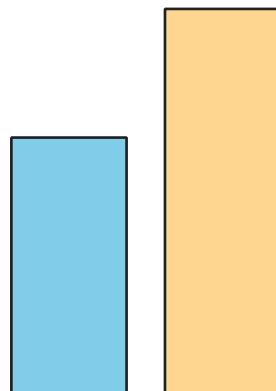
- Display the image or draw the shapes:



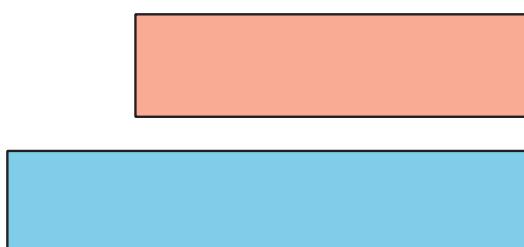
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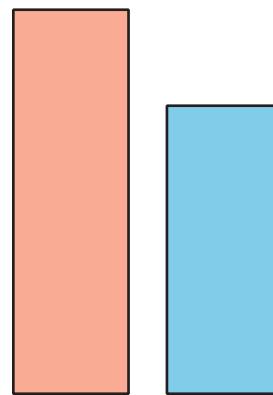
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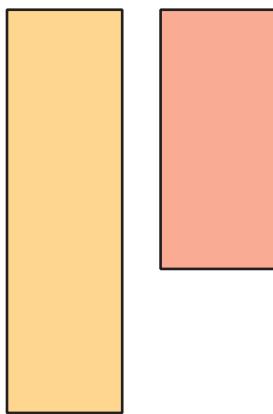
- “What is the same about these shapes? What is different about them?” (They are both rectangles. The red rectangle is taller, or longer, than the blue rectangle.)
- “Which rectangle is **shorter**?” (The blue rectangle is shorter than the red rectangle.)

Activity

- “Circle the rectangle that is **longer**. Tell your partner how you know which rectangle is longer.”
- 1 minute: partner work time
- Repeat the steps with the second problem.
- “Circle the rectangle that is shorter. Tell your partner how you know which rectangle is shorter.”
- 1 minute: partner work time
- Repeat the steps with the last two problems, first with longer and then with shorter.

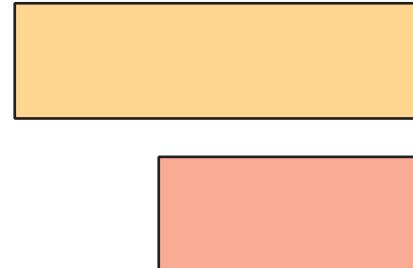
Synthesis

- Display the last problem.
- “Use ‘longer than’ to describe these rectangles.”
- “Use ‘shorter than’ to describe these rectangles.”
- Invite students to chorally repeat these words or phrases in unison 1–2 times:
 - “The yellow rectangle is longer than



the red rectangle.”

- “The red rectangle is shorter than the yellow rectangle.”
- Rotate the book so that the yellow rectangle is on top:



Student Responses

1. Students circle the red rectangle.
2. Students circle the blue rectangle.
3. Students circle the blue rectangle.
4. Students circle the red rectangle.

- “Which rectangle is longer?”
- “Even though we turned them, the yellow rectangle is longer than the red rectangle.”

Activity 3

⌚ 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts.

Students choose from any stage of previously introduced centers.

- Counting Collections
- Which One
- Picture Books
- Bingo
- Shake and Spill

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Counting Collections, Stage 1
 - Which One, Stage 1
 - Picture Books, Stages 1–3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

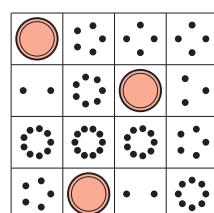
Student-facing Task Statement

Choose a center.

Counting Collections Which One



Picture Books



Bingo

Shake and Spill



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

- “What was something that felt challenging during centers today? Why did it feel challenging?”

Lesson Synthesis

⌚ 5 min

Draw the shapes:



"Today we worked with rectangles and squares. What is the same and what is different about these shapes?" (Both of these shapes are rectangles. The red shape is a special kind of rectangle that has sides that are all the same length. The blue rectangle has 2 longer sides and 2 shorter sides.)

If needed, ask "Which rectangle is longer?" (The blue rectangle is longer than the red rectangle.)

Lesson 7: Build with Straws

Standards Alignments

Addressing K.CC.A.1, K.G, K.G.B.5, K.MD.A.2

Teacher-facing Learning Goals

- Build shapes from components and name the shapes.
- Compare the lengths of 2 objects, by lining up the endpoints.

Student-facing Learning Goals

- Let's make shapes with straws.

Lesson Purpose

The purpose of this lesson is for students to build shapes from components.

In a previous lesson, students compared the length of rectangles that were lined up. In this lesson, students work with straws to build shapes. Students initially compare the length of the straws and then use the straws to build shapes. If straws are not available, other materials may be used as long as there are at least 4 different lengths of the material.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Bags: Activity 1
- Materials from a previous activity: Activity 2, Activity 3
- Materials from previous centers: Activity 3
- Play dough or modeling clay: Activity 2
- Straws: Activity 1

Materials to Copy

- Build Shapes Stage 1 and 2 Cards (groups of 2): 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

How did the work of the previous lesson lay the foundation for students to be successful in the first activity of this lesson?

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

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Compare the length of objects.
- Use informal language to describe shapes.
- Identify circles, triangles, rectangles, and squares.
- Name circles, triangles, rectangles, and squares.

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

Warm-up
 10 min

Choral Count: Count to 30

Standards Alignments

Addressing K.CC.A.1

The purpose of this warm-up is for students to extend the verbal count sequence to 30. Students also see the numbers written as they say each number to help connect the number names to the written numbers. In the synthesis, students determine the next number in a count, which prepares them to count on from a given number. This deepens their understanding of the structure of the counting sequence (MP7).

Instructional Routines

Choral Count

Student Responses

Students count to 30.

Launch

- Groups of 2
- “Let’s count to 30.”

Activity

- Count to 30 together.
- Record as students count.
- Count to thirty 1–2 times. Point to the numbers as students count.

Synthesis

- “I’m going to count. When I stop counting, whisper to your partner what number comes next when we count.”
- Count to 5.
- “What number comes next when we count?”
- Count to 11.
- “What number comes next when we count?”

Activity 1

⌚ 10 min

Compare Length of Straws

Standards Alignments

Addressing K.MD.A.2

The purpose of this activity is for students to compare two objects to determine which object is longer or shorter. In the previous lesson, students used longer than and shorter than to describe the length of rectangles. Because the rectangles were already lined up, students only needed to look and see which rectangle was longer. In this activity, students compare the length of straws that will be used to build shapes in the next activity. As students work, monitor for students who line up the straws at the endpoints when they compare length. The activity synthesis focuses on why lining up at the endpoints is helpful to accurately compare the lengths of objects (MP6).

🌐 Access for English Learners

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

Advances: Speaking, Conversing, Representing

♿ Access for Students with Disabilities

Representation: Access for Perception. Students might need a strategy to line up the straws. When lining up the straws during the launch be sure to demonstrate using your hand or an object as a “wall” for the end of both straws to push up against.

Supports accessibility for: Visual-Spatial Processing, Fine Motor Skills

Materials to Gather

Bags, Straws

Required Preparation

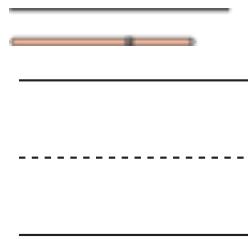
- Each group of 2 needs a bag with at least 6 straws of each size:
 - $2\frac{3}{4}$ inches
 - $1\frac{1}{2}$ inch

- 1 inch
- $\frac{1}{2}$ inch

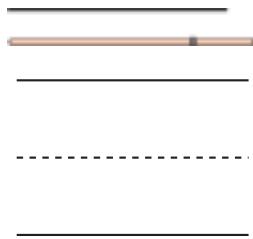
Student-facing Task Statement

Let's put the straws into 2 groups.

shorter than



longer than



Launch

- Groups of 2
- Give each group of students a bag of straws.
- “Today we will use these straws to build shapes. First let's compare the lengths of the straws and figure out which is longer.”
- “Work with your partner to compare the length of the straws to the line on your paper. If the straw is shorter than the line, put it on the left side of the page. If the straw is longer than the line, put it on the right side of the page. Tell your partner about each straw using 'longer than' and 'shorter than.'”

Activity

- 5 minutes: partner work time
- Monitor for students who align the end of the straw with the endpoint of the line.

Synthesis

- Display 2 straws arranged as shown.

- “Clare was comparing the lengths of the straws. She says that the blue straw is longer than the red straw because it sticks out more. What do you think?” (We can't tell. The blue one is sticking out more but it doesn't start at the same place.)
- “When we're comparing the lengths of objects, we should line them up at their ends.”
- Line up the the straws as shown:

Student Responses

- Students compare the length of the straw and line.
- Students use comparison language to describe the straws. Sample responses:
 - The straw is longer than the line because it looks bigger.
 - I put the straw next to the line. The straw sticks out at the end so it is longer.

- The line is short.
- The straw is longer than the line.



- “Tell your partner about the length of the straws using ‘shorter than.’”
- Invite previously identified students to share how they compared the length.
- Draw or display a rectangle:



- “In the next activity we will use straws to build shapes like this rectangle. What kind of straws do you need to build this shape?” (I need two long straws and two shorter straws.)

Activity 2

⌚ 15 min

Build Shapes from Straws

Standards Alignments

Addressing K.G.B.5

The purpose of this activity is for students to build shapes from components. Students use the straws from the first activity to build shapes and name the shapes that they build. Students may use the clay to connect the straws at the corners.

Materials to Gather

Materials from a previous activity, Play dough or modeling clay

Required Preparation

- Students need the bags of straws from the previous activity.

Student Responses

Students build shapes using straws.

Launch

- Give each group of students a bag of straws and clay or play dough.
- “Use your straws to make a shape. Show it to your partner and ask ‘What shape did I make?’ Take turns making and naming shapes.”

Activity

- 6 minutes: partner work time

Synthesis

- “Use three straws to create a shape.”
- 30 seconds: independent work time
- Display 3 student-created triangles.
- “What is alike about these shapes? What is different?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Monitor for students who identify the shapes as triangles. Monitor for students who describe the different lengths of the sides.
- Share responses.
- Repeat the steps and have students use four straws to create a shape. Display at least one square.

Activity 3

Introduce Build Shapes, Match the Flat Shape

⌚ 20 min

Standards Alignments

Addressing K.G.B.5

The purpose of this activity is for students to learn stage 1 of the Build Shapes center. Students use straws and clay to build a shape of their choice. Students check with their partner to be sure they both agree that the shapes match. The Build Shapes Cards are printed in the student book for this activity. The Build Shapes Cards Introduction master is available for students to use during center activities in future lessons. Listen to how students create an argument and use or revise their language to make their argument clear to others (MP3, MP6).

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

- Counting Collections
- Which One
- Picture Books
- Bingo
- Shake and Spill

Materials to Gather

Materials from a previous activity, Materials from previous centers

Materials to Copy

Build Shapes Stage 1 and 2 Cards (groups of 2)

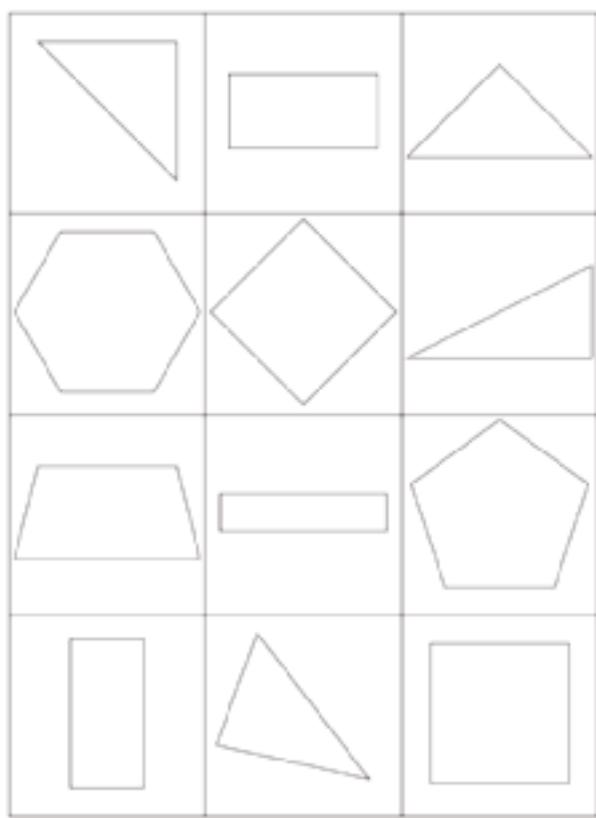
Required Preparation

- Students need the bags of straws and clay from the previous activity.
- Gather materials from:
 - Counting Collections, Stage 1
 - Which One, Stage 1
 - Picture Books, Stages 1–3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

Student-facing Task Statement

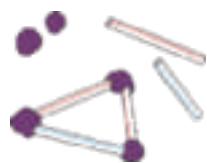
Launch

- Groups of 2
- Give each group clay and straws.



Choose a center.

Build Shapes

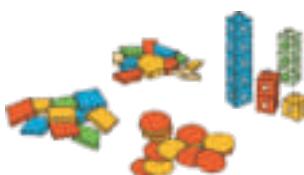


Which One



Bingo

Counting Collections



Picture Books



Shake and Spill

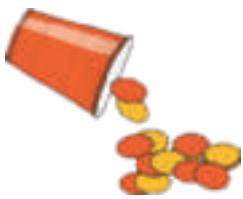
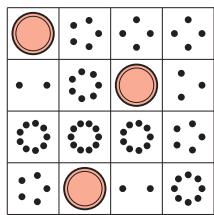
- “We are going to learn a center called Build Shapes. You will choose a shape. Then you and your partner will both use the straws and clay to build that shape. When you are both finished, compare your shapes and make sure they both match the shape you chose.”

Activity

- 8 minutes: partner work time
- Monitor for two students who build different rectangles to share in the lesson synthesis.
- “Now you can choose another center. You can also continue playing Build Shapes.”
- 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 a square built from 4 straws that are the same length.
- Display a rectangle from the shape cards.
- “Han was trying to build this shape. What should Han change so his shape will match the shape on the card?”



Lesson Synthesis

⌚ 5 min

"Today we built shapes with straws."

Display two rectangles created by students in previous activities.

"Tell your partner one thing you know about each shape." (It is a rectangle. There are longer sides and shorter sides. There are 4 sides.)

"Which shape is longer? How do you know?"

Lesson 8: Draw Shapes

Standards Alignments

Addressing K.G, K.G.A.1, K.G.B.4, K.G.B.5

Teacher-facing Learning Goals

- Draw shapes.
- Name shapes and use informal language to describe shapes and their attributes.

Student-facing Learning Goals

- Let's draw shapes.

Lesson Purpose

The purpose of this lesson is for students to draw shapes.

In a previous lesson, students built shapes from straws and clay. In this lesson, students start by naming the shapes that they draw and then describe the attributes of shapes to help their partner draw shapes. While students are not expected to draw exact shapes, the dot paper helps students attend to precision and consider attributes of shapes as they draw them (MP6).

Access for:

① Students with Disabilities

- Action and Expression (Activity 2)

② English Learners

- MLR8 (Activity 2)

Instructional Routines

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

Materials to Gather

- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min

Teacher Reflection Question

What language did students use to describe attributes of shapes in the second activity? When and how did you highlight the language that students use for the class?

Activity 3 20 min

Lesson Synthesis 5 min

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

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Use informal language to describe shapes.
- Identify circles, triangles, rectangles, and squares.
- Name circles, triangles, rectangles, and squares.

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

Warm-up 10 min

What Do You Know About Rectangles?

Standards Alignments

Addressing K.G.B.4

The purpose of this warm-up is for students to share what they know about rectangles. Students may share examples of objects in the world that look like rectangles or may describe attributes of rectangles. This encourages students to mathematize their environment (MP4).

Instructional Routines

What Do You Know About ____?

Student-facing Task Statement

What do you know about rectangles?

Student Responses

Sample responses:

- A door looks like a rectangle.
- A square on the carpet is a rectangle.
- Rectangles have 4 sides and 4 corners.
- Rectangles have straight sides.
- A square is a special kind of rectangle.

Launch

- Groups of 2
- “What do you know about rectangles?”
- 30 seconds: quiet think time
- 1 minute: partner discussion

Activity

- Record responses.

Synthesis

- “How many straws do I need to make a rectangle?”

Activity 1

⌚ 10 min

Connect the Dots

Standards Alignments

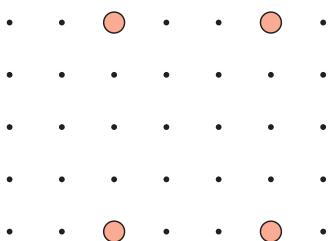
Addressing K.G.B.5

The purpose of this activity is for students to draw shapes. Students draw straight lines to connect the dots to create shapes. Some students may benefit from a ruler or straight edge to assist them. Students draw some shapes that they can name, such as triangles and rectangles. They also draw some shapes that they have not been introduced to the formal names of. Students can describe the attributes of these shapes but are not expected to name the shapes.

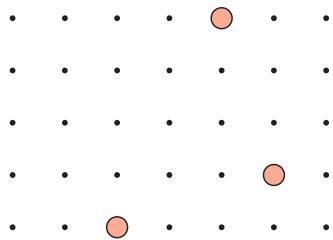
Student-facing Task Statement

Launch

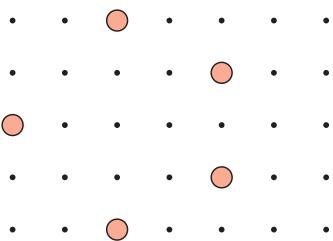
- Display the first image of four big red dots



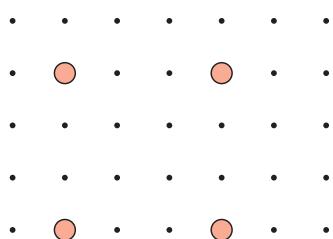
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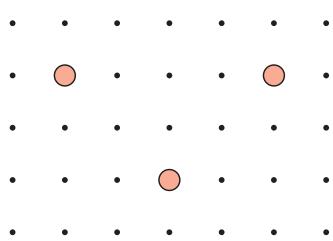
2.



3.



4.



5.

from the student book.

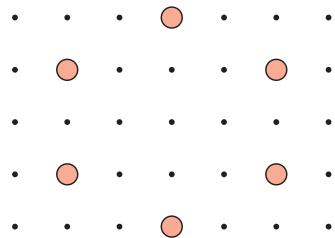
- “What do you notice? What do you wonder?” (There are black dots. There are 4 big red dots.)
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- “These dots will help us draw shapes. I need to connect the red dots using straight lines.”
- Demonstrate drawing a straight line between 2 of the red dots.
- “Where should I draw the next line?”
- Repeat until the rectangle is drawn.
- “What shape did I draw?” (A rectangle.)

Activity

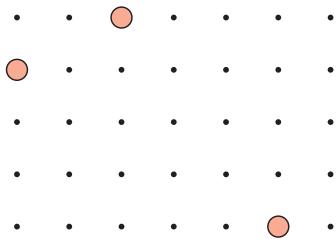
- “Draw straight lines to connect the dots. When you’re finished, color in the shape and tell your partner about the shape you drew.”
- 6 minutes: partner work time

Synthesis

- Display the last image with 3 red dots.
- “Tyler is connecting the dots. What shape do you think he is going to make? Why?” (A triangle. There are 3 dots so there will be 3 sides. Triangles have 3 sides.)
- If needed, ask “How many corners will the shape have? How many sides will the shape have?”



Synthesis:



Student Responses

Students connect the dots to draw shapes.

Activity 2

⌚ 15 min

Describe and Draw Shapes

Standards Alignments

Addressing K.G.B.4, K.G.B.5

The purpose of this activity is for students to describe and draw shapes. Students work in pairs to describe and draw a mystery shape. Students learn that they need to be precise in describing the shape in order for their partner to draw the shape accurately and have opportunities to use the language they have learned to describe shape attributes (MP6). There are also some shapes that students have not been introduced to the formal names of. Students can describe the attributes of these shapes but are not expected to name the shapes.

Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the partner's description before drawing it. For example, "your shape has 3 sides and 3 corners." This gives both students an opportunity to produce language.

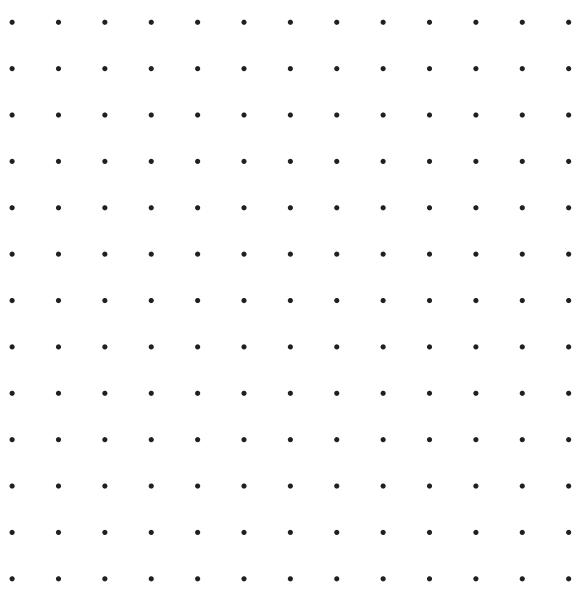
Advances: Conversing

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Students might need quiet think time to come up with words they will use to describe the shape they picked. Ask students to give their partners time in between turns to think of words.

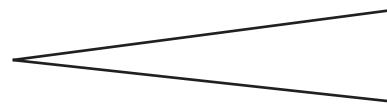
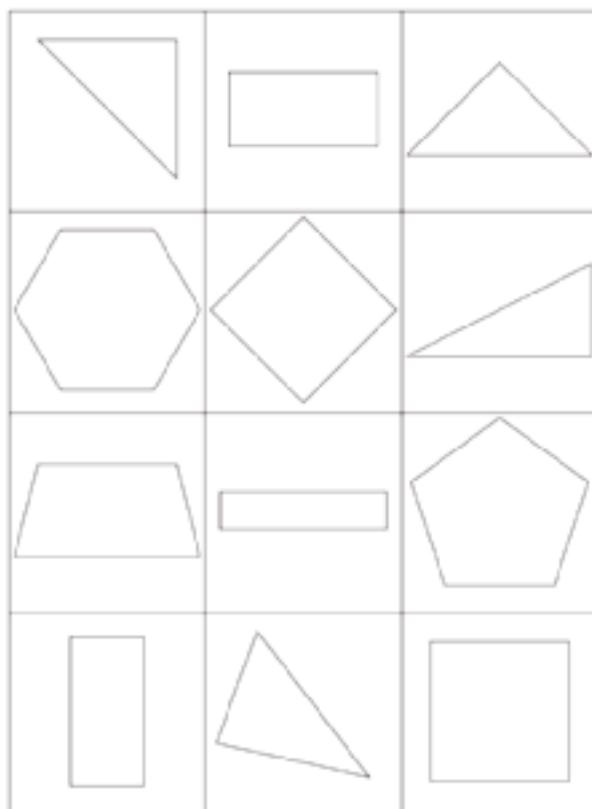
Supports accessibility for: Conceptual Processing, Language

Student-facing Task Statement



Launch

- Display the student book.
- "In the last activity, we used dot paper. What is different about this dot paper?" (There are no red dots.)
- Share responses.
- "Draw lines on the dot paper to make some shapes."
- 2 minutes: independent work time
- "Today we're going to play a new game called 'Draw the Mystery Shape'. One partner will choose a shape and describe it. The other partner will draw the shape."
- "Let's try it. I'm going to describe a shape. Draw the shape that I describe on the dot paper."
- "This shape has 3 sides and 3 corners."
- 30 seconds: independent work time
- "Did you and your partner draw the same shape?" (No. We drew shapes with 3 sides but they don't look the same.)
- Draw or display:



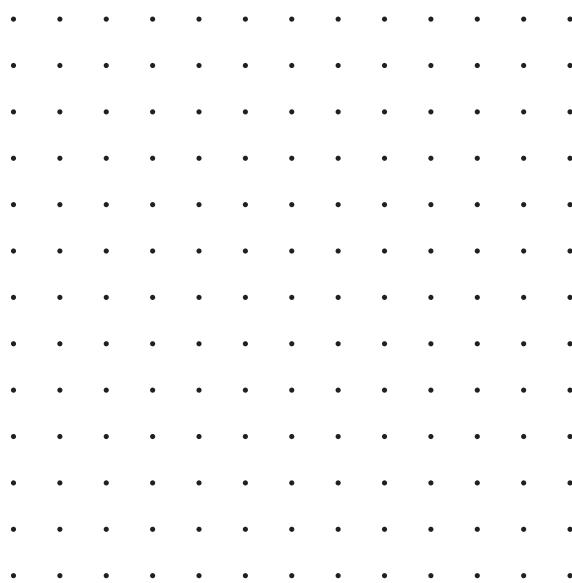
- “This was the shape I wanted you to draw. What else could I have said about the shape to help you know what to draw?” (It is skinny. It is pointing to the side. Two sides are long and one side is short.)

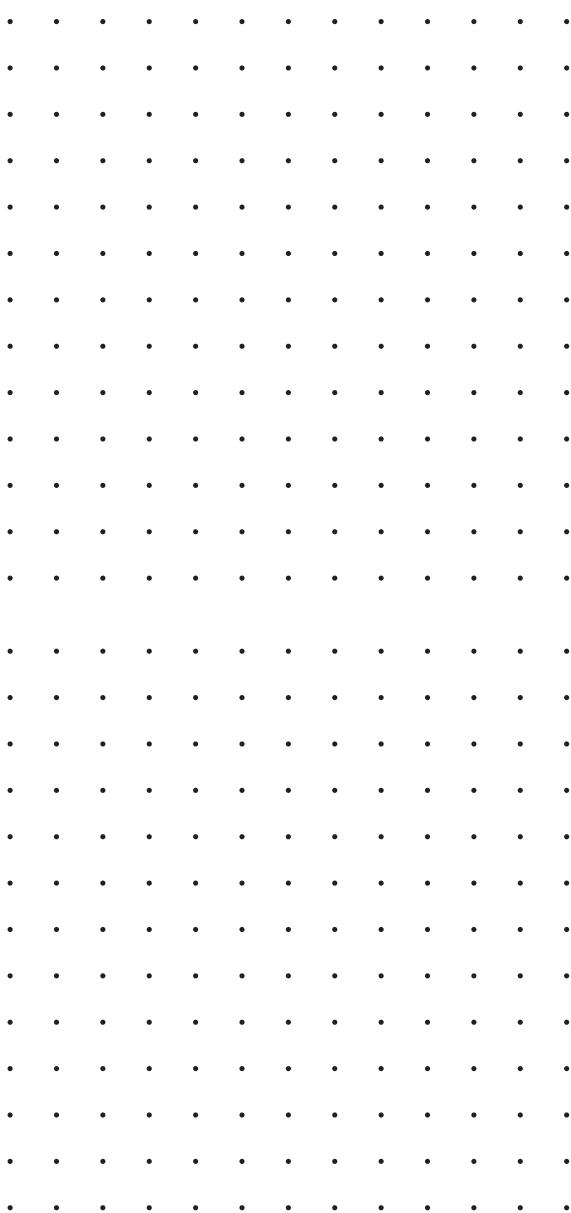
Activity

- “Pick a shape but don’t tell your partner which shape you picked. Tell your partner all about the shape so they can draw it.”
- 8 minutes: partner work time

Synthesis

- “Which clues helped you figure out how to draw the shape?”





Student Responses

Students describe and draw shapes.

⌚ 20 min

Activity 3

Introduce Build Shapes, Describe the Flat Shape

Standards Alignments

Addressing K.G.A.1, K.G.B.5

The purpose of this activity is for students to learn stage 2 of the Build Shapes center. Students secretly choose a shape and describe it to their partner. Their partner then builds the shape described using straws and clay. This center combines the work that students have done in previous activities with describing shapes while practicing building shapes. With repeated experience, students describe and build shapes with more precision and identify key attributes to highlight in their descriptions (MP8). The shape cards are printed in the student book for this activity. The Build Shapes Cards Introduction master is available for students to use during centers in future lessons.

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

- Build Shapes
- Counting Collections
- Which One
- Picture Books
- Bingo
- Shake and Spill

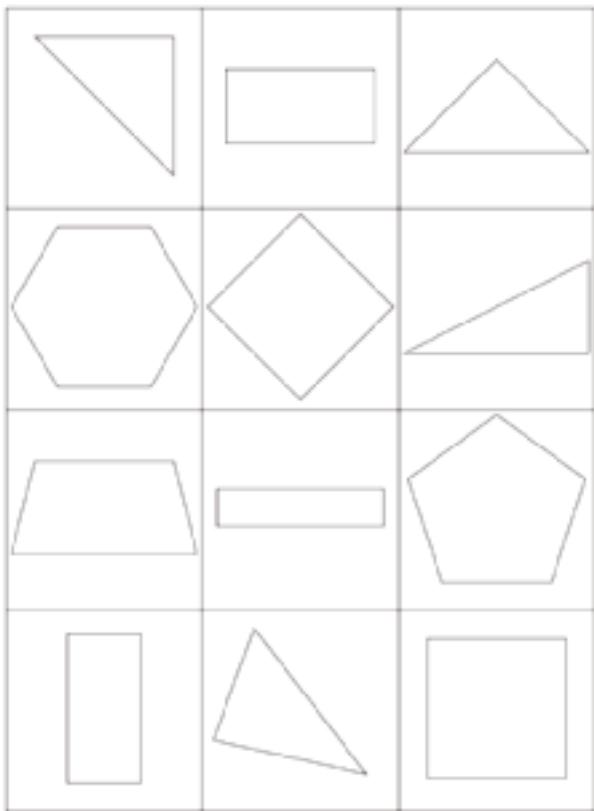
Materials to Gather

Materials from previous centers

Required Preparation

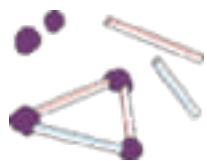
- Gather materials from:
 - Build Shapes, Stage 1
 - Counting Collections, Stage 1
 - Which One, Stage 1
 - Picture Books, Stages 1–3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

Student-facing Task Statement



Choose a center.

Build Shapes

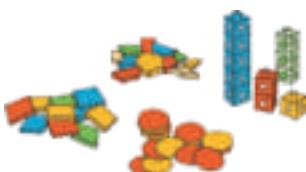


Which One



Bingo

Counting Collections



Picture Books



Shake and Spill

Launch

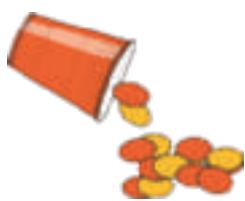
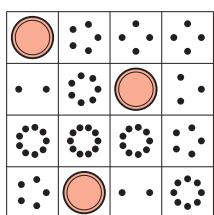
- Groups of 2
- Give each group of students a set of straws and clay.
- “We are going to learn a new way to do the Build Shapes center.”
- “One person will choose a shape without telling their partner which one they chose. They will describe the shape to their partner, and their partner will build the shape with straws and clay. When the shape is built, work together to see if it looks like the mystery shape. Take turns playing with your partner.”

Activity

- 8 minutes: partner work time
- “Now you can choose another center. You can also continue playing Build Shapes.”
- 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

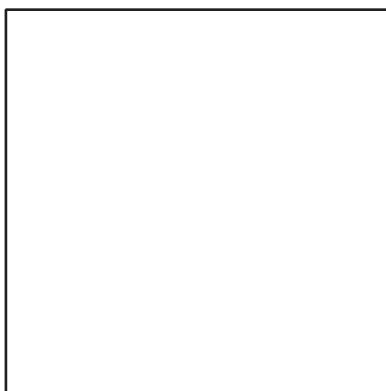
- “If you needed your partner to build a triangle, what could you tell them?”



Lesson Synthesis

⌚ 5 min

Draw or display a square:



"Today we described and drew shapes. Kiran was trying to get Jada to draw this shape. She told Jada to draw a shape with 4 lines and 4 corners. Jada drew this shape."

Draw or display a rectangle:



"What can Kiran tell Jada to help her make the shape the same?"

Lesson 9: Shapes Are Everywhere

Standards Alignments

Addressing K.G, K.G.A.1, K.G.A.2, K.G.B.4, K.G.B.5

Teacher-facing Learning Goals

- Name shapes and use informal language to describe attributes of shapes in the environment.

Student-facing Learning Goals

- Let's find shapes in our world.

Lesson Purpose

The purpose of this lesson is for students to use what they know about shapes and their attributes to name and describe shapes in the environment.

In previous lessons, students described shapes that they saw in the environment. In this lesson, students use what they have learned about shapes throughout the section to name specific examples of shapes in their school environment. Students choose to either draw or create an example of a shape that they found. Students share their work with their classmates and answer questions about their shape.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR7 (Activity 2)

Instructional Routines

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

Materials to Gather

- Clipboards: Activity 1
- Colored pencils or crayons: Activity 2
- Materials from a previous lesson: Activity 2
- Materials from previous centers: Activity 3

- String: Activity 2

Lesson Timeline

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

Teacher Reflection Question

What opportunities are you giving students to reflect on their understanding of the mathematical content?

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

⌚ 0 min

Unit 3, Section A Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Use informal language to describe shapes.
- Name circles, triangles, rectangles, and squares.

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

Warm-up

⌚ 10 min

Which One Doesn't Belong: Rectangles, Squares, and Triangles

Standards Alignments

Addressing K.G.B.4

This warm-up prompts students to carefully analyze and compare the attributes of 4 shapes. In making comparisons, students have a reason to use language precisely (MP6). The activity also enables the teacher to hear the words students know and how they talk about attributes of shapes.

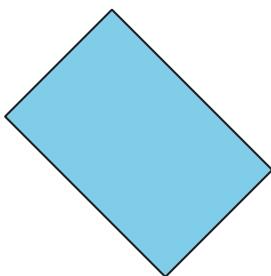
Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?

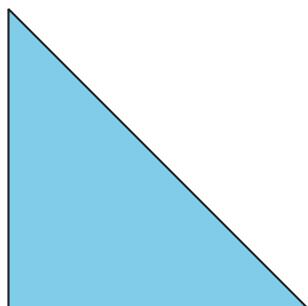
A



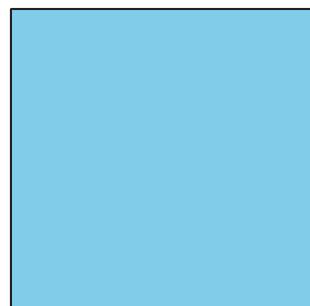
B



C



D



Student Responses

Sample responses:

A doesn't belong because:

- It is not flat on the bottom.

B doesn't belong because:

Launch

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

Activity

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

Synthesis

- Display the image of the square.
- "Noah said that this shape doesn't belong because it is not a rectangle. What do you think?"
- 30 seconds: quiet think time
- Share responses.
- "A square is a special kind of rectangle."

- It is not blue. It is red.

C doesn't belong because:

- It does not have 4 sides. It is not a rectangle. It has 3 sides.

D doesn't belong because:

- It doesn't have sides that are different lengths. All of the sides are the same length.

Activity 1

⌚ 15 min

School Shape Walk

Standards Alignments

Addressing K.G.A.1, K.G.A.2, K.G.B.4

The purpose of this activity is for students to identify and name shapes in the environment. The shape walk can take place in the playground, library, or another area of the school. It may be easier for students to use their recording sheet if it is on a clipboard.

When students recognize mathematical features of objects in the real world, they model with mathematics (MP4).

ⓘ Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Students may benefit from chunking this task into smaller parts. Invite students to look for one shape at a time. Check in with students to provide feedback and encouragement after recording each shape.

Supports accessibility for: Conceptual Processing

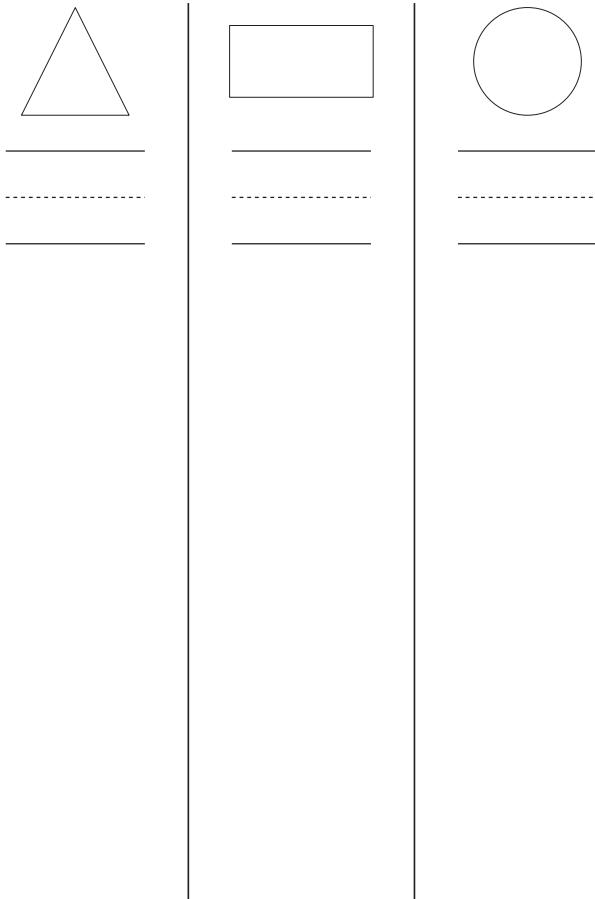
Materials to Gather

Clipboards

Student-facing Task Statement

Launch

- Groups of 2
- “We are going to take a walk around the



Synthesis:



playground. Look for examples of triangles, rectangles, and circles around the playground. Tell your partner about the shapes you find and draw pictures or write words to record what you find."

Activity

- 10 minutes: shape walk
- "Write a number to show how many of each shape you found."
- 2 minutes: independent work time

Synthesis

- Invite students to share their recording sheets and the shapes that they found.
- Display the image or an example from the playground:



- "Han found this swing on the playground. Where should he draw this on the recording sheet?" (The swing looks like a rectangle so he could draw it with the rectangles. The sides of the swing look like triangles.)

Student Responses

Students name shapes in the environment.

Activity 2

⌚ 15 min

Create the Shape

Standards Alignments

Addressing K.G.B.4, K.G.B.5

The purpose of this activity is for students to create shapes from components. Students should have access to different materials to create shapes, such as straws from a previous lesson, pipe cleaners, string, or other art supplies. Dot paper is printed in the student workbook for students who choose to draw their shape. As students ask and answer questions about the shapes in the activity synthesis, they have an opportunity to name shapes and informally describe attributes of shapes using precise language (MP6).

🌐 Access for English Learners

MLR7 Compare and Connect. Synthesis: To amplify student language as they answer questions during the gallery walk, encourage students to point to the relevant parts of their display as they speak.

Advances: Representing, Conversing

Materials to Gather

Colored pencils or crayons, Materials from a previous lesson, String

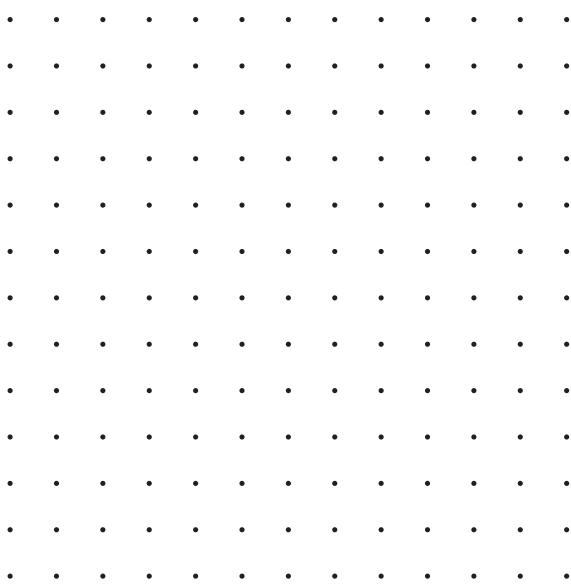
Required Preparation

- Students need the straws from the previous lesson and pipe cleaners, string, or other art supplies.

Student-facing Task Statement

Launch

- Give students access to materials to create shapes, such as straws, pipe cleaners, string, and crayons or colored pencils.
- “What was your favorite shape that you found on our shape walk?”
- 30 seconds: quiet think time
- Share responses.



Student Responses

Students draw or create shapes.

Students ask questions about shapes.

Sample responses:

- What shape did you make?
- Where did you see the shape on the playground?
- How many sides does your shape have?

- “Use any materials to make or draw your favorite shape that you found on the shape walk.”

Activity

- 4 minutes: independent work time

Synthesis

- “Half the class will stay by the shape they created. Half the class will walk around and look at all the shapes. Ask each person one question about their shape.”
- 5 minutes: gallery walk
- “Now the other half of the class will walk around to see the shapes. Remember to ask each person one question about their shape.”
- 5 minutes: gallery walk

Activity 3

⌚ 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with number and shape concepts.

Students choose from any stage of previously introduced centers.

- Build Shapes
- Counting Collections
- Which One

- Picture Books
- Bingo
- Shake and Spill

Materials to Gather

Materials from previous centers

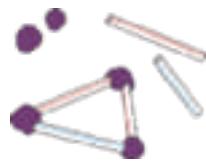
Required Preparation

- Gather materials from:
 - Build Shapes, Stages 1 and 2
 - Counting Collections, Stage 1
 - Which One, Stage 1
 - Picture Books, Stages 1–3
 - Bingo, Stages 1 and 2
 - Shake and Spill, Stages 1 and 2

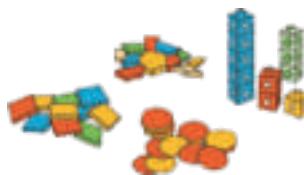
Student-facing Task Statement

Choose a center.

Build Shapes



Counting Collections



Which One

Picture Books



Bingo

Shake and Spill

Launch

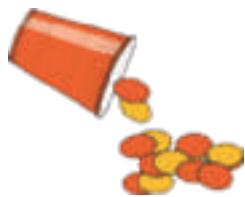
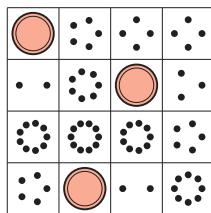
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do.”
- 30 seconds: quiet think time

Activity

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

Synthesis

- “What is something you do well while working in centers? What is something you want to continue working on?”



Lesson Synthesis

⌚ 5 min

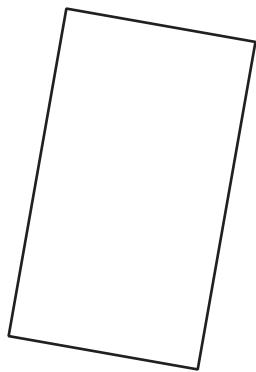
"In this section, we have learned all about shapes. What have you learned about shapes?"

Share and record responses.

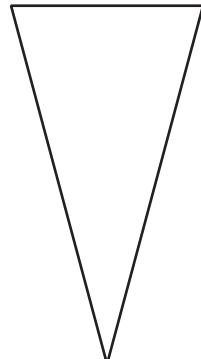
📝 Student Section Summary

In this section, we noticed shapes in the world around us.

We described and compared shapes.



This shape looks like a door that is crooked.
It has 4 corners.



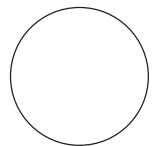
This shape has 2 long sides and 1 shorter side.

The shapes are alike because they have straight sides.

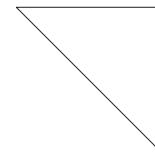
The shapes are different because one has 4 sides and one has 3 sides.

We learned the names of these shapes:

circle



triangle



rectangle



square



Section B: Making Shapes

Lesson 10: Put Together Pattern Blocks

Standards Alignments

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

Teacher-facing Learning Goals

- Put shapes together to form larger shapes.

Student-facing Learning Goals

- Let's put together pattern blocks.

Lesson Purpose

The purpose of this lesson is for students to put together shapes to form larger shapes.

In a previous unit, students explored pattern blocks and filled in simple puzzles. In the previous section, students explored the attributes of and built individual flat shapes like rectangles and triangles. In this lesson, students explore putting together pattern blocks with sides touching to form larger shapes.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR7 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3
- Pattern blocks: Activity 1, Activity 2

Materials to Copy

- Pattern Blocks Stage 4 Recording Sheets (groups of 1): Activity 1
- Pattern Block Puzzles (groups of 1): 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

Revisit the norms you established as a class about doing mathematics. Which norms are working and which might need revision? Are there any norms you or your students might want to add?

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

Unit 3, Section B Checkpoint

Standards Alignments

Addressing K.CC, K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Identify the pattern blocks needed to fill a puzzle.
- Count the number of pattern blocks used to make a shape.
- Compare the number of pattern blocks used to make a shape.

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

Warm-up
 10 min

Notice and Wonder: Quilts

Standards Alignments

Addressing K.G.B.6

The purpose of this warm-up is to elicit the idea that shapes can be combined to make patterns and pictures, which will be useful when students put together pattern blocks to make shapes in a later activity. While students may notice and wonder many things about these images, the shapes in the design of the quilt are the important discussion points.

The images in this warm-up are of quilts made by a group of women in Gee's Bend, Alabama. Consider reading the book "Stitchin' and Pullin': A Gee's Bend Quilt" by Patricia McKissack and showing students more examples of quilts as a part of the Notice and Wonder activity. Examples of quilts from the book that are made of different shapes than the one shown in the student workbook will give students the opportunity to notice and wonder different things.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

What do you wonder?



Synthesis:

Launch

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

Activity

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

Synthesis

- Display the image:



- Consider displaying images of other quilts



from this website:

<https://www.soulsgrowndeep.org/quilt-categories/patterns-geometry>

- “These pictures show quilts that are made by women in Gee’s Bend, Alabama. What shapes do you see in the quilts?” (There are rectangles, squares, and circles.)
- “Where do you see shapes that are put together to make another shape?” (There are a lot of rectangles that make a square. There are rectangles that are put together to make a bigger rectangle.)

Student Responses

Sample responses:

Students may notice:

- It looks like a blanket.
- There are many different colors.
- There are shapes. There are rectangles, squares, and circles.

Students may wonder:

- Is it a blanket?
- Why aren’t there any triangles?

Activity 1

⌚ 10 min

Introduce Pattern Blocks, Count Out and Build

Standards Alignments

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

The purpose of this activity is for students to learn stage 4 of the Pattern Blocks center within the context of the warm-up. Students put together pattern blocks to form larger shapes. Students

practice recognizing written numbers and counting out a given number of objects. Students describe and compare the shapes that they create.

In this activity, students put together the pattern blocks to make their own quilt. Consider taking pictures of the designs that students create and combining them to make a class quilt. Students may or may not put the pattern blocks together to look like something specific, such as a boat or a square. The recording sheet is printed in the student book for this activity. The Introduction master is available for students to use during center activities in future lessons.

Access for English Learners

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

Advances: Representing, Conversing

Access for Students with Disabilities

Representation: Internalize Comprehension. Invite students to line up the pattern blocks so that they can visually see which patterns blocks were used more.

Supports accessibility for: Visual-Spatial Processing, Conceptual Processing

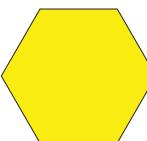
Materials to Gather

Pattern blocks

Materials to Copy

Pattern Blocks Stage 4 Recording Sheets
(groups of 1)

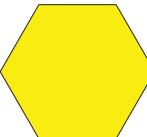
Student-facing Task Statement

3		green triangles
6		yellow hexagons
8		blue rhombuses
4		orange squares

Launch

- Groups of 2
- “Shapes are often put together to make things like clothes, blankets, and quilts. Does your family have or make any special blankets or quilts that have shapes on them? How would you describe them?”
- 30 seconds: quiet think time
- Share responses.
- Give each group of students pattern blocks.
- “We are going to learn a new way to do the Pattern Blocks center. It is called Count Out and Build. You are going to count out the pattern blocks and use them to make your

I used more _____ than _____.

- 5  blue rhombuses
- 2  yellow hexagons
- 4  tan rhombuses
- 7  green triangles

I used more _____ than _____.

Student Responses

Students count out the given number of pattern blocks and put the pattern blocks together.

own pattern for a quilt."

- Display the student book.
- "The numbers tell me how many of each pattern block I need to count out. How many orange square pattern blocks do I need?" (4)
- 30 seconds: quiet think time
- Share responses.
- "Count out the pattern blocks. Then put your pattern blocks together to make a pattern for a quilt. Tell your partner about what you are making."

Activity

- 3 minutes: partner work time
- "This sentence says 'I used more ____ than ____.' I can draw a picture of the pattern block or write a word. If I use more triangles than squares, I can draw a triangle on the first line and a square on the next line."
- Demonstrate drawing a triangle and a square.
- "My sentence says 'I used more triangles than squares.' Fill in the sentence about your quilt."
- 2 minutes: independent work time
- If time, invite students to count out the pattern blocks listed on the second page and create another quilt.

Synthesis

- Invite students to share the shapes they made with pattern blocks.
- Display two student-created shapes.
- "What is the same about the shapes? What is different about them?" (Sample responses: They both have 3 green triangles. They used the same shapes but they put them together in a different way.)

One of them looks like it has a smiley face in the middle.)

- “Are there more green triangle pattern blocks or blue pattern blocks? How do you know?”

Activity 2

⌚ 10 min

Pattern Block Puzzles

Standards Alignments

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

The purpose of this activity is for students to use pattern blocks to fill in simple puzzles. Students need to be more precise in arranging the pattern blocks because the pattern blocks touch at the sides and corners. The puzzles are in black and white so that students are not able to determine which pattern block to use based only on color. The Pattern Block Puzzles Introduction master is available for students to use during this activity.

When students make connections between the pattern blocks and the shape outlines in the puzzle, they show their ability to reason abstractly and quantitatively (MP2).

Materials to Gather

Pattern blocks

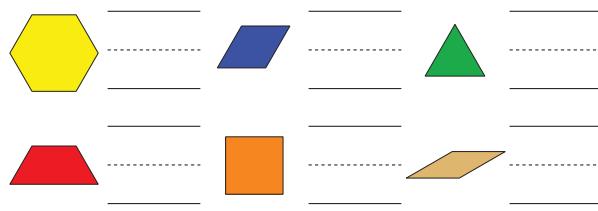
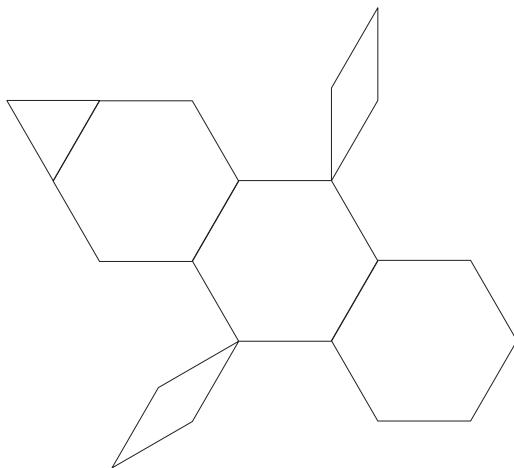
Student-facing Task Statement

Materials to Copy

Pattern Block Puzzles (groups of 1)

Launch

- Groups of 2
- Give each group of students pattern blocks.
- “In the last activity we put together pattern blocks to make quilts. We can also use pattern blocks to make things that we see in real life. Close your eyes and think about something that you see at home or in your community. Use the pattern blocks to make what you see.”



Student Responses

Students fill in the puzzles with pattern blocks.

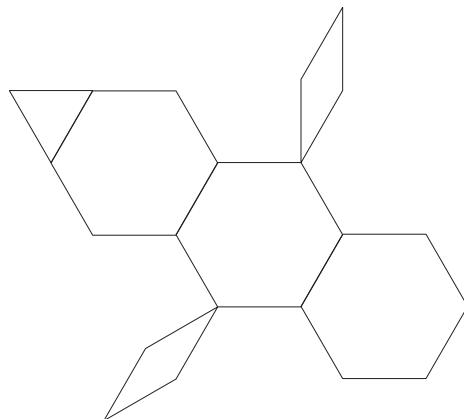
- 2 minutes: independent work time
- “Tell your partner about what you made and why.”
- 2 minutes: partner discussion
- Share responses.
- “Each puzzle looks like something we see in real life. Use the pattern blocks to fill in each puzzle. Write a number to show how many of each pattern block you used. Ask your partner a question about each puzzle using the word ‘fewer’.”

Activity

- 6 minutes: partner work time

Synthesis

- “How did you know which pattern block would fit?”
- Display the first puzzle filled in with pattern blocks:



- “What is a question that you can ask about this shape using the word ‘fewer’?” (Are there fewer green triangle pattern blocks or fewer tan pattern blocks? Are there fewer green triangle pattern blocks or yellow pattern blocks?)

Activity 3

⌚ 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice building shapes and putting together shapes to form larger shapes.

Students choose from any stage of previously introduced centers.

- Geoblocks
- Build Shapes
- Pattern Blocks
- Less, Same, More

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:
 - Geoblocks, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Pattern Blocks, Stages 1-4
 - Less, Same, More, Stages 1-4

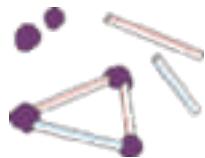
Student-facing Task Statement

Choose a center.

Geoblocks



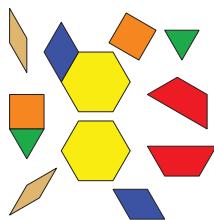
Build Shapes



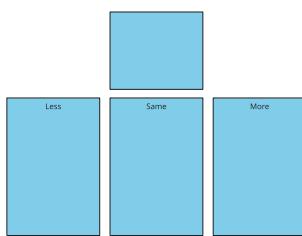
Launch

- “Today we are going to choose from centers we have already learned. You can also continue playing Pattern Blocks, Count Out and Build. You can put the pattern blocks together to make a quilt or anything you choose.”
- Display the center choices in the student book.
- “Think about what you would like to do

Pattern Blocks



Less, Same, More



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

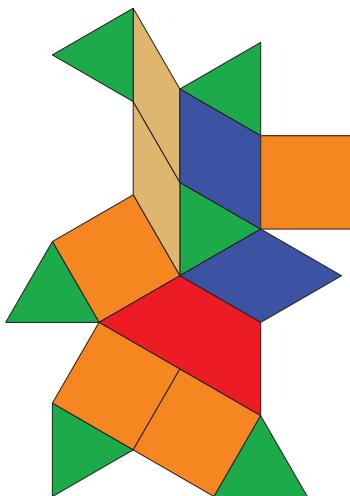
Synthesis

- Invite a student who built a shape out of straws to share.
- Invite a student who put together pattern blocks to share.
- “What is the same about the shapes that you built with straws and the shapes that we created when we put together pattern blocks? What is different?”

Lesson Synthesis

⌚ 5 min

Display pattern blocks arranged as pictured, or display a student-created example from the first activity.



"Today we put together pattern blocks to make shapes. Describe this shape to your partner. How many green triangles are there? How many orange squares are there? Are there more green triangles or more orange squares?"

Lesson 11: Same Shapes

Standards Alignments

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

Teacher-facing Learning Goals

- Identify shapes that are the same, regardless of orientation or size.

Student-facing Learning Goals

- Let's figure out which shapes are the same.

Lesson Purpose

The purpose of this lesson is for students to identify shapes that are the same, regardless of orientation.

In a previous section, students identified and named shapes in the environment, including shapes in different orientations. In this lesson, students use pattern blocks to figure out which shapes are the same. Students may analyze the attributes of the shapes or may rotate the pattern blocks to determine which shapes are the same.

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

- Colored pencils or crayons: Activity 2
- Materials from previous centers: Activity 3
- Pattern blocks: Activity 1, Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min

Teacher Reflection Question

In an upcoming lesson, students will put together pattern blocks to compose the same shape in more than one way. What do you

Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

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 3, Section B Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize shapes that are the same regardless of orientation.
- Identify the pattern blocks needed to fill a puzzle.

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

Warm-up ⌚ 10 min

How Many Do You See: 1 More and 1 Less on 5-frames

Standards Alignments

Addressing 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. The synthesis highlights that the images show 1 more and 1 less than the initial image. When students use the dot images to subitize, they look for and make use of the structure of 5 and 1 more or 1 less (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 image. 5 and 1 more is 6.
- 4. One is missing from the 5-frame.

Launch

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

Activity

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

Synthesis

- “How does the first image help you figure out how many dots there are in the second image?” (There is only 1 more dot. 5 and 1 more is 6.)

Activity 1

Missing Shapes

⌚ 10 min

Standards Alignments

Addressing K.G.A.2

The purpose of this activity is for students to identify shapes that are the same, regardless of orientation, by filling in the missing pattern block in a puzzle. Students rotate the pattern blocks to determine which pattern block will fit, which helps students to develop the idea that a shape is the same in different orientations.

Access for English Learners

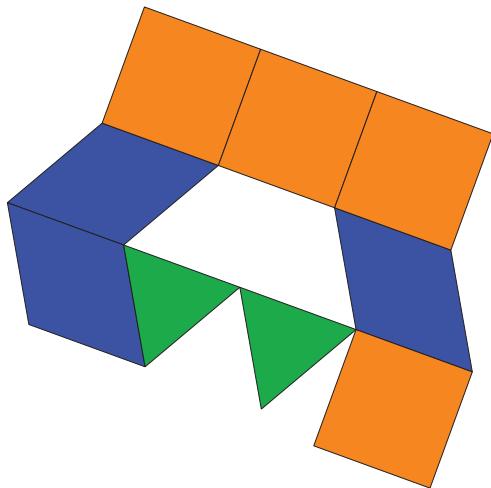
MLR8 Discussion Supports. Synthesis: Some students may benefit from the opportunity to rehearse what they will say with a partner before they share with the whole class.

Advances: Speaking

Materials to Gather

Pattern blocks

Student-facing Task Statement



Launch

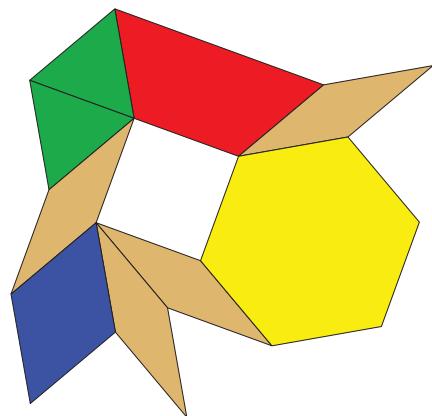
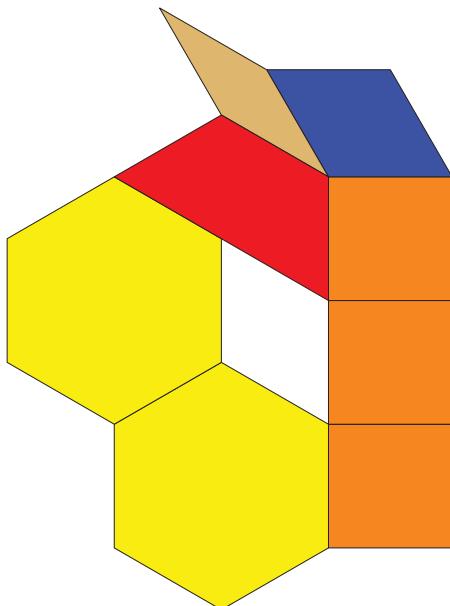
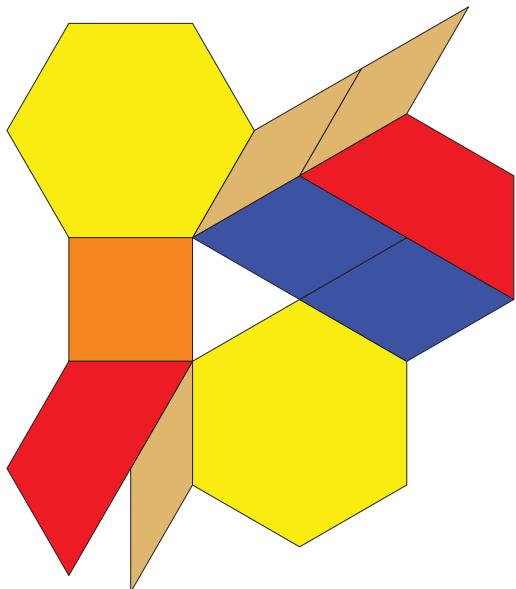
- Groups of 2
- Give students pattern blocks.
- Display the student book.
- “What do you notice? What do you wonder?” (There are lots of different pattern blocks. I wonder why they are all missing a piece.)
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- “Figure out which pattern block is missing from each puzzle. Tell your partner how you know.”

Activity

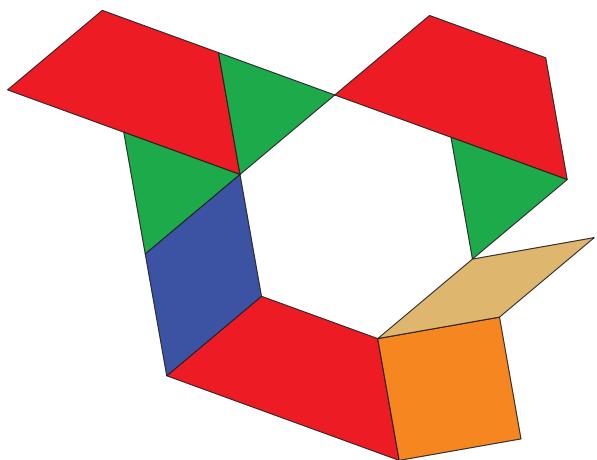
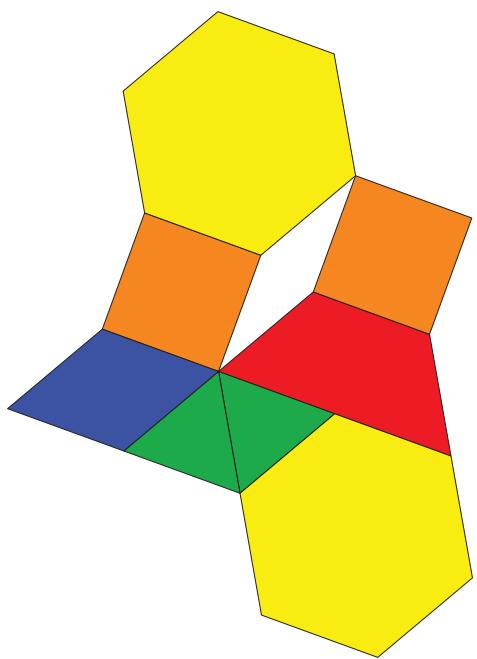
- 5 minutes: partner work time
- Monitor for students who rotate the pattern blocks to determine which fit.

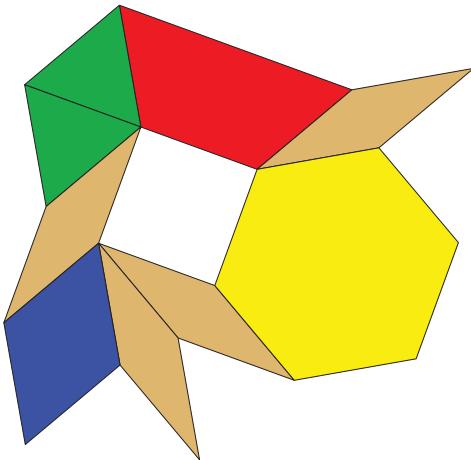
Synthesis

- Invite previously identified students to share.
- Display the last puzzle:



- “Which pattern block is missing from this puzzle? How do you know?”
- “Even though the shape is tilted, we can turn the orange square to see that it fits.”





Student Responses

Students determine which pattern block fits in the puzzle.

Activity 2

⌚ 15 min

Find the Shape

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.G.A.2

The purpose of this activity is for students to identify examples of the same shape in different orientations. As in the previous activity, identifying the same shape in different orientations helps students to notice important properties of the shape, such as having 4 sides and having one side that is longer than the other 3 (MP7).

⌚ Access for Students with Disabilities

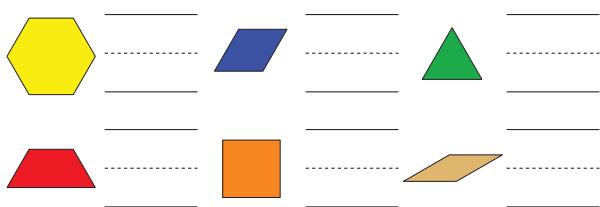
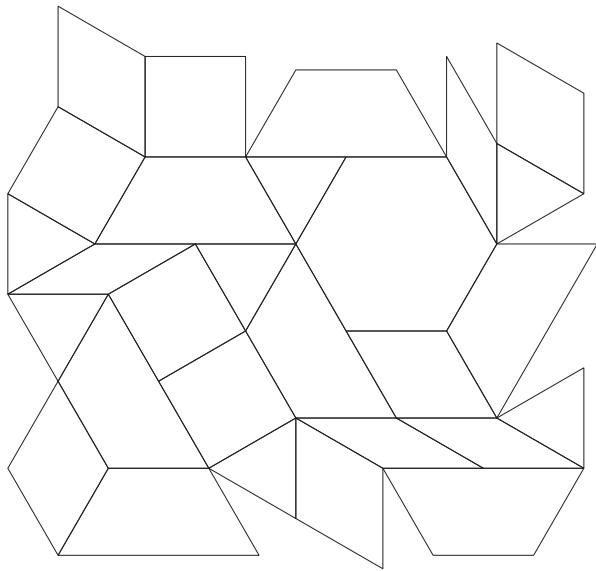
Representation: Access for Perception. Students with color blindness may benefit from access to colored pencils, or crayons with labels that indicate color and the appropriate pattern block shape.

Supports accessibility for: Visual-Spatial Processing

Materials to Gather

Colored pencils or crayons, Pattern blocks

Student-facing Task Statement



Student Responses

Students color 1 yellow hexagon, 5 blue rhombuses, 7 green triangles, 7 red trapezoids, 4 orange squares, and 4 tan rhombuses.

Launch

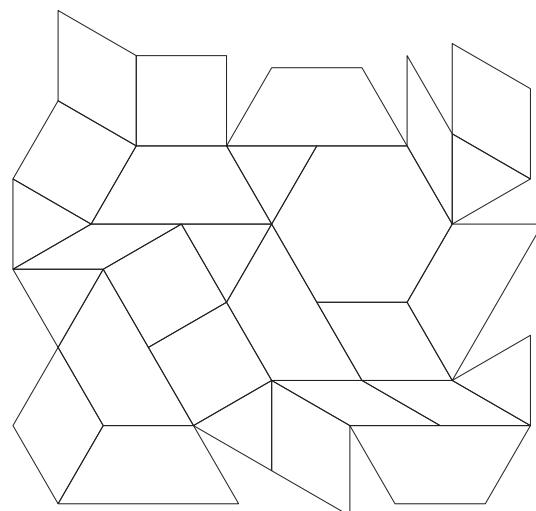
- Groups of 2
- Give each group of students pattern blocks and colored pencils or crayons.
- "Find all of the shapes in this puzzle that are the same as the red trapezoid pattern block. Color them red."

Activity

- 3 minutes: independent work time
- "Did you and your partner color in all of the same shapes?"
- 1 minute: partner discussion
- "Figure out how many red trapezoids there are. Write a number to show how many there are."
- 1 minute: independent work time
- Repeat the steps with the green triangle, blue rhombus, orange square, yellow hexagon, and tan rhombus pattern blocks.

Synthesis

- Display the student book and point to the trapezoid in the bottom right corner of the picture.



- “What color did you color this shape? Why?”
(Sample responses: Red. The red pattern block fit in the shape.)
- “Did you color fewer green triangles or orange squares? How do you know?”

Advancing Student Thinking

If students color shapes other than trapezoids red, consider asking:

- “How did you choose which shapes to color red?”
- “How can you use red trapezoid pattern blocks to find shapes that are the same?”

Activity 3

⌚ 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice building shapes and putting together shapes to form larger shapes.

Students choose from any stage of previously introduced centers.

- Geoblocks

- Build Shapes
- Pattern Blocks
- Less, Same, More

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Geoblocks, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Pattern Blocks, Stages 1-4
 - Less, Same, More, Stages 1-4

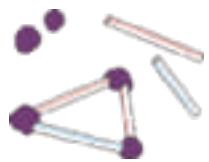
Student-facing Task Statement

Choose a center.

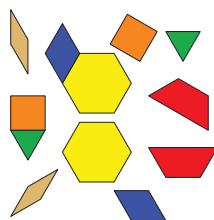
Geoblocks



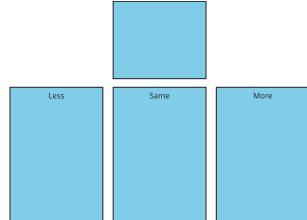
Build Shapes



Pattern Blocks



Less, Same, More



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

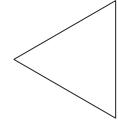
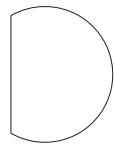
- “When you were working in centers, did you try something that didn’t work? What did you do? Did you try something else?”

Lesson Synthesis

⌚ 5 min

"Today we looked for shapes that matched."

Display a green triangle pattern block and draw these 2 shapes:



"Which shape do you think is the same as the pattern block? Why do you think that?" (The shape on the left isn't the same because it has a curved side. The shape on the right is the same because it has three sides and looks like the green pattern block, but it is on its side.)

Lesson 12: More than One Way to Make a Shape

Standards Alignments

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

Teacher-facing Learning Goals

- Put shapes together in multiple ways to form larger shapes.

Student-facing Learning Goals

- Let's figure out how many different ways we can make a shape.

Lesson Purpose

The purpose of this lesson is for students to put together shapes in multiple ways to form larger shapes.

In previous lessons, students filled in puzzles using pattern blocks. In this lesson, students notice that there are multiple ways to put together pattern blocks to make a shape as they fill in more complex puzzles. They begin by filling up a pattern block puzzle that doesn't show the individual shapes, which requires changing the orientation of shapes. Then they create the same shapes using different pattern blocks. Students should have access to pattern blocks throughout the lesson, including during the lesson synthesis.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

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

Materials to Gather

- Materials from previous centers: Activity 3
- Pattern blocks: Activity 1, Activity 2

Materials to Copy

- Pattern Blocks Stage 5 Mat (groups of 2): Activity 1
- Pattern Blocks Stage 5 Recording Sheet (groups of 2): Activity 1

Lesson Timeline

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

Teacher Reflection Question

What do you love most about math? How are you sharing that joy with your students and encouraging them to think about what they love about math?

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

Unit 3, Section B Checkpoint

Standards Alignments

Addressing K.CC, K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Identify the pattern blocks needed to fill a puzzle.
- Compare the number of pattern blocks used to make a shape.
- Count the number of pattern blocks used to make a shape.

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

Warm-up
 10 min

Which One Doesn't Belong: Pattern Block Trapezoids

Standards Alignments

Addressing K.G.B.6

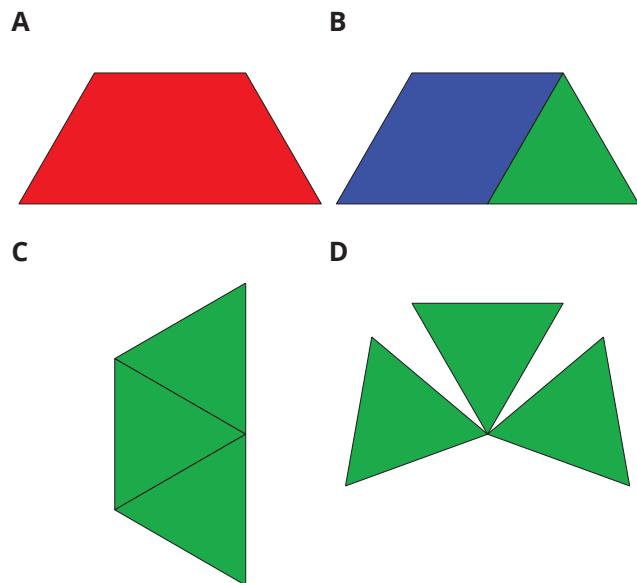
This warm-up prompts students to compare four shapes made of pattern blocks and think about different ways that pattern blocks can be put together to form larger shapes. It gives students a reason to use language precisely (MP6) as they describe the attributes of shapes.

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?



Student Responses

Sample responses:

A doesn't belong because:

- It doesn't have more than one shape. It's just one piece.

B doesn't belong because:

- It's the only one that isn't only one color.
- It's the only one with blue.

C doesn't belong because:

- It is not flat on top.
- It's the only one that's sideways.

Launch

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

Activity

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

Synthesis

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

D doesn't belong because:

- It's not the same shape. The shapes don't line up at the sides. The shapes only touch at the corners.

Activity 1

⌚ 10 min

Introduce Pattern Blocks, Puzzle Challenge

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.G.B.6

The purpose of this activity is to introduce students to stage 5 of the Pattern Blocks center. Students use pattern blocks to fill in puzzles that don't show each individual pattern block. A puzzle is printed in the student book for this activity. A Introduction master with more puzzles is available for students to use during center activities in future lessons.

Students may experiment with different shapes or begin with a part of the puzzle where they can see what shape looks like it will fit. In either case, as they fill in the puzzle, each choice they make will influence which shapes they can use and whether or not they can fill in the entire puzzle so students will need to persevere and likely go back and make changes (MP1).

ⓘ Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Some students may benefit from starting with a smaller shape in the puzzle. Differentiate the degree of difficulty or complexity by allowing students to start with a shape that is familiar to them. For example, the flag or base of the boat. *Supports accessibility for: Socio-Emotional Functioning, Organization*

Materials to Gather

Pattern blocks

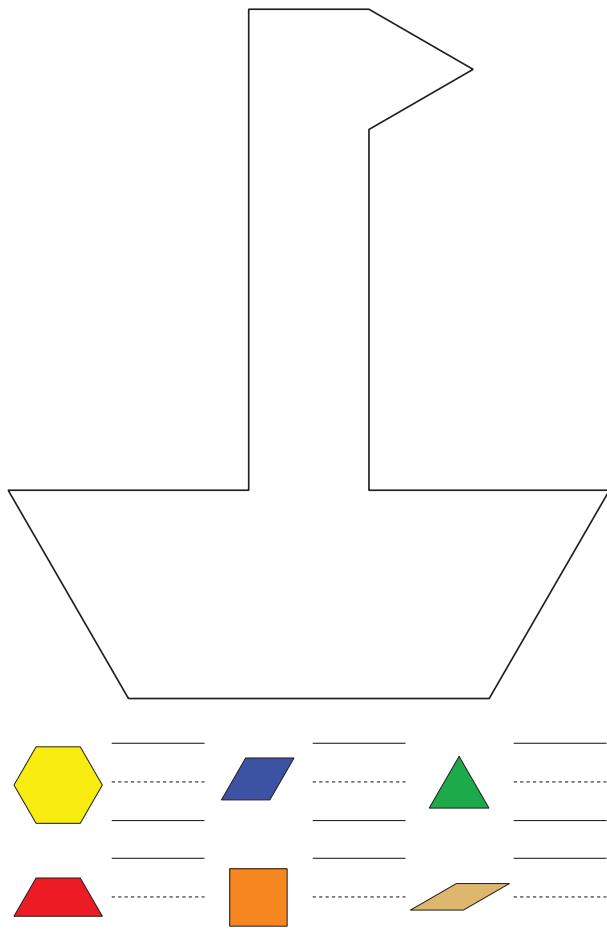
Materials to Copy

Pattern Blocks Stage 5 Mat (groups of 2),
Pattern Blocks Stage 5 Recording Sheet
(groups of 2)

Student-facing Task Statement

Launch

- Groups of 2
- Give each student pattern blocks.



Student Responses

Students fill in the puzzle with pattern blocks.

- “We are going to learn a new way to do the Pattern Blocks center.”
- Display the book.
- “What do you notice? What do you wonder?” (They are puzzles. Some of the lines in the middle aren’t there.)
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- “Use the pattern blocks to fill in the puzzle. Write a number to show how many of each pattern block you used.”

Activity

- 4 minutes: independent work time
- Monitor for students who fill in the puzzle with different pattern blocks.

Synthesis

- “Did you fill in the puzzle the same way as your partner?”
- 1 minute: partner discussion
- Display 2 puzzles filled in by students.
- “What is the same? What is different?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- “There are different ways that we can put together pattern blocks to make shapes.”

Activity 2

⌚ 10 min

Many Ways to Make a Hexagon

Standards Alignments

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

The purpose of this activity is for students to put together pattern blocks to form larger shapes in more than one way. Students create hexagons using different combinations of pattern blocks. In the synthesis, students discuss whether the same pattern blocks in different orientations should be considered as different ways to make a hexagon (MP3). There is no one correct answer to the question. The goal is for students to notice and discuss that the same pattern blocks are arranged in different orientations.

Access for English Learners

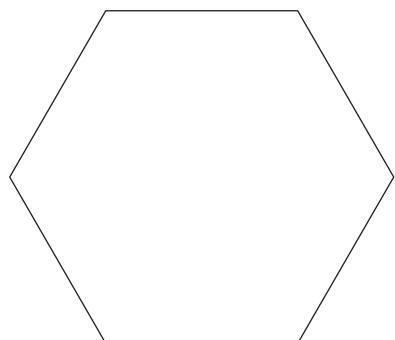
MLR8 Discussion Supports. To support the transfer of new vocabulary to long-term memory, invite students to chorally repeat these words in unison 1–2 times: more, fewer, the same as.

Advances: Listening, Speaking

Materials to Gather

Pattern blocks

Student-facing Task Statement



Launch

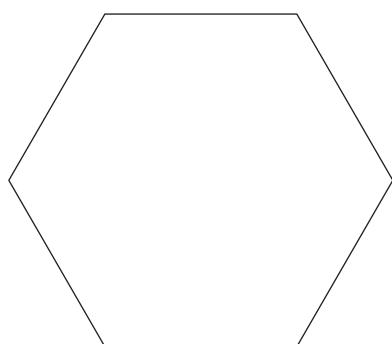
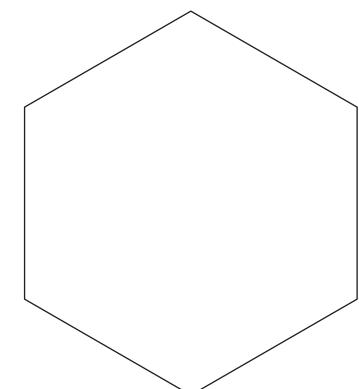
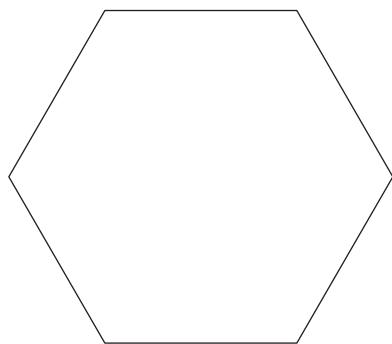
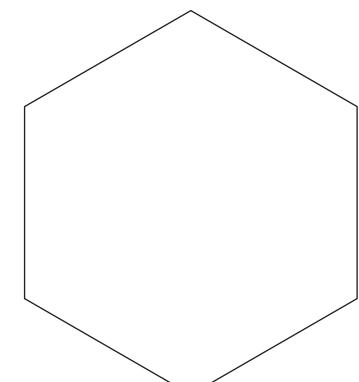
- Groups of 2
- Give each group of students pattern blocks.
- “Work with your partner to find many different ways to make hexagons with pattern blocks. Tell your partner about the shapes that you use each time using ‘more’, ‘fewer’, or ‘the same number’.”

Activity

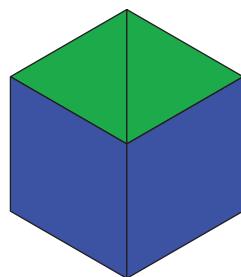
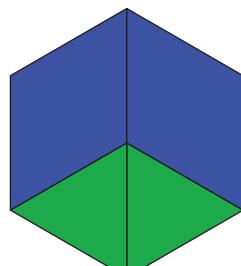
- 6 minutes: partner work time

Synthesis

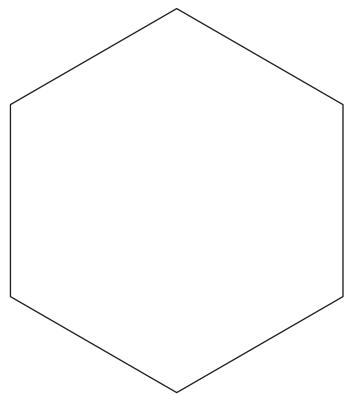
- Invite students to share different ways they made a hexagon.
- As students share, say “Tell your partner about the shapes that they used using ‘more’, ‘fewer’, or ‘the same number’.”



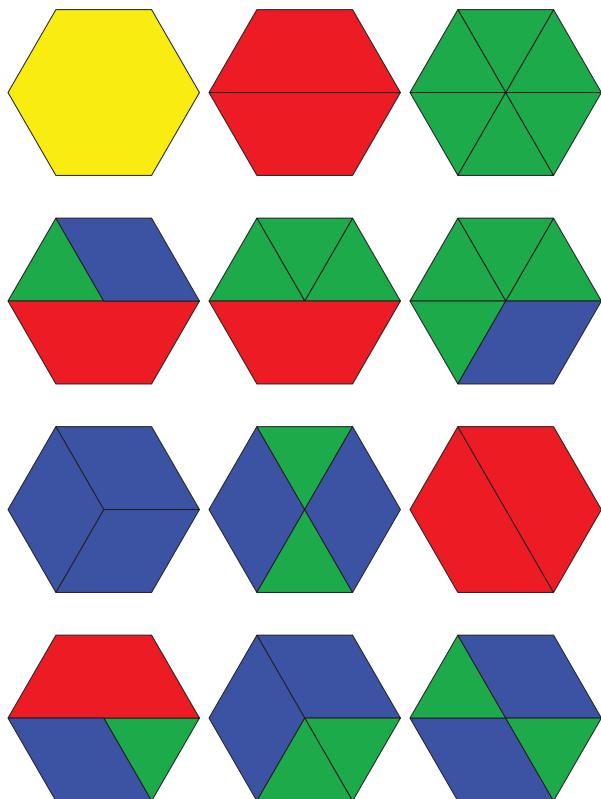
- Display all of the ways to make a hexagon that students have shared.
- “Are there any other ways to make a hexagon with pattern blocks?”
- Display 2 hexagons created with 2 blue rhombus pattern blocks and 2 green triangle pattern blocks in different orientations:



- “Han and Clare shared these ways to make a hexagon with pattern blocks. Are these the same way to make a hexagon or a different way? Why do you think that?”
(They are the same because they used the same pattern blocks but put them in different spots. It looks like they flipped it. They are different because the pattern blocks are in different places, so they look different.)



Student Responses



Advancing Student Thinking

If students find one or two ways to fill in the hexagon pattern block puzzle:

- “Tell me more about which pattern blocks you used to make the hexagon.”

- “Can you use these green triangle pattern blocks to make this red trapezoid pattern block? How can that help you find another way to fill in the hexagon?”

Activity 3

⌚ 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice building shapes and putting together shapes to form larger shapes.

Students choose from any stage of previously introduced centers.

- Geoblocks
- Build Shapes
- Pattern Blocks
- Less, Same, More

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Geoblocks, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Pattern Blocks, Stages 1-5
 - Less, Same, More, Stages 1-4

Student-facing Task Statement

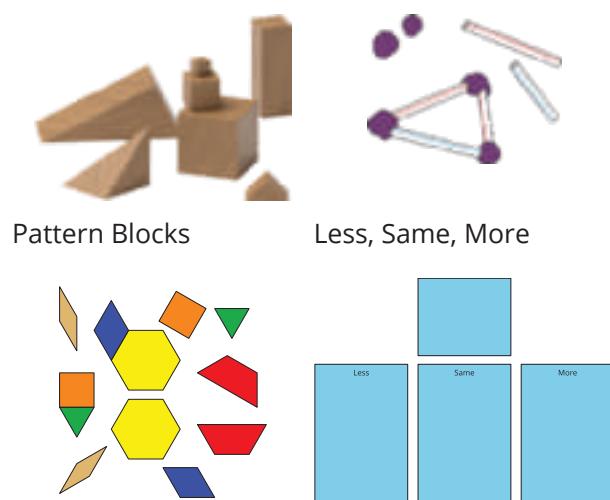
Choose a center.

Geoblocks

Build Shapes

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

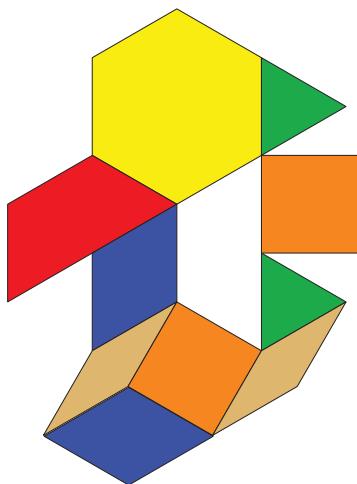
Synthesis

- “Which pattern block puzzle was your favorite?”

Lesson Synthesis

⌚ 10 min

“Today we discovered that we can put together shapes in different ways to make the same shape.”
Arrange pattern blocks as shown or display image:



“What pattern blocks could you use to finish this puzzle?” (A red trapezoid pattern block, 3 green triangle pattern blocks, 1 blue rhombus pattern block and 1 green triangle pattern block.)

If needed, allow students to experiment with pattern blocks.

Share responses. Demonstrate or invite students to demonstrate making the missing piece with pattern blocks.

Lesson 13: Describe and Match Shapes

Standards Alignments

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

Teacher-facing Learning Goals

- Describe the location of shapes using positional words.
- Put shapes together to form larger shapes.

Student-facing Learning Goals

- Let's build shapes that match.

Lesson Purpose

The purpose of this lesson is for students to use positional words to describe the location of pattern blocks in a larger shape.

While some students may already be familiar with the positional words, students are formally introduced to the words **above**, **below**, **next to**, and **beside**. Students hear and use these words to describe the location of objects in the classroom. Students describe shapes made out of pattern blocks and use positional words to help their partner create the same shape. Listen to how students create an argument and use or revise their language to make their argument clear to others (MP3, MP6).

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

- Colored pencils or crayons: Activity 1
- Materials from previous centers: Activity 3
- Pattern blocks: 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

The standards ask students to describe the relative positions of objects using terms such as *above*, *below*, *next to*, and *beside*. When can you ask students questions involving positional words? How can you incorporate it into literacy time or transitions?

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

Unit 3, Section B Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Describe shapes made from pattern blocks.
- Use positional words to describe the location of shapes.

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

Warm-up
 10 min

How Many Do You See: Add On and Rearrange

Standards Alignments

Addressing K.CC

The purpose of this warm-up is for students to subitize or use grouping strategies to describe the number of dots they see and how they see them. Students have an opportunity to notice and make use of structure (MP7) because each dot image builds from the previous one, and students can think about adding on one or rearranging the dots rather than counting.

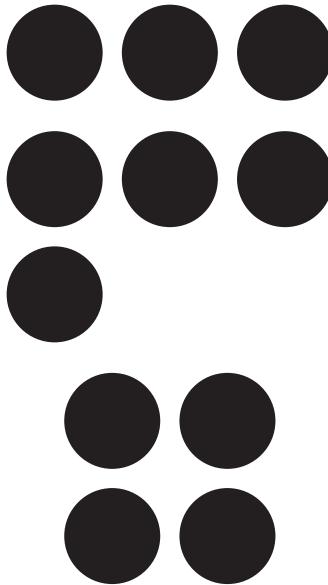
Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?

How do you see them?



Student Responses

- 3. I looked and I saw three dots. I see 2 dots and 1 more. I counted. 1, 2, 3.
- 4. I see the same 3 dots and 1 more. I see four dots. 2 on one side, and 1, 2 more.
- 4. There are the same number of dots as the last one, but one dot moved from the top to the bottom.

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

- "What helped you see how many dots there were each time?" (In the second image I saw 3 and 1 more and I know that is 4. In the last one I saw 2 and 2.)

Activity 1

⌚ 10 min

Where are the Pattern Blocks?

Standards Alignments

Addressing K.G.A.1

The purpose of this activity is for students to identify the location of shapes based on positional words. The words *above*, *below*, *next to*, and *beside* are the focus of this activity, but other positional words can be used.

⌚ Access for Students with Disabilities

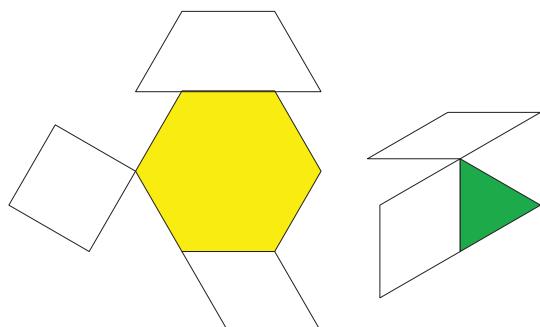
Representation: Access for Perception. Students with color blindness may benefit from additional guidance to identify which shapes to pay attention to, and which colors to use. As the instructions are read aloud, point to a visual display of the task or hold up the appropriate pattern blocks. Provide access to colored pencils or crayons with labels that indicate color.

Supports accessibility for: Visual-Spatial Reasoning

Materials to Gather

Colored pencils or crayons

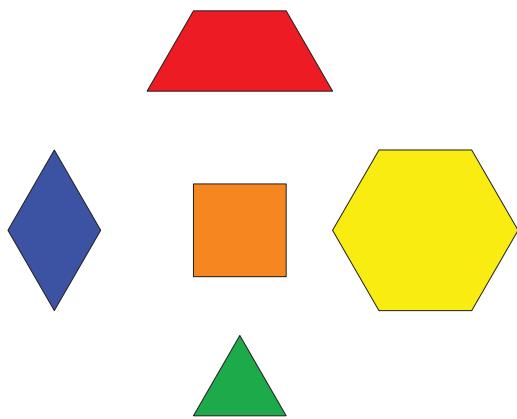
Student-facing Task Statement



Synthesis:

Launch

- Groups of 2
- Give students colored pencils or crayons.
- Play one round of I spy with students, using the words *above*, *below*, *next to*, and *beside*. For example:
 - "I spy something that is above the clock."
 - "I spy something that is beside the window."
 - "I spy something that is below the poster."
- After students identify each object, invite students to chorally repeat these words or phrases in unison 1–2 times:



Student Responses

Students color the shapes based on the positional words.

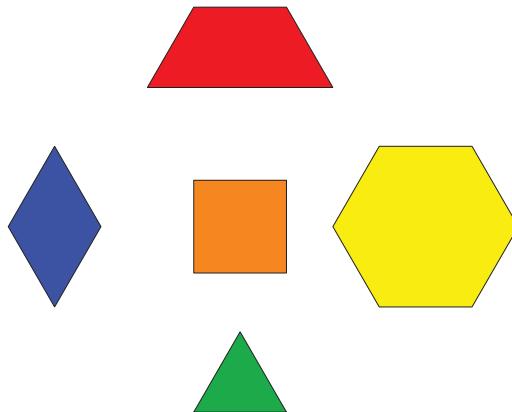
- “The ___ is beside the ___.”
- “The ___ is below the ___.”

Activity

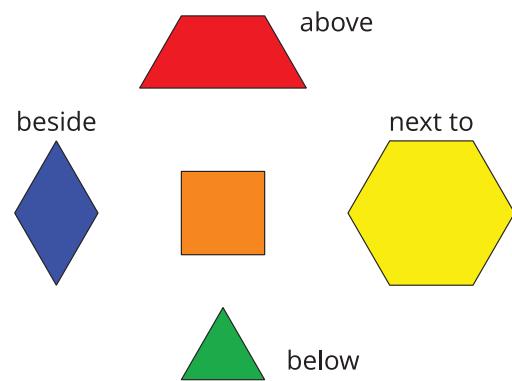
- “Color the shape that is **above** the yellow hexagon blue.”
- “Color the shape that is **next to** the triangle red.”
- “Color the shape that is **below** the yellow hexagon orange.”
- “Color the shape that is **beside** the yellow hexagon purple.”
- “Draw a new shape below the green triangle.”

Synthesis

- Display the image:



- “Where is the red trapezoid pattern block? (The red trapezoid pattern block is above the orange square.)
- 30 seconds: quiet think time
- 30 seconds: partner discussions
- Share responses.
- Repeat the steps with the other pattern blocks, recording the words as the students share. Consider creating a poster to display in the classroom.



Activity 2

⌚ 15 min

Introduce Match Mine, Pattern Blocks

👤 ↔👤 PLC Activity

Standards Alignments

Addressing K.G.A.1

The purpose of this activity is for students to learn stage 1 of the Match Mine center. Students use positional words to describe the location of pattern blocks within a larger shape. Students may initially describe the shapes generally or use positional words other than those introduced in the previous activity. Students need repeated experiences hearing positional words in order to develop precision with their language (MP6).

🌐 Access for English Learners

MLR8 Discussion Supports. For each description that is shared, invite students to turn to a partner and restate what they heard using precise mathematical language, specifically positional words.
Advances: Listening, Speaking

Materials to Gather

Pattern blocks

Launch

- Groups of 2

- Give students access to pattern blocks.
- “We are going to learn a new center called Match Mine. Let’s practice describing a shape together.”
- Build a shape with 5 pattern blocks.
- “How could we describe where the square is in this shape?” (The square is below the hexagon.)
- “How could we describe where the triangle is?” (The triangle is next to the square.)
- “One partner will build a shape using 5 pattern blocks. Then they will tell their partner about the shape and their partner tries to make the same shape.”
- “Remember to use positional words that will help your partner put each pattern block in the right place.”
- “Keep your shapes hidden while you build them. When your partner is done making the shape, check to see if they match.”
- “Take turns building and describing shapes with your partner.”

Activity

- 8 minutes: partner work time
- Monitor for students who describe the location of each pattern block using positional words.

Synthesis

- Display a shape made up of 5 pattern blocks, including a triangle.
- “How would you tell your partner where to put the triangle?”

Activity 3

⌚ 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice building shapes and putting together shapes to form larger shapes.

Students choose from any stage of previously introduced centers.

- Match Mine
- Geoblocks
- Build Shapes
- Pattern Blocks
- Less, Same, More

Materials to Gather

Materials from previous centers

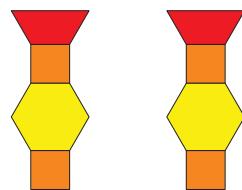
Required Preparation

- Gather materials from:
 - Match Mine, Stage 1
 - Geoblocks, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Pattern Blocks, Stages 1-5
 - Less, Same, More, Stages 1-4

Student-facing Task Statement

Choose a center.

Match Mine



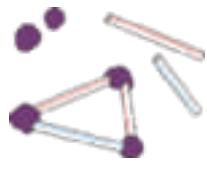
Geoblocks



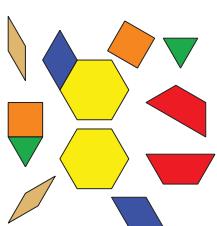
Launch

- “Today we are going to choose from centers we have already learned. You can also continue playing Match Mine.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

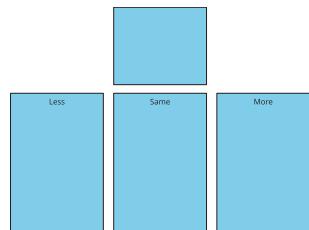
Build Shapes



Pattern Blocks



Less, Same, More

**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

- “If your partner gets stuck, how can you help them without telling them the answer?”

Lesson Synthesis
⌚ 5 min

“Today we described how we put pattern blocks together to make larger shapes. What are some of the words we used to help us describe where the pattern blocks were in the larger shape?”

Lesson 14: Shapes in Art

Standards Alignments

Addressing K.G, K.G.A.1, K.G.A.2, K.G.B.6

Teacher-facing Learning Goals

- Describe shapes and the location of shapes.
- Put shapes together to form larger shapes.

Student-facing Learning Goals

- Let's find shapes in art and use shapes to make our own art.

Lesson Purpose

The purpose of this lesson is for students to put together shapes in a way that makes sense to them.

This lesson gives students an opportunity to look at the shapes in artwork from different cultures. Students may recognize some shapes that they have worked with throughout this unit and may also describe and use shapes that they are unfamiliar with. After looking at different examples, students make their own artwork with shapes. The title of each piece of art is provided because students may be interested in learning more about the artwork and the cultures they represent. The teacher may choose other artwork to share with the class that includes shapes that students can recognize.

The activities in this lesson can be done over the course of 2 lessons to allow students more time to explore and discuss the provided artwork and create and share their own artwork.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR7 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Colored pencils, crayons, or markers:
Activity 2

Materials to Copy

- Shapes in Art (groups of 7): Activity 1

- Construction paper: Activity 2
- Glue: Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

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

Teacher Reflection Question

As you finish up this unit, reflect on the norms and activities that have supported each student 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 4?

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

⌚ 0 min

Unit 3, Section B Checkpoint

Standards Alignments

Addressing K.G

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize shapes that are the same regardless of orientation.
- Use positional words to describe the location of shapes.

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

Warm-up

⌚ 10 min

Notice and Wonder: Shapes in Art

Standards Alignments

Addressing K.G.A.1

The purpose of this warm-up is to elicit the idea that shapes make up objects seen and represented in the environment. While students may notice and wonder many things about this painting, recognizing and describing shapes and their location in the painting are the important discussion points. When students articulate what they notice and wonder, they have an opportunity to attend to precision in the language they use to describe what they see (MP6).

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

What do you wonder?



Launch

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

Activity

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

Synthesis

- “What shapes do you see in this painting? Tell your partner where you see the shapes.”

Student Responses

Students may notice:

- There are many different shapes and colors.
- Some of the shapes look like pattern blocks.
- I see some letters.
- There is a table.

Students may wonder:

- Who made this picture?
- What are the circles supposed to be? Is it a bowl of cereal?
- What is the picture supposed to look like?

Activity 1

⌚ 15 min

Find Shapes in Art

Standards Alignments

Addressing K.G.A.1, K.G.A.2

The purpose of this activity is for students to recognize shapes in different pieces of artwork from around the world. Before beginning the activity, consider using a map to show students the country from which each piece originates. Students recognize shapes in each piece and discuss in the synthesis how they are alike and different. Students may notice that some artists put shapes together to create designs, while others use shapes to compose things we may recognize such as people, animals, and buildings. Consider creating a cue or signal to indicate when students should move from one drawing to the next.

🌐 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 images as students compare how they are alike and different.

Advances: Representing, Conversing

Materials to Copy

Shapes in Art (groups of 7)

Student Responses

Students discuss shapes they recognize in each image.

Launch

- Groups of 2
- Display the artwork around the room.
- “We have been putting pattern blocks together to form larger shapes in lots of

different ways. Now we are going to look at 5 different pieces of art. Each piece comes from a different part of the world."

- "As you walk around and look at the art at each station, talk to your partner about how the artists used shapes in their artwork."

Activity

- 10 minutes: whole-class work time

Synthesis

- Display each piece of artwork.
- "How are these all alike? How are they different?" (They all put small shapes together to make larger shapes. Some are just a design and some have people.)
- "Artists from all different parts of the world use shapes to create their art."

Activity 2

⌚ 15 min

Make Art with Shapes

Standards Alignments

Addressing K.G.B.6

The purpose of this activity is for students to put shapes together to form larger shapes. Students create their own piece of artwork by drawing or cutting out and putting together shapes. Students may use inspiration from the art they looked at in the first activity. Students may create designs or pictures of recognizable objects. Students may cut out their own shapes from construction paper, magazines, or other scraps. If available, some shapes that have already been cut out can be provided for students.

When students recognize mathematical features of objects in the real world, they model with mathematics (MP4).

⑩ Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to verbalize their strategy for their artwork before they begin. Students can speak quietly to themselves or share with a partner.
Supports accessibility for: Organization, Conceptual Processing, Language

Materials to Gather

Colored pencils, crayons, or markers,
 Construction paper, Glue

Required Preparation

- Each student needs cut out paper shapes.

Student Responses

Students use shapes to compose larger shapes.

Launch

- Give each student a sheet of construction or white paper.
- Give students access to cut out shapes, glue, crayons, colored pencils, and markers.
- “We noticed that artists use shapes in different ways to create art. Some artists make patterns and designs. Some put shapes together to form people or animals. Now you are going to make your own piece of artwork using shapes. You can use any of these materials. Think about how you can draw or put shapes together to make larger shapes.”

Activity

- 8 minutes: independent work time

Synthesis

- Display student work on tables or desks.
- “Now we will do a gallery walk to see the art we made using shapes.”
- 5 minutes: gallery walk

Activity 3

⌚ 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice building shapes and putting together shapes to form larger shapes.

Students choose from any stage of previously introduced centers.

- Match Mine
- Geoblocks
- Build Shapes
- Pattern Blocks
- Less, Same, More

Materials to Gather

Materials from previous centers

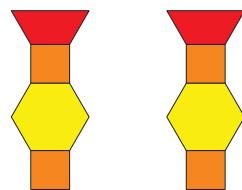
Required Preparation

- Gather materials from:
 - Match Mine, Stage 1
 - Geoblocks, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Pattern Blocks, Stages 1–5
 - Less, Same, More, Stages 1–4

Student-facing Task Statement

Choose a center.

Match Mine



Geoblocks



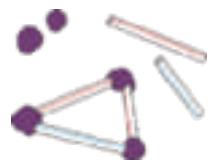
Launch

- “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.”

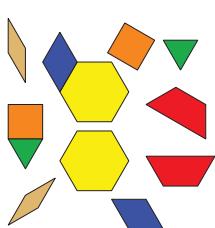
Activity

- Invite students to work at the center of

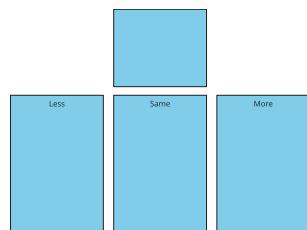
Build Shapes



Pattern Blocks



Less, Same, More



their choice.

- 10 minutes: center work time

Synthesis

- "What if I want to use a yellow hexagon pattern block in my puzzle and my partner has used all the yellow hexagon pattern blocks? What could I do?"

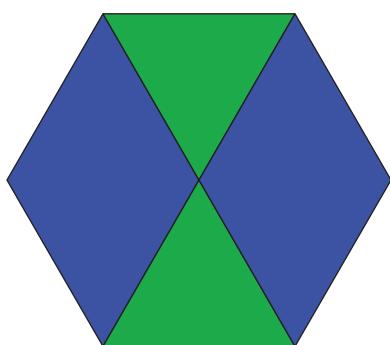
Lesson Synthesis

⌚ 5 min

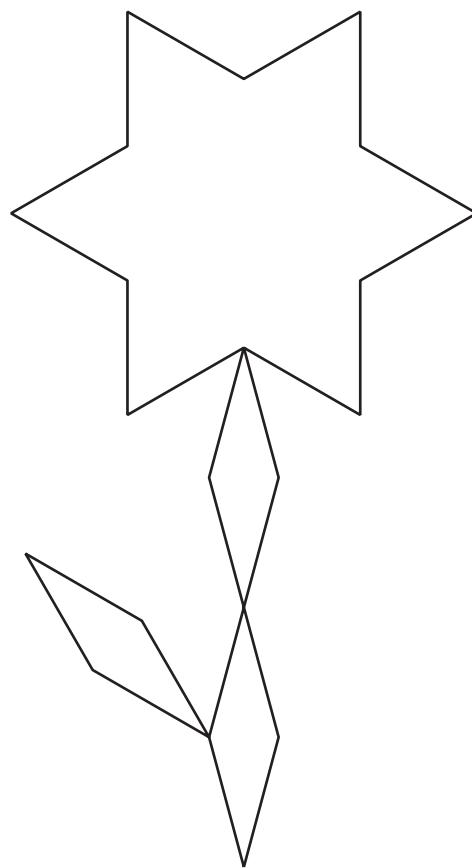
"Today we learned that one place we can see shapes is in art. Tell your partner where else you see shapes in the world."

📝 Student Section Summary

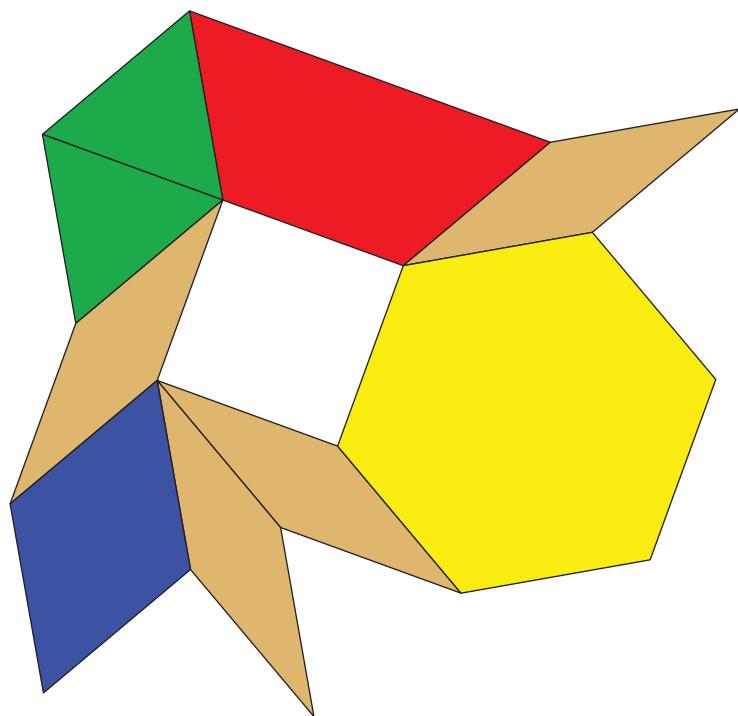
In this section we put shapes together to make larger shapes. Sometimes we used shapes to make other shapes.



Sometimes we used shapes to make things in the world.



We learned that the same shape can look different when it is moved around.



The shape that is missing is the square but it looks different because it is turned.

We also used words like above, below, beside, and next to to describe where shapes are.

The green triangle is next to the red trapezoid.

The green triangle is above the blue rhombus.

Lesson 15: Animal Shape Stamp Art (Optional)

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6, K.G.A.1, K.G.A.2, K.G.B.6
Building Towards K.G.A.1, K.G.A.2, K.G.B.6

Teacher-facing Learning Goals

- Put shapes together to form larger shapes.

Student-facing Learning Goals

- Let's make animals out of shapes.

Lesson Purpose

The purpose of this lesson is for students to put shapes together to form larger shapes.

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. This lesson builds on previous lessons in which students found shapes in art and described the shapes and their positions. In this lesson, students create animals out of shapes using stamps. Students practice describing their art in terms of shapes, quantities of shapes, and positions of shapes. When students recognize the mathematical features of things in the real world and ask questions that arise from a presented situation, they model with mathematics (MP4).

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR7 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Card stock: Activity 1
- Paint: Activity 1
- Paper plates: Activity 1
- Paper: Activity 1
- Tape: Activity 1

Required Preparation

Lesson Timeline

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

Teacher Reflection Question

What language did you hear students use to describe shapes in this lesson? How has the language that students use progressed since the beginning of the unit?

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

Warm-up

⌚ 10 min

Notice and Wonder: Animals at the Watering Hole

Standards Alignments

Building Towards K.G.A.1, K.G.A.2, K.G.B.6

The purpose of this warm-up is to elicit descriptions of animals which will be useful when students use familiar shapes to create animals in a later activity. While students may notice and wonder many things about these images, the shapes students see in the animals are the important discussion points.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

What do you wonder?

Launch

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



Student Responses

Students may notice:

- There is 1 elephant and it's much bigger than the other animals.
- I think there are 3 kinds of animals.

Students may wonder:

- Are there other animals behind the big elephant?
- How many animals are there altogether?

Activity

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

Synthesis

- “There are many different animals in this picture. There’s an elephant, some ostriches, some antelopes, and there is a giraffe in the back. What are some other animals that you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses
- “What shapes could we put together to make the giraffe?” (We could use a long rectangle for the neck and a little triangle for its head, a circle for its body and skinny rectangles for its legs and tail.)

Activity 1

⌚ 20 min

Animal Print Making

Standards Alignments

Addressing K.G.B.6

In this activity, students use shapes to compose animals. Students can create the animal in their student book or on a piece of cardstock or construction paper. They practice describing their animals using shape names, positions of shapes, and the number of shapes (MP6). When students recognize mathematical features of objects in the real world, they model with mathematics. (MP4)

Shape Stamp sets are prepared by the teacher prior to the lesson.



Consider covering the work area or giving each group of students a paper plate to place their stamps on once they have paint on them.

Access for English Learners

MLR7 Compare and Connect. Synthesis: Lead a discussion comparing, contrasting, and connecting the different representations. Ask, “How are the animals you made the same? How are they different?”

Advances: Representing, Conversing

Access for Students with Disabilities

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

Supports accessibility for: Memory, Organization

Materials to Gather

Card stock, Paint, Paper, Paper plates, Tape

Required Preparation

- Make shape stamps from strips of card stock for each group of 4.
- Pour paint onto plates for each group of 4.

Student-facing Task Statement

Use the shape stamps to create an animal.

Student Responses

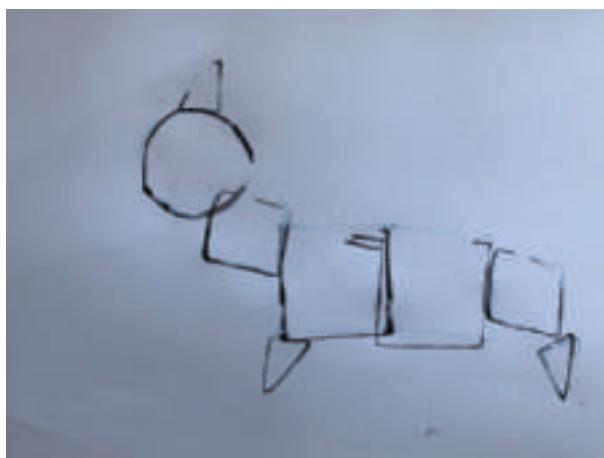
Sample responses:

Launch

- Groups of 4
- Give each group of students a set of shape stamps and a paper plate with black paint.
- “You will use these stamps to make an animal. I am going to make a cat. What shapes should I use?” (Circle for the head, triangles for the ears, rectangles for the



I made a giraffe. It has 2 triangle ears above a circle head. It has 2 rectangles in its neck next to its circle body. There are 4 rectangle legs below the circle body and 1 triangle for the tail.



I made a dachshund. It has 3 triangles in all—1 for the ears and 2 for its legs. It has a 1 circle head and 4 squares next to each other for its body. The triangle legs are below its body.

legs and tail.)

- “If I want to make a circle for the cat’s head, which stamp should I use?”
- Invite students to point to the correct shape.
- Demonstrate dipping the stamp into the paint and pressing it on the paper.
- “Take turns using the shape stamps with your group. You only need a little bit of paint for each stamp.”

Activity

- “Which animal do you want to make? What shapes will you use to make the animal?”
- 30 seconds: quiet think time
- 10 minutes: small-group work time

Synthesis

- “Show a partner the animal you made. Tell your partner the shapes you used to make your animal and the part of the animal each shape represents.”
- 30 seconds: quiet think time
- 2 minutes: partner discussion
- “Tell your partner about the shapes you used using ‘more’ or ‘fewer’. For example, did you use fewer rectangles or circles to make your animal?”
- 30 seconds: quiet think time
- 2 minutes: partner discussion

Activity 2

Mathematical Questions About Our Animals

⌚ 20 min

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6, K.G.A.1, K.G.A.2, K.G.B.6

The purpose of this activity is for students to ask and answer mathematical questions about the animals that they created in the previous activity. Students brainstorm different types of questions they can ask. Students participate in a gallery walk and ask questions about the animals their classmates made.

Student Responses

Students ask mathematical questions about the animals.

Launch

- Groups of 2
- Invite a student to share the animal they created in the previous activity. Display the animal for all to see.
- “What questions could we ask about this animal?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.
- “We are going to ask each other questions about the shapes we used in our animal pictures. What mathematical questions could we ask?”
- Share and record responses.
- If needed, prompt students to develop different types of mathematical questions. For example:
 - “What ‘how many’ questions can we ask about the animal?”
 - “Are there questions that we can ask using ‘fewer?’”
 - “Do you have any questions about which shapes they used?”
 - “What questions can we ask about where we can find certain shapes in the animal?”
- “As you walk around to see the animals

that your classmates made, ask them at least 2 questions."

Activity

- Invite half of the class to stand next to their animal. Invite the other half of the class to walk around and look at each animal.
- 7 minutes: gallery walk
- Switch groups.
- 7 minutes: gallery walk

Synthesis

- Invite 2 students to share and display the animal that they created.
- "What is the same about the animals that they created and the shapes they used? What is different?"

Lesson Synthesis

⌚ 10 min

"Today we used shapes to create animals."

Display the image from the warm-up.



"Which of these animals do you think would be easiest to make with shapes? Why? Which animal would be the hardest to make?"

"Which shapes would you use to make an elephant?"



Family Support Materials

Family Support Materials

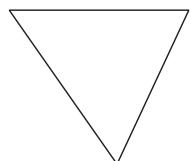
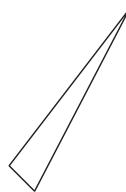
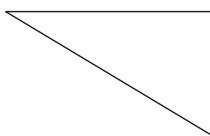
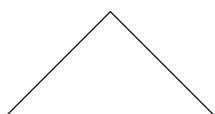
Flat Shapes All Around Us

In this unit, students identify, describe, analyze, compare, and compose two-dimensional shapes.

Section A: Exploring Shapes in Our Environment

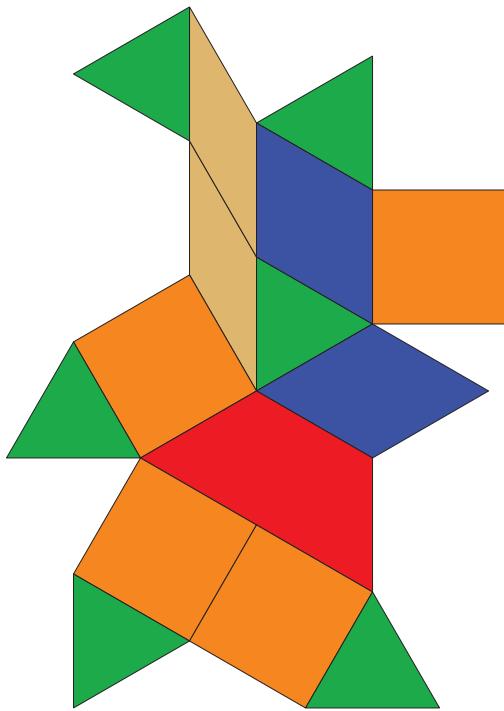
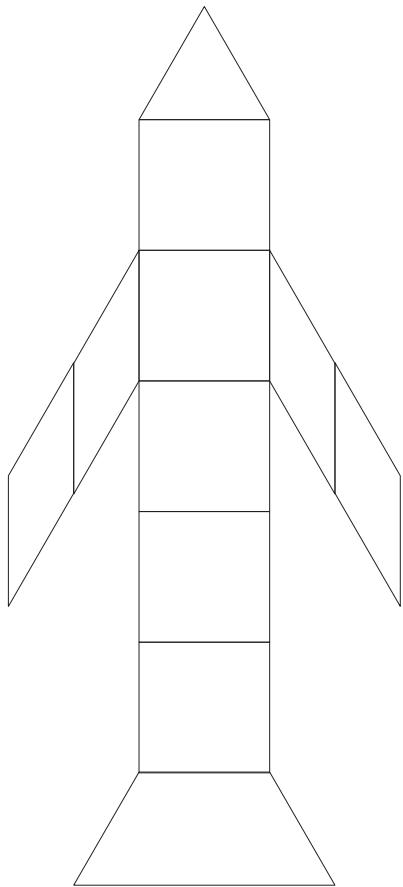
In this section, students look for shapes in the world around them and describe and compare them using their own language. Students begin by identifying objects in books and in their world that look like flat shapes. For example, students may look at a tissue box and say it looks like a rectangle. (The difference between flat and solid shapes will be investigated in a later unit.)

Students do not need to use formal vocabulary to describe or name shapes. However, they are asked to identify circles, squares, rectangles, and triangles. They are introduced to the idea that a square is a special kind of rectangle with all 4 sides the same length. Students see a wide range of examples of specific shapes, to help them develop an understanding of what the shapes are. For example, students see these shapes and talk about what makes them triangles.



Section B: Making Shapes

In this section, students develop spatial reasoning as they make shapes out of pattern blocks.



Students find shapes that match exactly. Students work on shape puzzles that may require them to change the orientation of shapes to complete the puzzles. Students use their own language to describe how the shapes they are using and building are alike and different.

Try it at home!

Near the end of the unit, ask your student to go on a scavenger hunt to find shapes around the home or in places you visit often.

Questions that may be helpful as they work:

- Can you find a square, a rectangle, a triangle, and a circle?
- Find two shapes that are the same. What is the same about these shapes? What is different?



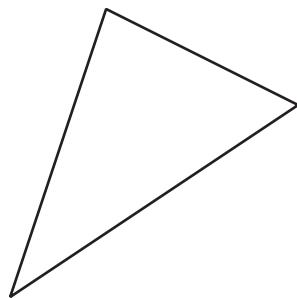
Unit Assessments

End-of-Unit Assessment

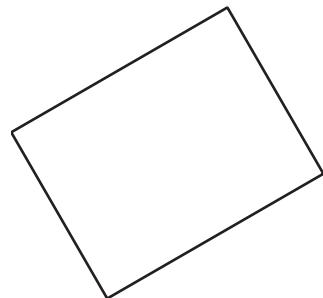
Flat Shapes All Around Us: End-of-Unit Assessment

1. Color the 3 rectangles.

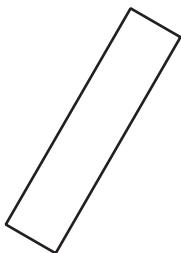
A.



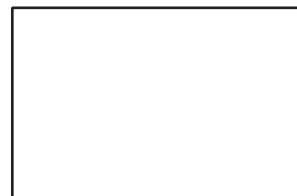
D.



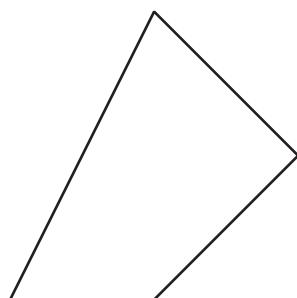
B.



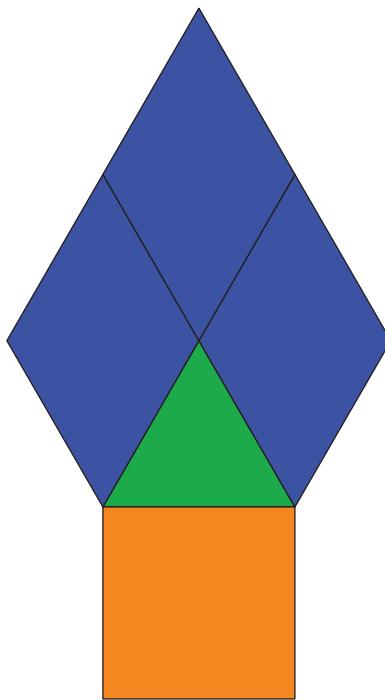
E.



C.



2. After you listen to each statement, circle “yes” if it is true and “no” if it is not true.

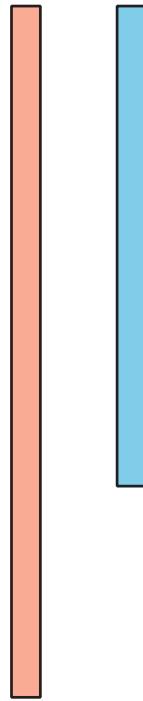


- a. The square is below the triangle. yes no
- b. The triangle is below the square. yes no
- c. There are 6 pattern blocks in the puzzle. yes no
- d. There are 5 pattern blocks in the puzzle. yes no
- e. The triangle is above the square. yes no
- f. The square is above the triangle. yes no

3. a. Circle the rectangle that is longer.



b. Circle the rectangle that is shorter.



4.



- a. Circle objects in the picture that look like rectangles.
- b. Cross out objects in the picture that look like triangles.



Assessment Answer Keys

Check Your Readiness A and B
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.

- Recognize and describe shapes in the environment.
- Use informal language to describe and compare shapes and their attributes.
 - Use informal language to describe shapes.
 - Tell what is the same or different about two or more shapes.
 - Sort shapes into groups.
 - Compare the length of objects.
 - Identify circles, triangles, rectangles, and squares.
 - Name circles, triangles, rectangles, and squares.

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.

- Put shapes together to form larger shapes.
 - Describe shapes made from pattern blocks.
 - Identify the pattern blocks needed to fill a puzzle.
 - Recognize shapes that are the same regardless of orientation.
 - Use positional words to describe the location of shapes.
 - Count the number of pattern blocks used to make a shape.
 - Compare the number of pattern blocks used to make a shape.

Assessment: End-of-Unit Assessment

Problem 1

Standards Alignments

Addressing K.G.A.2

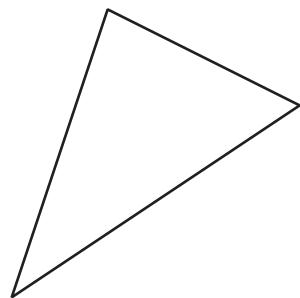
Narrative

Students identify rectangles. Students may not select shape B because it is a long and skinny rectangle or because it is rotated. They may not select the shape D because it is rotated. Students may select shape C if they see that it has 4 sides but do not focus on the corners. If students select shape A then they either need more practice with the vocabulary of triangle and rectangle or more practice identifying these shapes.

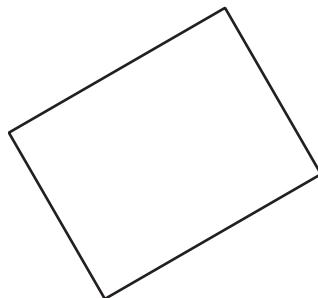
For this problem, the teacher reads the statement and rereads it if the student requires this.

Color the **3** rectangles.

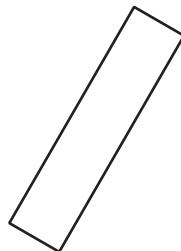
A.



D.



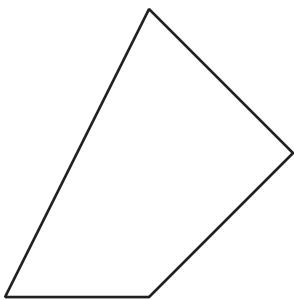
B.



E.



C.



Solution

B, D, E

Problem 2

Standards Alignments

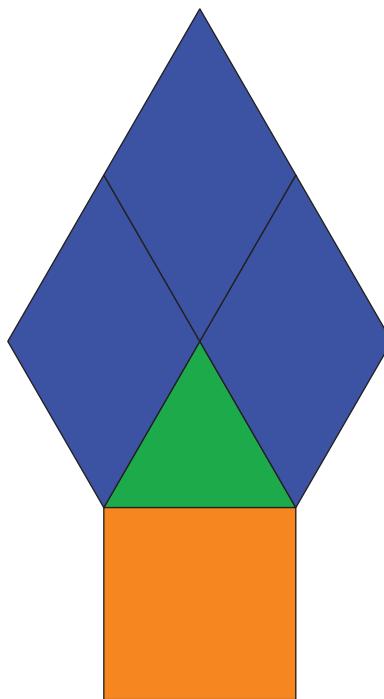
Addressing K.CC.B.5, K.G.A.1, K.G.A.2

Narrative

Students interpret the positional words above and below and the names of the shapes as they refer to pattern blocks. Students may write yes the second and sixth statements instead of the first and fifth. This means that they have switched the meaning of above and below and with more practice will get better using these words correctly. Students who do not write yes for both the first and fifth or both the second and sixth statements need more directed practice using the positional words above and below.

For this item, the teacher reads each statement and gives time for students to record their answer before moving on to the next statement.

After you listen to each statement, circle “yes” if it is true and “no” if it is not true.



a. The square is below the triangle.	yes	no
b. The triangle is below the square.	yes	no
c. There are 6 pattern blocks in the puzzle.	yes	no
d. There are 5 pattern blocks in the puzzle.	yes	no
e. The triangle is above the square.	yes	no
f. The square is above the triangle.	yes	no

Solution

- a. yes
- b. no
- c. no
- d. yes
- e. yes
- f. no

Problem 3

Standards Alignments

Addressing K.MD.A.2

Narrative

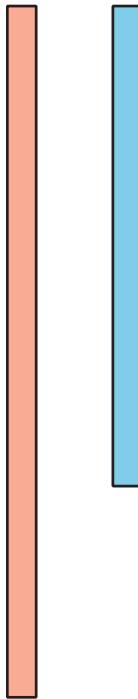
Students understand the words longer and shorter and can accurately compare lengths. If students answer both problems incorrectly, they probably have switched the meaning of longer and shorter and need more practice hearing these words used correctly. If students answer one question correctly and one incorrectly then they need more practice comparing lengths of objects.

For this item, the teacher reads each statement and gives time for students to record their answer before moving on to the next statement.

a. Circle the rectangle that is longer.



b. Circle the rectangle that is shorter.



Solution

- a. Top rectangle
- b. Right rectangle

Problem 4

Standards Alignments

Addressing K.G.A.2

Narrative

Students identify triangles and rectangles in an image. It is not essential for the student to identify every rectangle or triangle. Students may also select items like the blades of the scissors or the water in the beaker as representing a triangle. This probably means that they are imagining the third side even though it is not drawn, for the scissors, and may not notice the gently curved corners (and missing third corner) for the water in the beaker. As long as students have the idea that a triangle has 3 sides and corners they are meeting the standard.

For this item, the teacher reads each statement and gives time for students to record their answer before moving on to the next statement.



- a. Circle objects in the picture that look like rectangles.
- b. Cross out objects in the picture that look like triangles.

Solution

- a. Circled rectangles such as cards, books, the top of the hat, or the cuff on the shirt.
- b. Crossed-out triangles such as the protractor or black part of the arm.



Instructional Masters

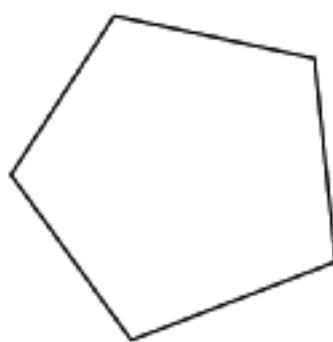
Introduction Masters for Flat Shapes All Around Us

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Activity Kindergarten.3.3.2	Shape Cards Grade K	2	no	yes	no
Activity Kindergarten.3.5.2	Triangle Sort Cards	4	no	yes	no
Activity Kindergarten.3.12.1	Pattern Blocks Stage 5 Recording Sheet	2	yes	no	no
Center	Pattern Blocks Stage 5 Recording Sheet	2	yes	no	no
Assessment Kindergarten.3	Checklist	0	yes	no	no
Assessment Kindergarten.3	Checklist	0	yes	no	no
Activity Kindergarten.3.3.3	Which One Stage 1 Gameboard	2	no	no	no
Center	Which One Stage 1 Gameboard	2	no	no	no
Activity Kindergarten.3.6.1	Rectangle Sort Cards	4	no	yes	no
Activity Kindergarten.3.7.3	Build Shapes Stage 1 and 2 Cards	2	no	yes	no
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Activity Kindergarten.3.10.1	Pattern Blocks Stage 4 Recording Sheets	1	yes	no	no

Center	Pattern Blocks Stage 4 Recording Sheets	1	yes	no	no	no	no
Activity Kindergarten.3.10.2	Pattern Block Puzzles	1	no	no	no	no	no
Activity Kindergarten.3.14.1	Shapes in Art	7	no	no	no	no	no
Activity Kindergarten.3.12.1	Pattern Blocks Stage 5 Mat	2	no	no	no	no	no
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Center	Picture Books Stage 3 Recording Sheet	1	yes	no	no	no	no
Center	Picture Books Stage 2 Recording Sheet	1	yes	no	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no	no	no
Center	Bingo Stage 1 Cards	4	no	yes	no	no	no
Center	Counting Collections Stages 1 and 2 Recording Sheet	1	yes	no	no	no	no
Center	Geoblocks Stage 2	8	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
Center	Image Cards Grade K	2	no	yes	no	no	no
Center	Image Cards Grade K	2	no	yes	no	no	no
Center	Number and Image Cards	2	no	yes	no	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
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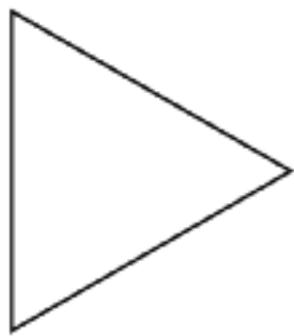
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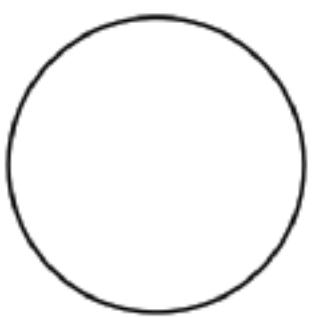
Shape Cards Grade K
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Shape Cards Grade K
A



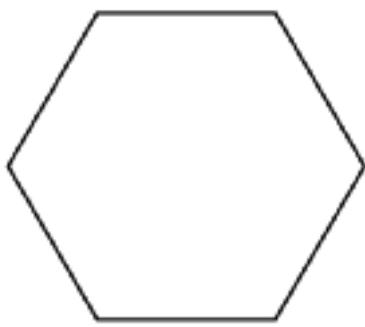
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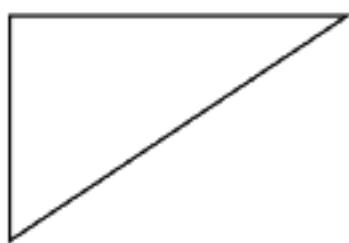
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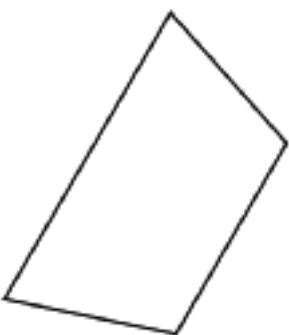
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Shape Cards Grade K
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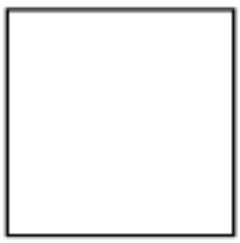
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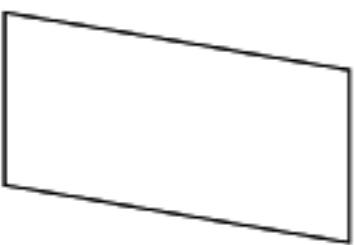
Shape Cards Grade K
D

Shape Cards Grade K

Shape Cards Grade K
I



Shape Cards Grade K
J



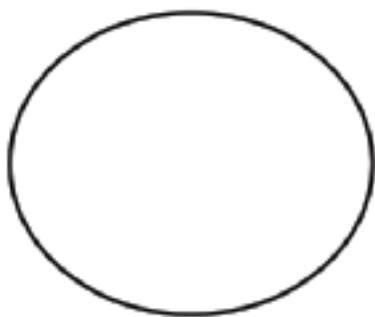
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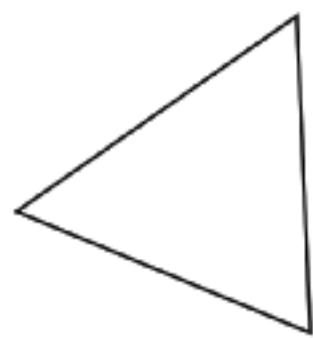
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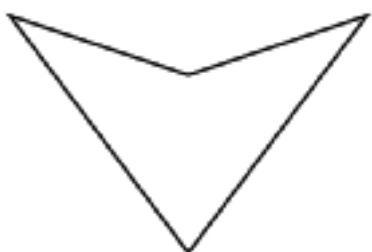
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Shape Cards Grade K
N



Shape Cards Grade K
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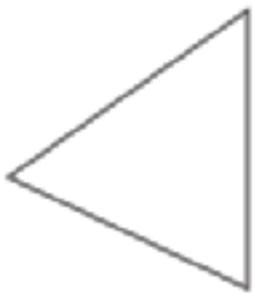


Shape Cards Grade K
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Triangle Sort Cards

Triangle Sort Cards
A



Triangle Sort Cards
B



Triangle Sort Cards
C



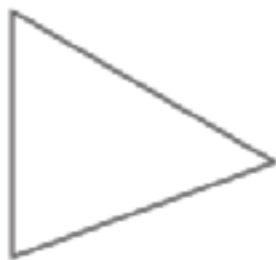
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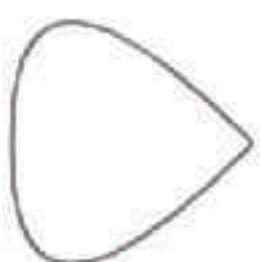
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Triangle Sort Cards
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Triangle Sort Cards
G



Triangle Sort Cards
H

Triangle Sort Cards

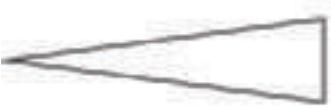
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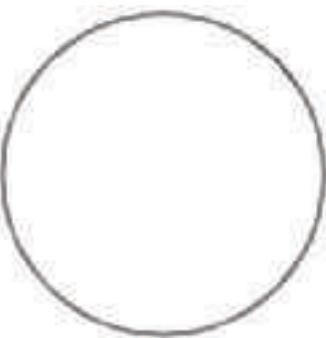
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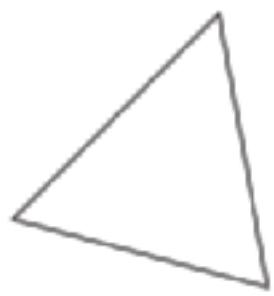
Triangle Sort Cards
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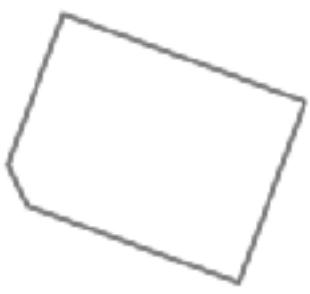
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Triangle Sort Cards
M



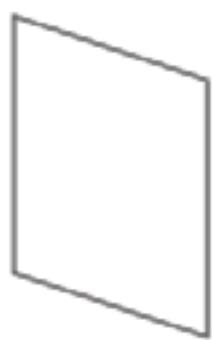
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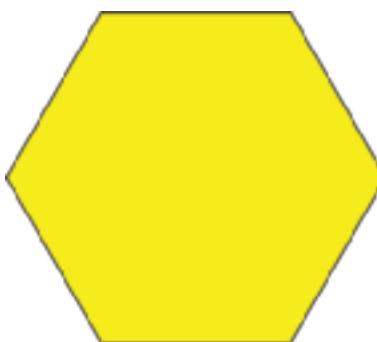
Triangle Sort Cards
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Triangle Sort Cards
P



Pattern Blocks Stage 5 Recording Sheet



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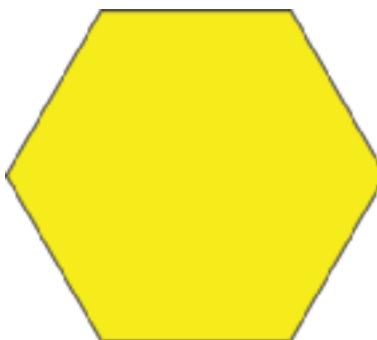
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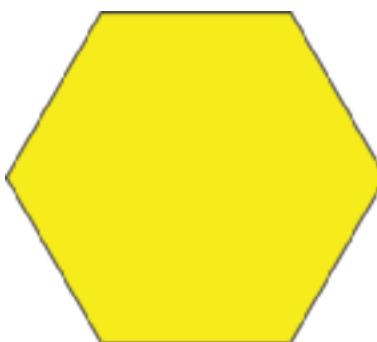


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Pattern Blocks Stage 5 Recording Sheet



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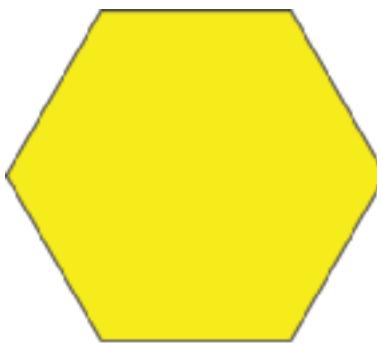
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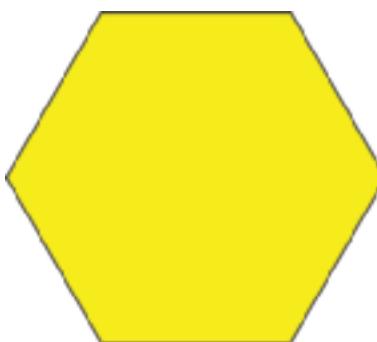


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Pattern Blocks Stage 5 Recording Sheet



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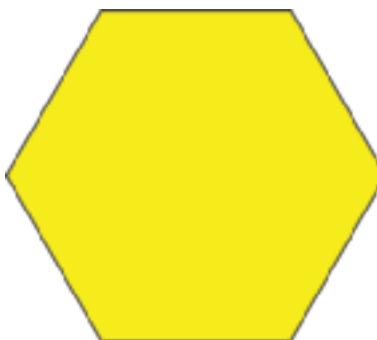
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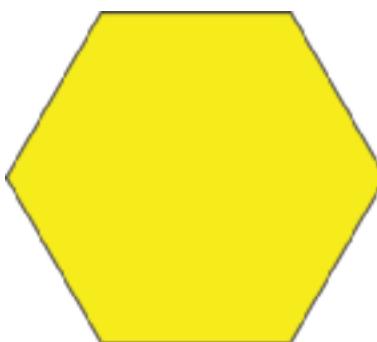


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Pattern Blocks Stage 5 Recording Sheet



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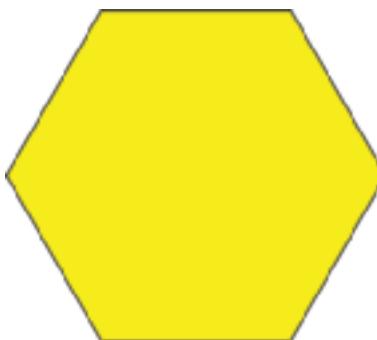
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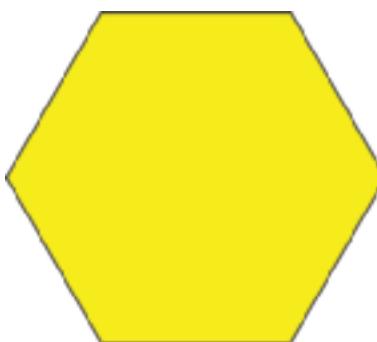


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Pattern Blocks Stage 5 Recording Sheet



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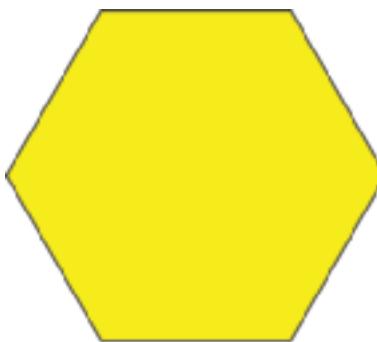
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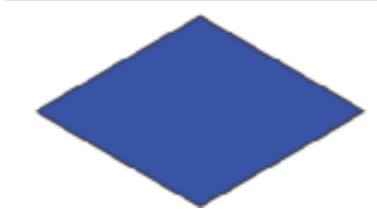


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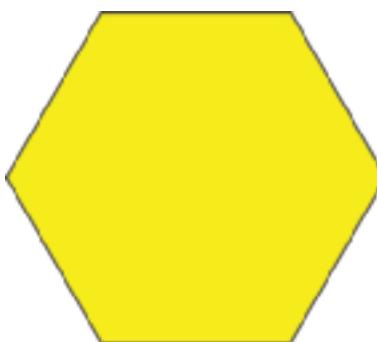


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Pattern Blocks Stage 5 Recording Sheet



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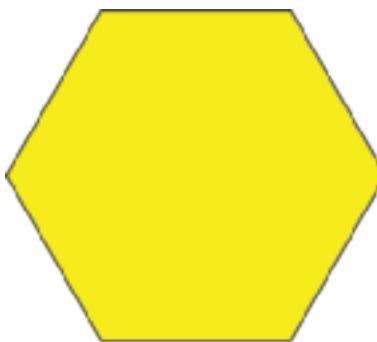
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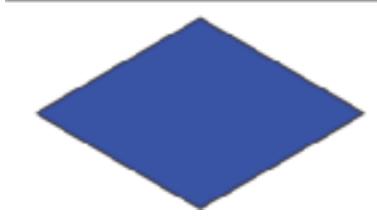


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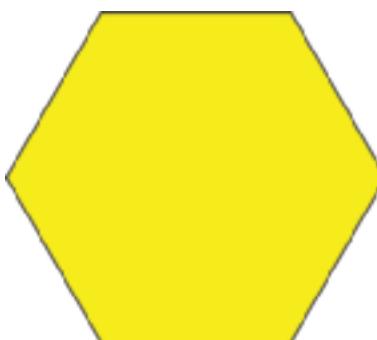


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Pattern Blocks Stage 5 Recording Sheet



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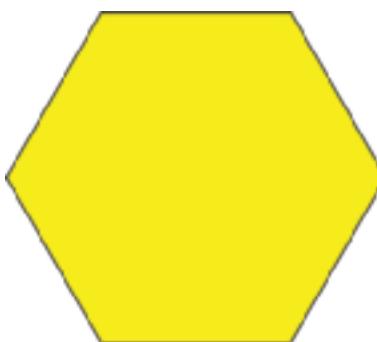
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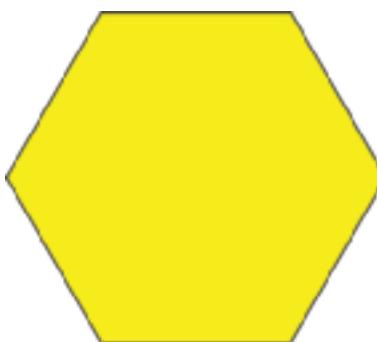


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Pattern Blocks Stage 5 Recording Sheet



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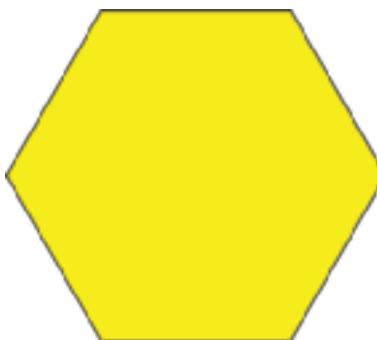
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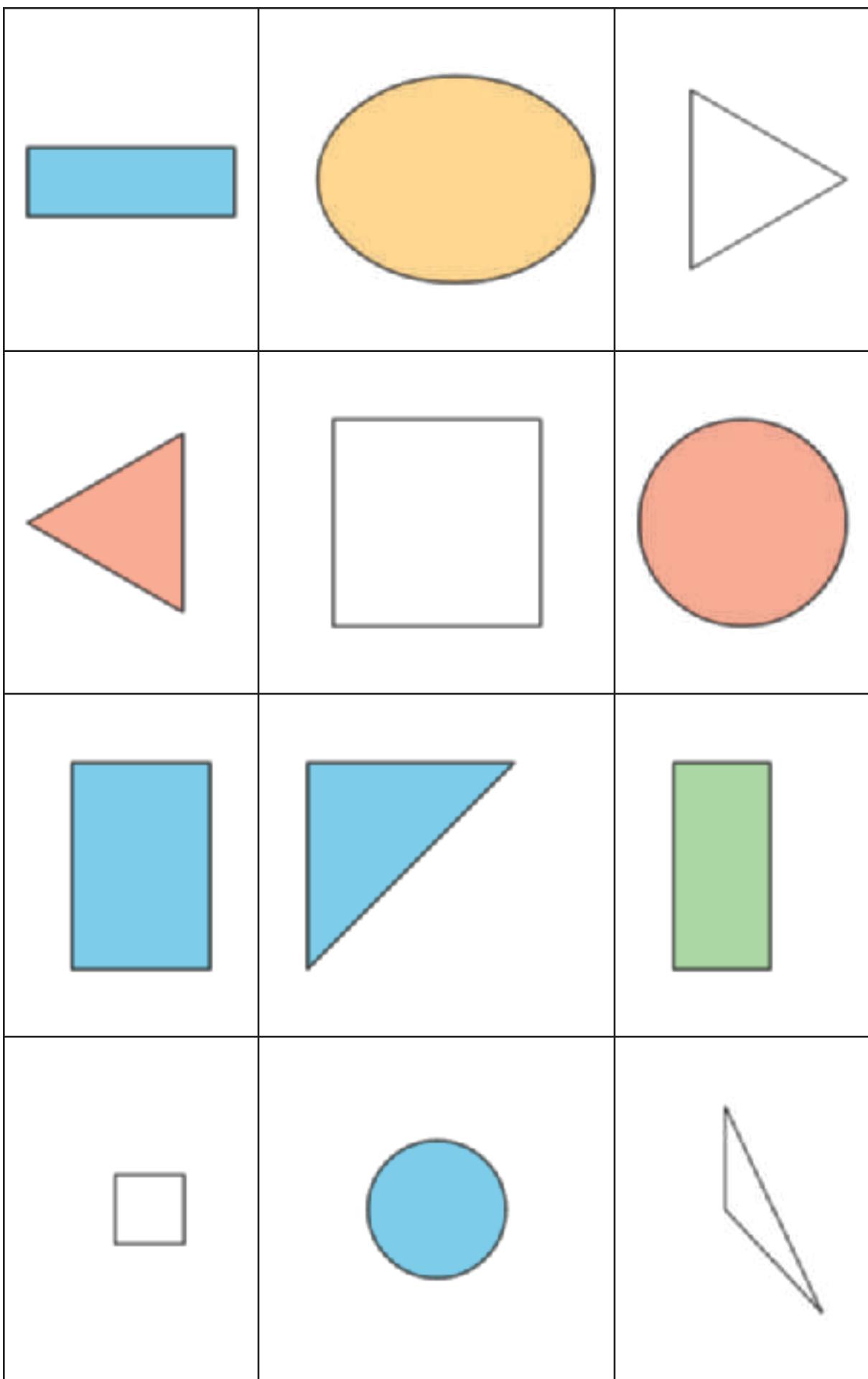
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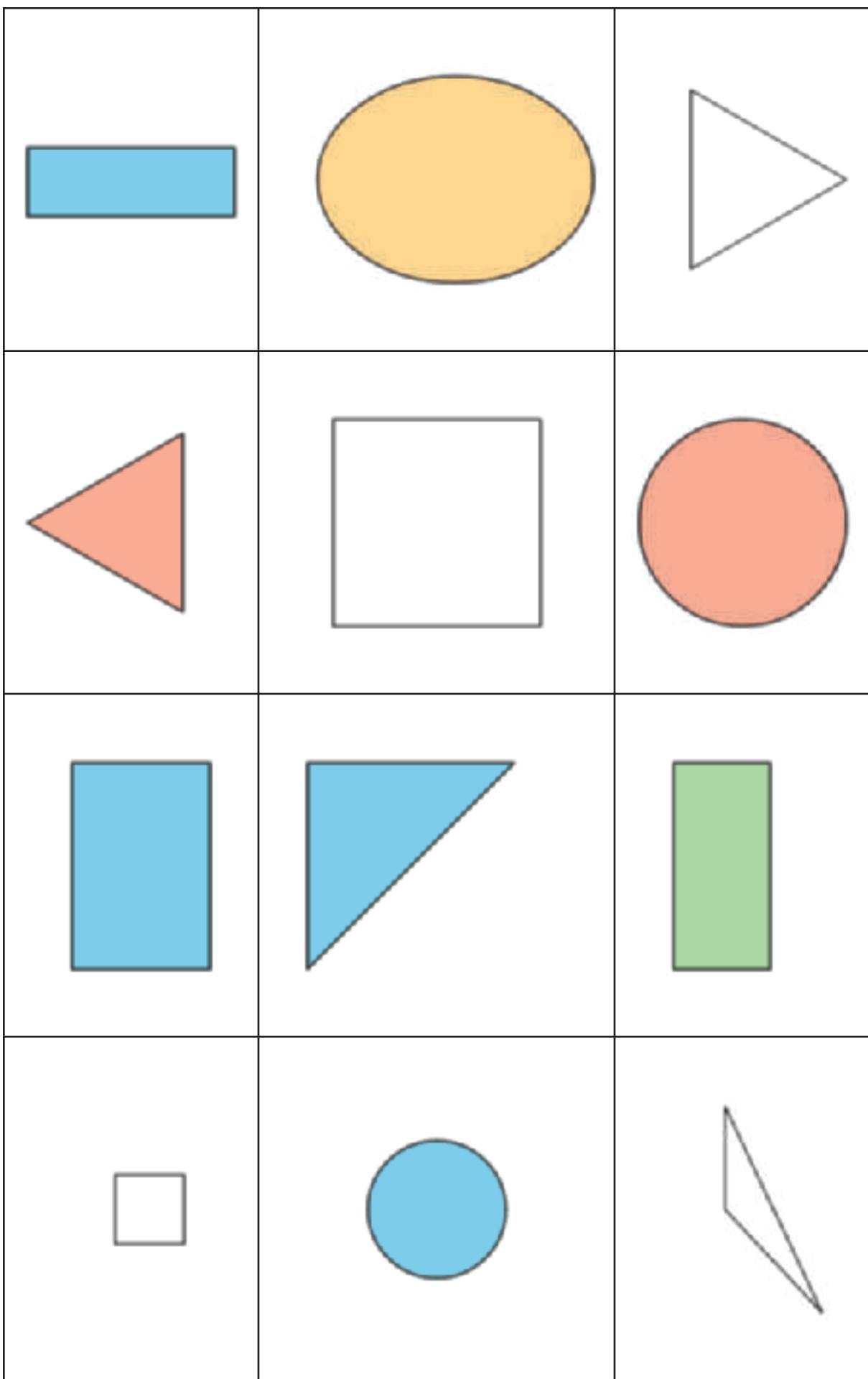


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Kindergarten, Unit 3 Section A Checkpoint	• Recognize and describe shapes in the environment. • Use informal language to describe and compare shapes and their attributes.
Use informal language to describe shapes.	Tell what is the same or different about two or more shapes.
Sort shapes into groups.	Compare the length of objects.
Identify circles, triangles, rectangles, and squares.	Name circles, triangles, rectangles, and squares.

Kindergarten, Unit 3 Section B Checkpoint	<ul style="list-style-type: none">Put shapes together to form larger shapes.
Describe shapes made from pattern blocks.	Identify the pattern blocks needed to fill a puzzle.
Recognize shapes that are the same regardless of orientation.	Use positional words to describe the location of shapes.
Count the number of pattern blocks used to make a shape.	Compare the number of pattern blocks used to make a shape.



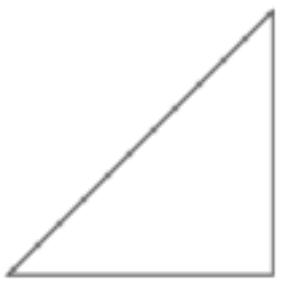


Rectangle Sort Cards

Rectangle Sort Cards
A



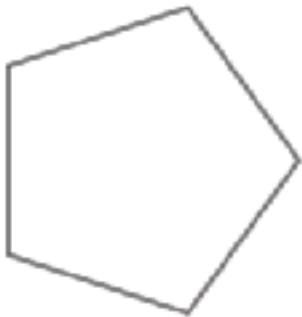
Rectangle Sort Cards
B



Rectangle Sort Cards
C



Rectangle Sort Cards
D



Rectangle Sort Cards
E



Rectangle Sort Cards
F



Rectangle Sort Cards
G



Rectangle Sort Cards
H



Rectangle Sort Cards

Rectangle Sort Cards

I

Rectangle Sort Cards

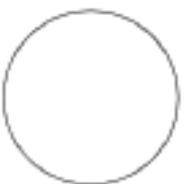
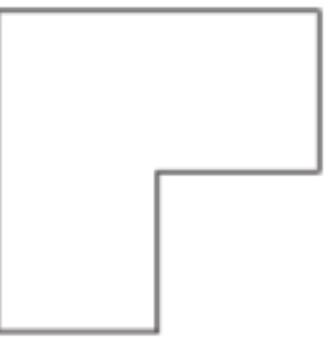
J

Rectangle Sort Cards

K

Rectangle Sort Cards

L



Rectangle Sort Cards

M

Rectangle Sort Cards

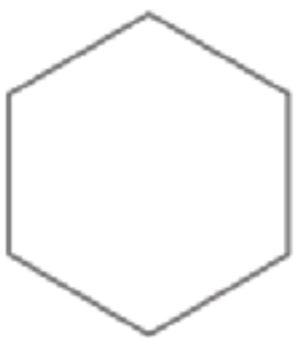
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Rectangle Sort Cards

O

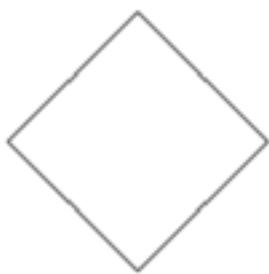
Rectangle Sort Cards

P

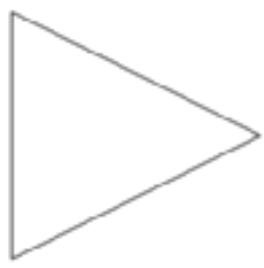


Build Shapes Stage 1 and 2 Cards

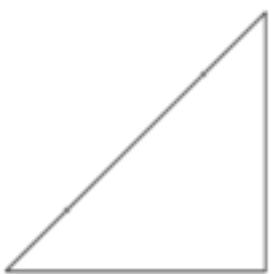
Build Shapes



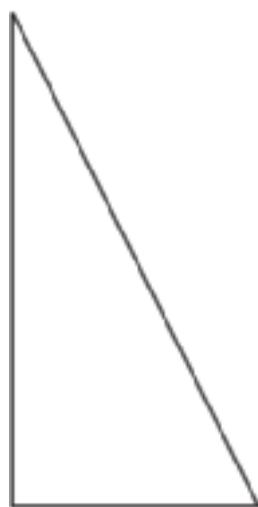
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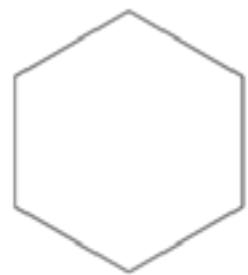
Build Shapes



Build Shapes



Build Shapes

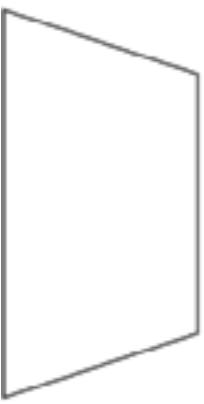


Build Shapes



Build Shapes Stage 1 and 2 Cards

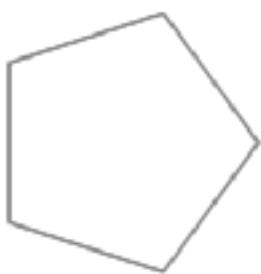
Build Shapes



Build Shapes



Build Shapes



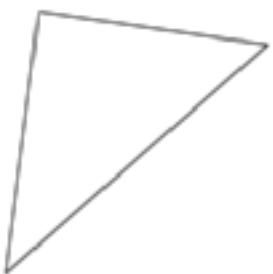
Build Shapes



Build Shapes

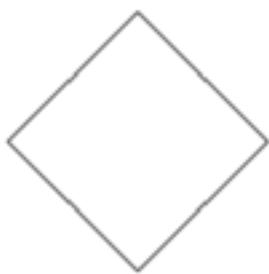


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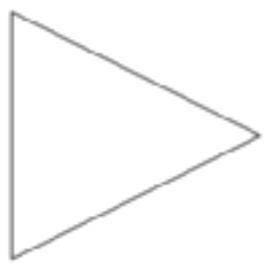


Build Shapes Stage 1 and 2 Cards

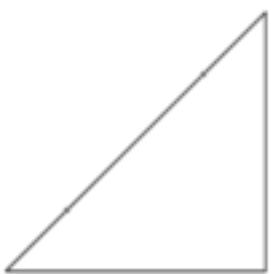
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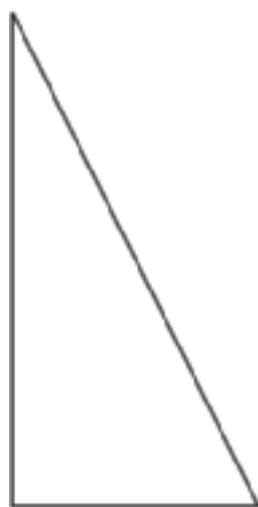
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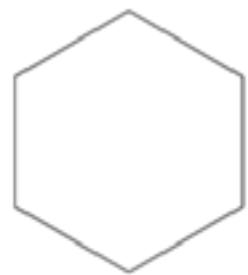
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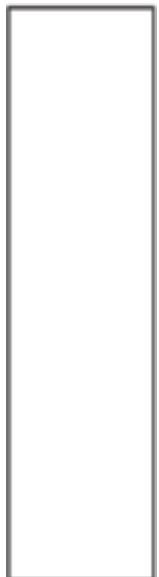


Build Shapes Stage 1 and 2 Cards

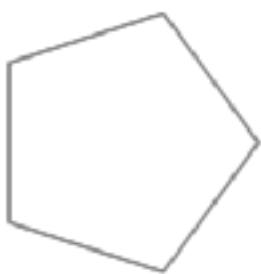
Build Shapes



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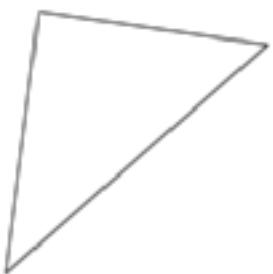
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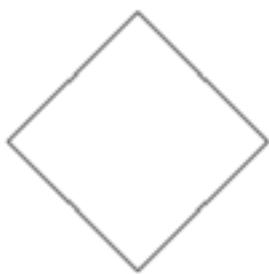


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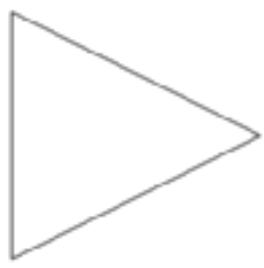


Build Shapes Stage 1 and 2 Cards

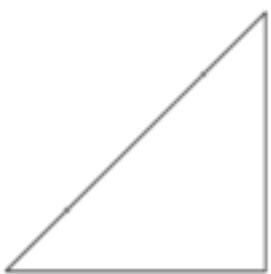
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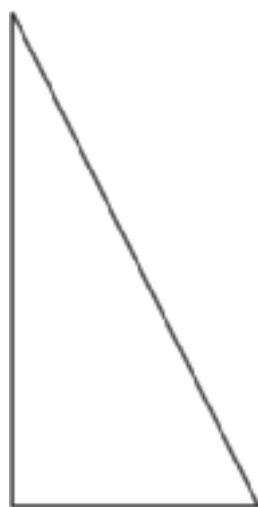
Build Shapes



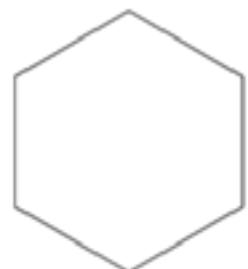
Build Shapes



Build Shapes



Build Shapes



Build Shapes



Build Shapes Stage 1 and 2 Cards

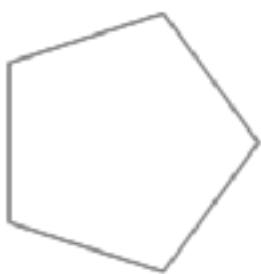
Build Shapes



Build Shapes



Build Shapes



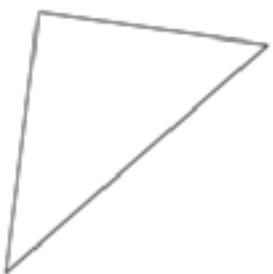
Build Shapes



Build Shapes



Build Shapes

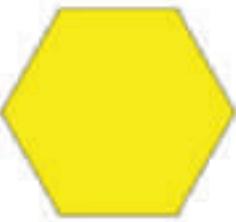


3



green triangles

6



yellow hexagons

8



blue rhombuses

4



orange squares

I used more _____ than _____.

5  blue rhombuses

2  yellow hexagons

4  tan rhombuses

7  green triangles

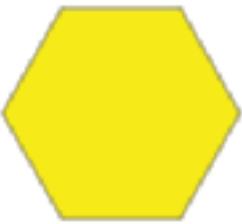
I used more _____ than _____.

9



orange squares

4



yellow hexagons

5



green triangles

2



blue rhombuses

I used more _____ than _____.

6  tan rhombuses

10  blue rhombuses

4  green triangles

3  red trapezoids

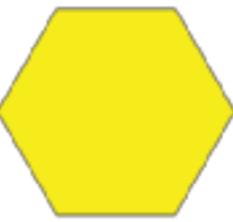
I used more _____ than _____.

7



red trapezoids

3



yellow hexagons

5



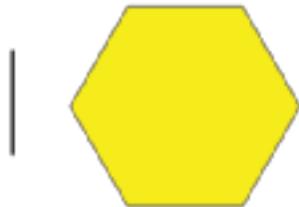
orange squares

2



tan rhombuses

I used more _____ than _____.



1 yellow hexagon

8



green triangles

5



blue rhombuses

4



orange squares

I used more _____ than _____.

6  tan rhombuses

5  red trapezoids

7  green triangles

3  orange squares

I used more _____ than _____.

10



orange squares

5



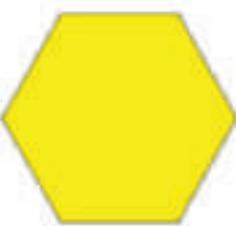
blue rhombuses

8



green triangles

2



yellow hexagons

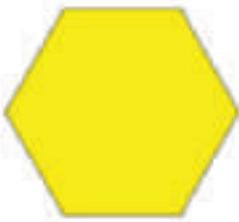
I used more _____ than _____.

3



green triangles

6



yellow hexagons

8



blue rhombuses

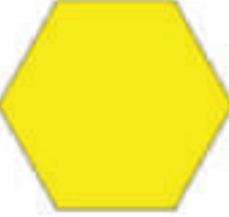
4



orange squares

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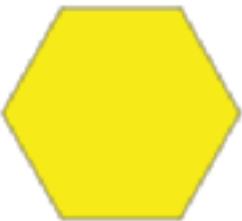
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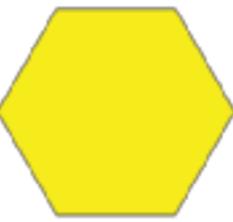
I used more _____ than _____.

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red trapezoids

3



yellow hexagons

5



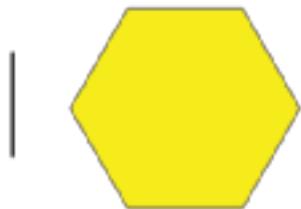
orange squares

2



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orange squares

5



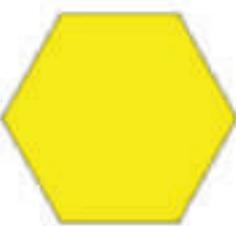
blue rhombuses

8



green triangles

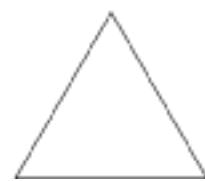
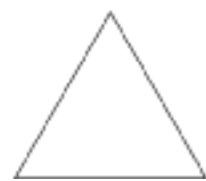
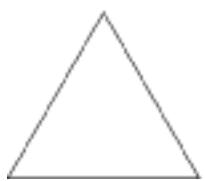
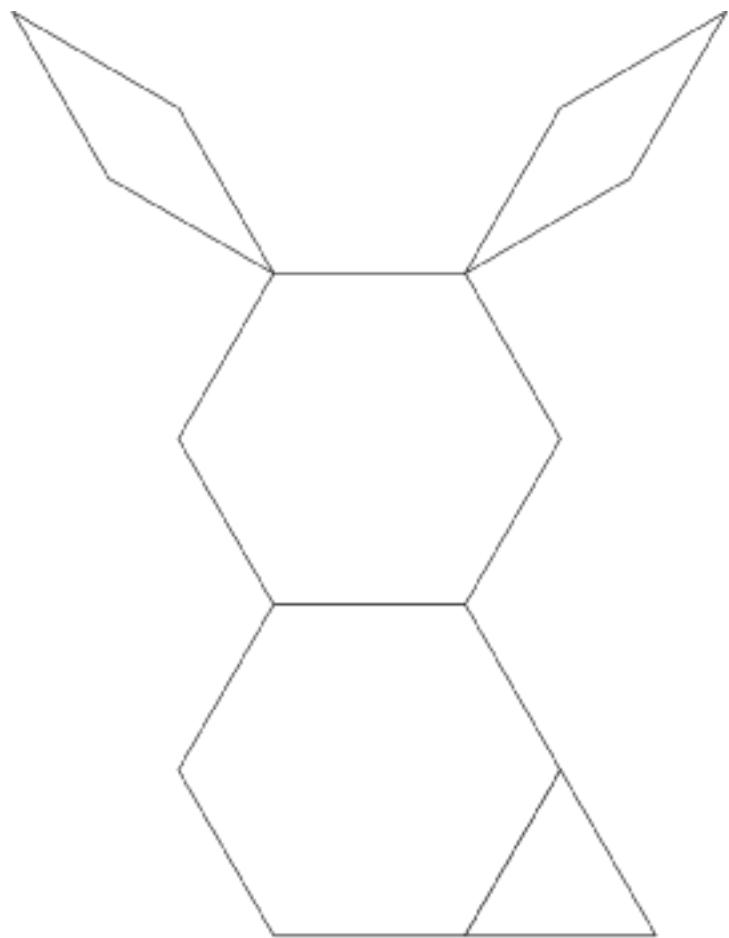
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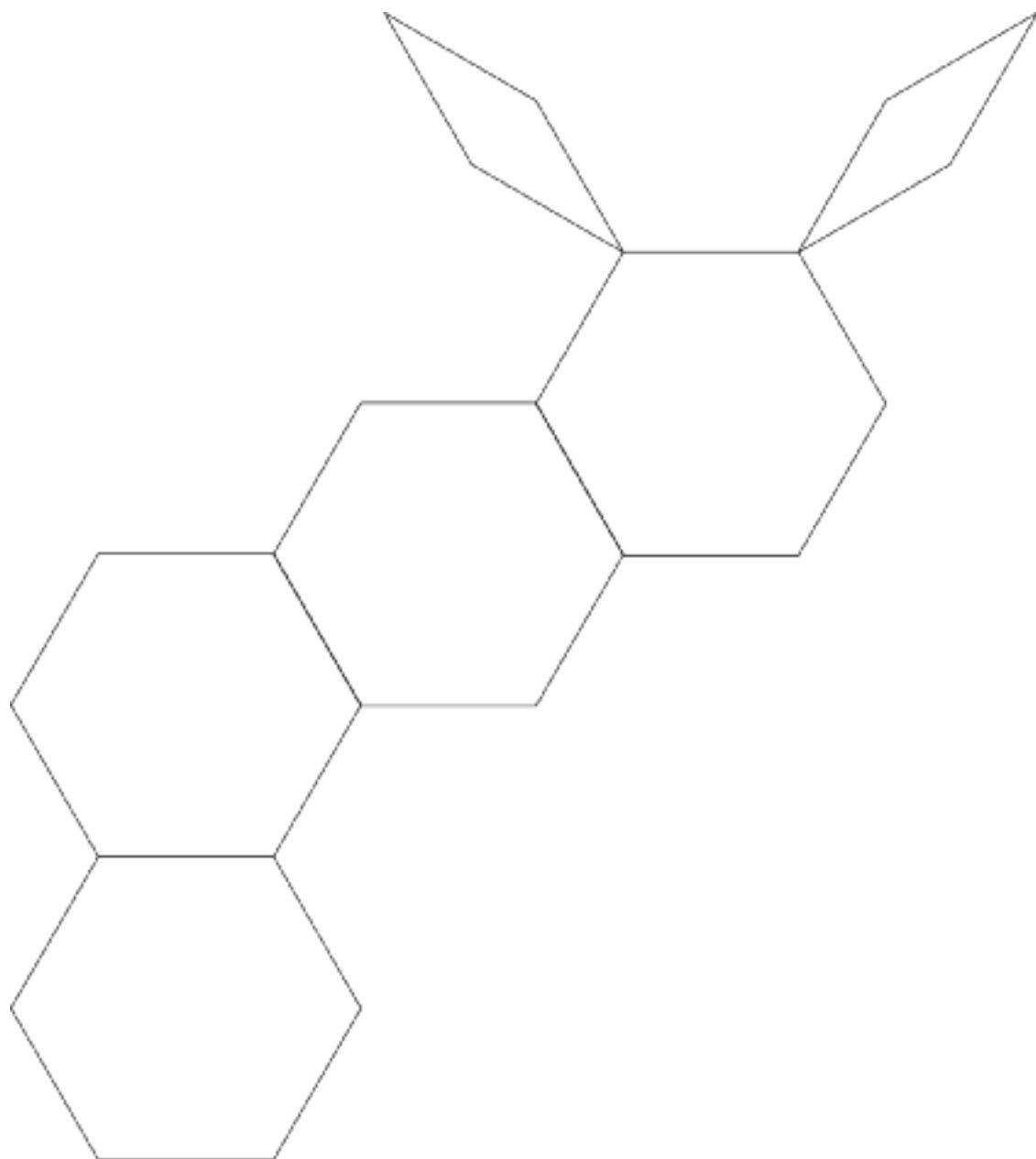
yellow hexagons

I used more _____ than _____.

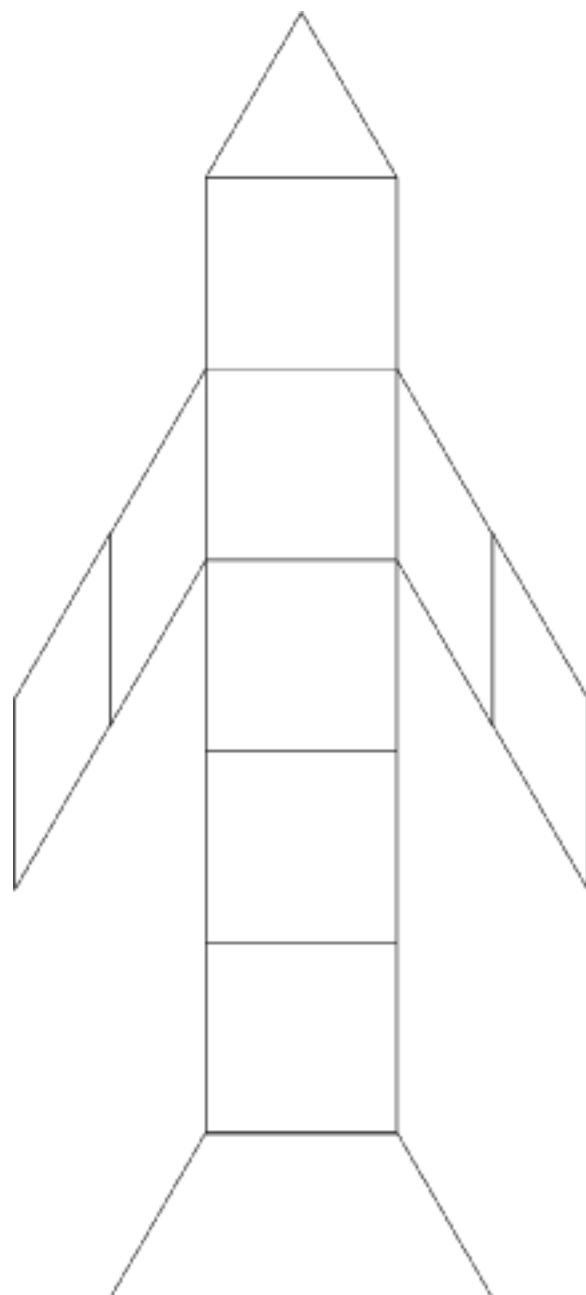
Pattern Block Puzzles



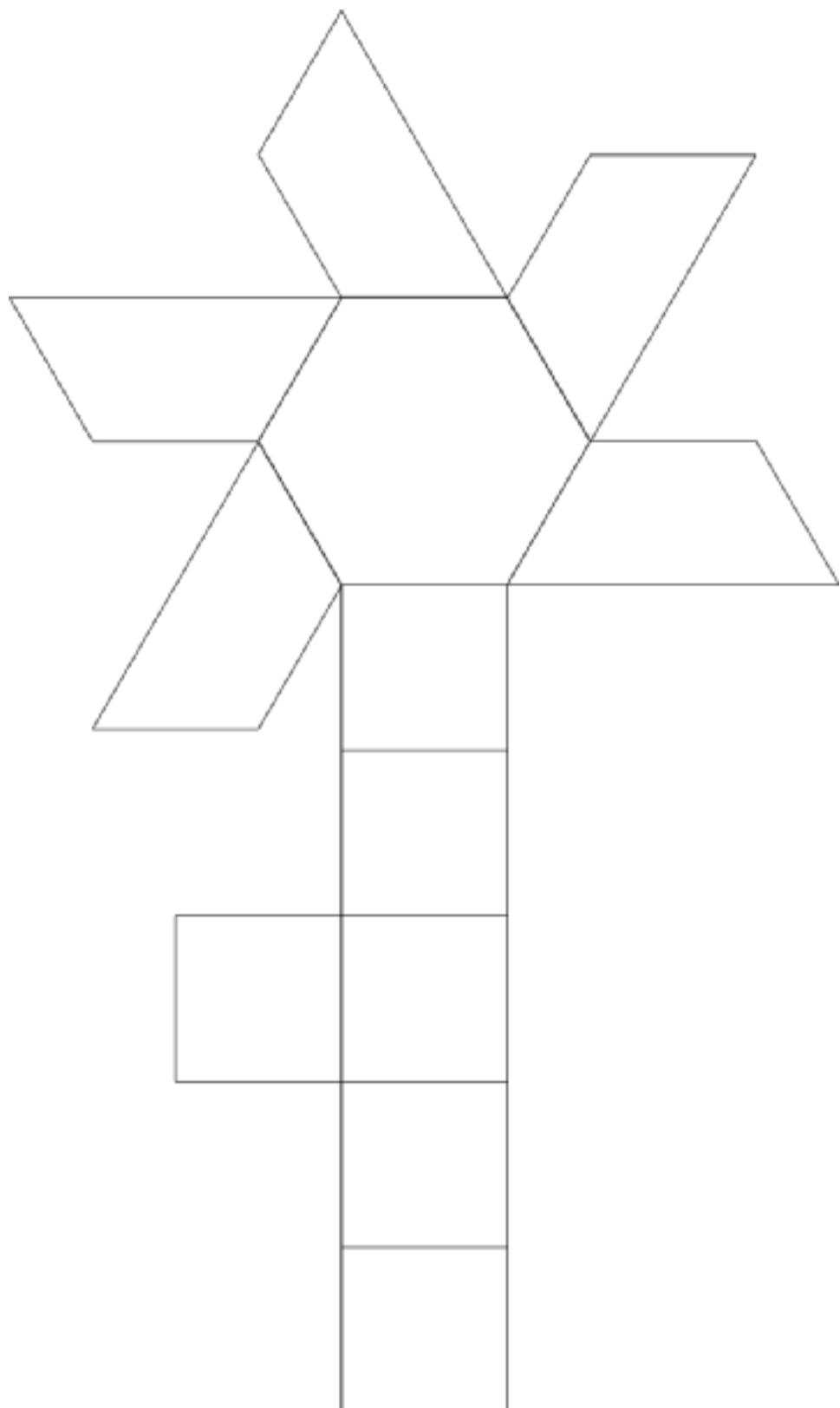
Pattern Block Puzzles



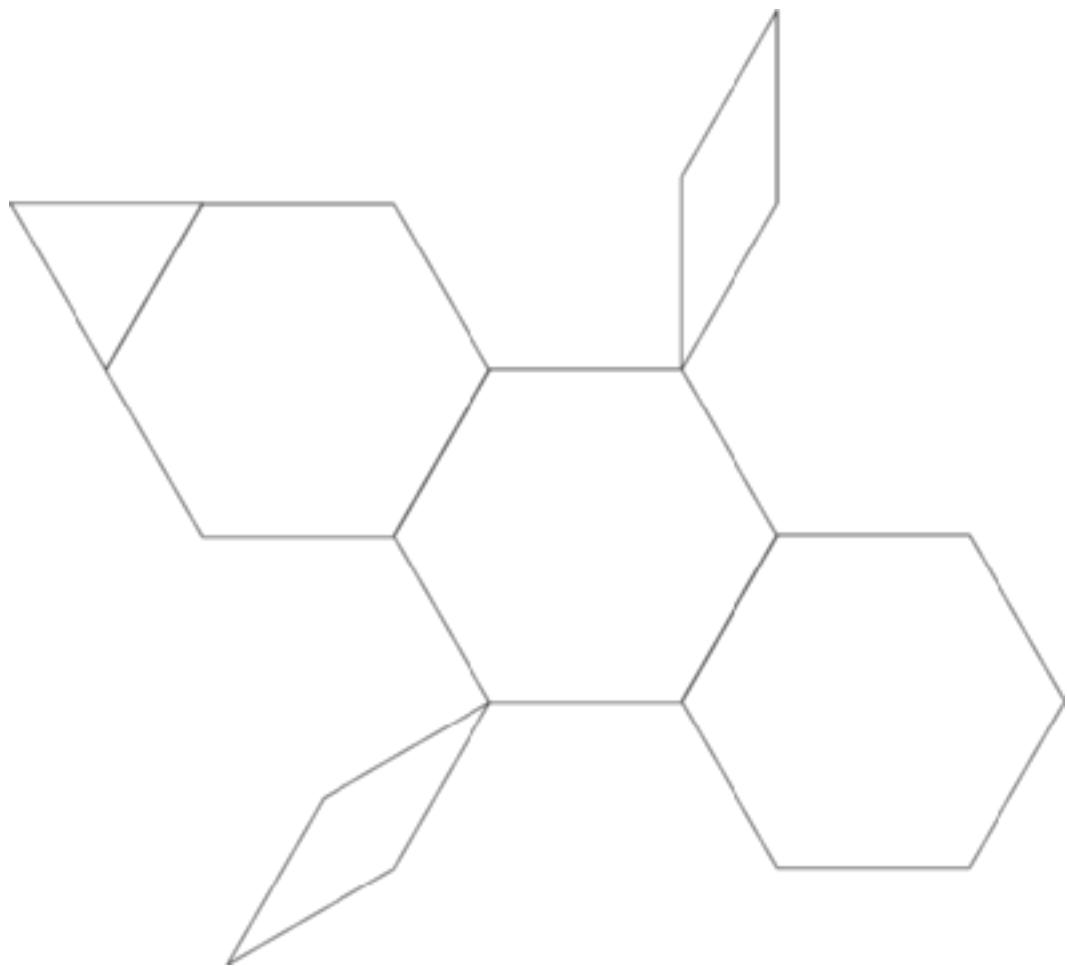
Pattern Block Puzzles



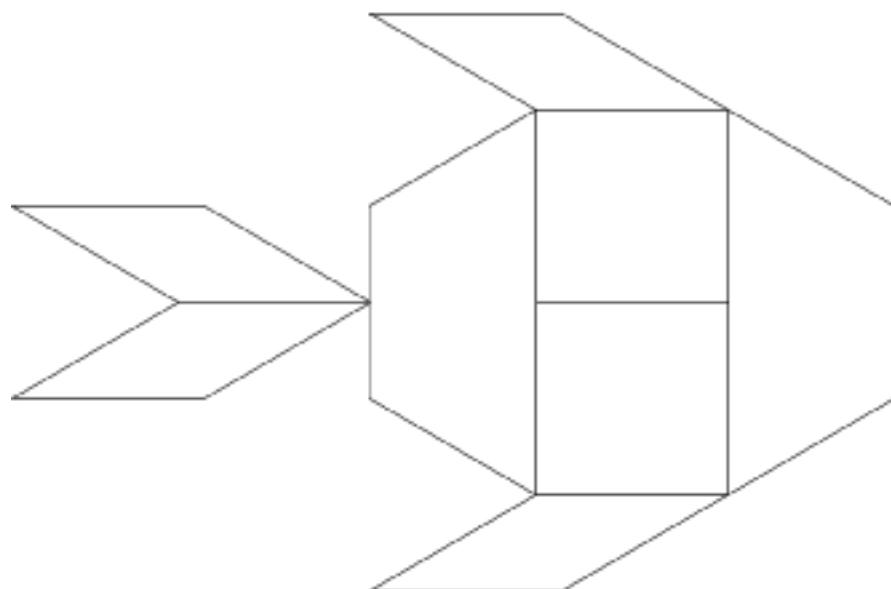
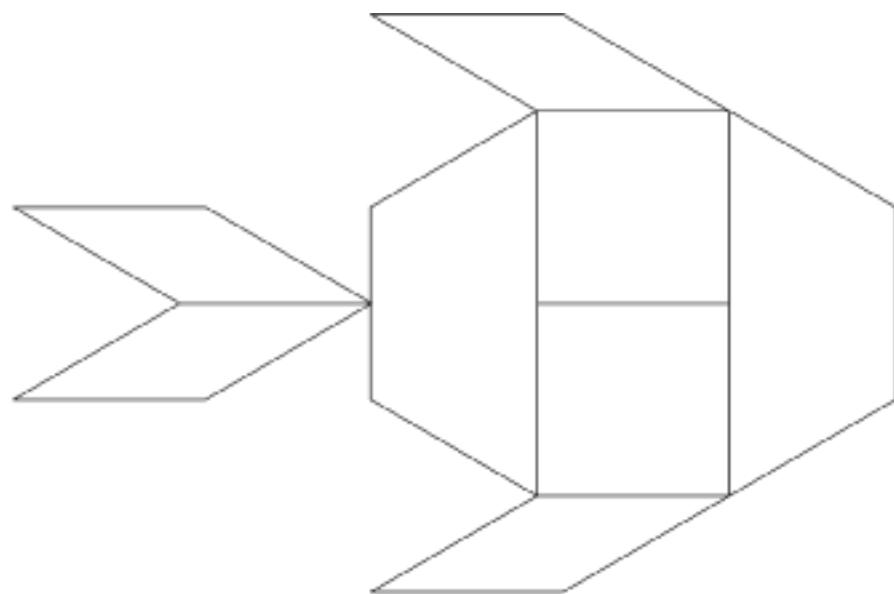
Pattern Block Puzzles



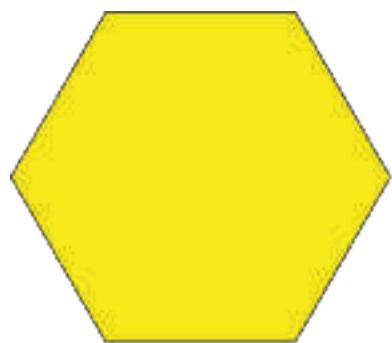
Pattern Block Puzzles

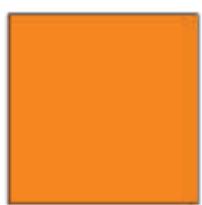


Pattern Block Puzzles



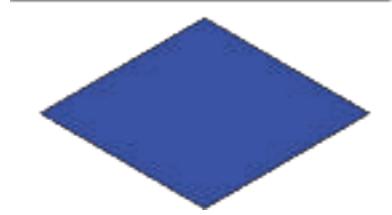
Pattern Block Puzzles



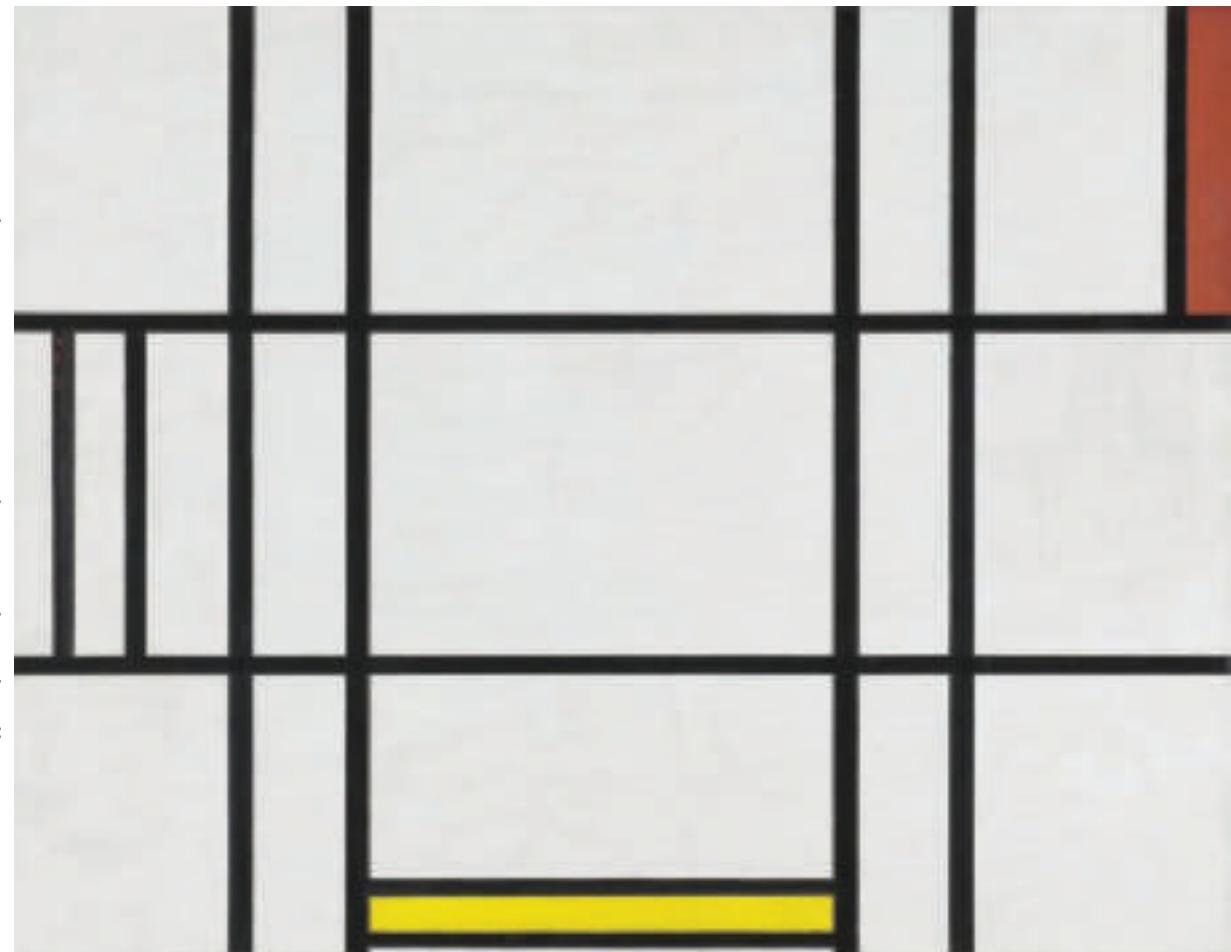












Title: Composition in White, Red, and Yellow
Artist: Piet Mondrian (Netherlands, 1872-1944)



Title: Newspaper and Fruit Dish
Artist: Juan Gris (Spain, 1887-1927)



Title: Coronation Stone of Motecuhzoma II (Stone of the Five Suns)

Artist Unknown

Created: Tenochtitlan, Mexico (1503)



Title: Hamamatsu, from the series "Fifty-three Stations of the Tokaido (Tokaido gojusan tsugi)," also known as the Tokaido with Poem (Kyōka

iri Tokaido)

Artist: Utagawa Hiroshige (Japan, 1797-1858)



Title: The Mellow Pad
Artist: Stuart Davis (United States of America, 1892-1964)

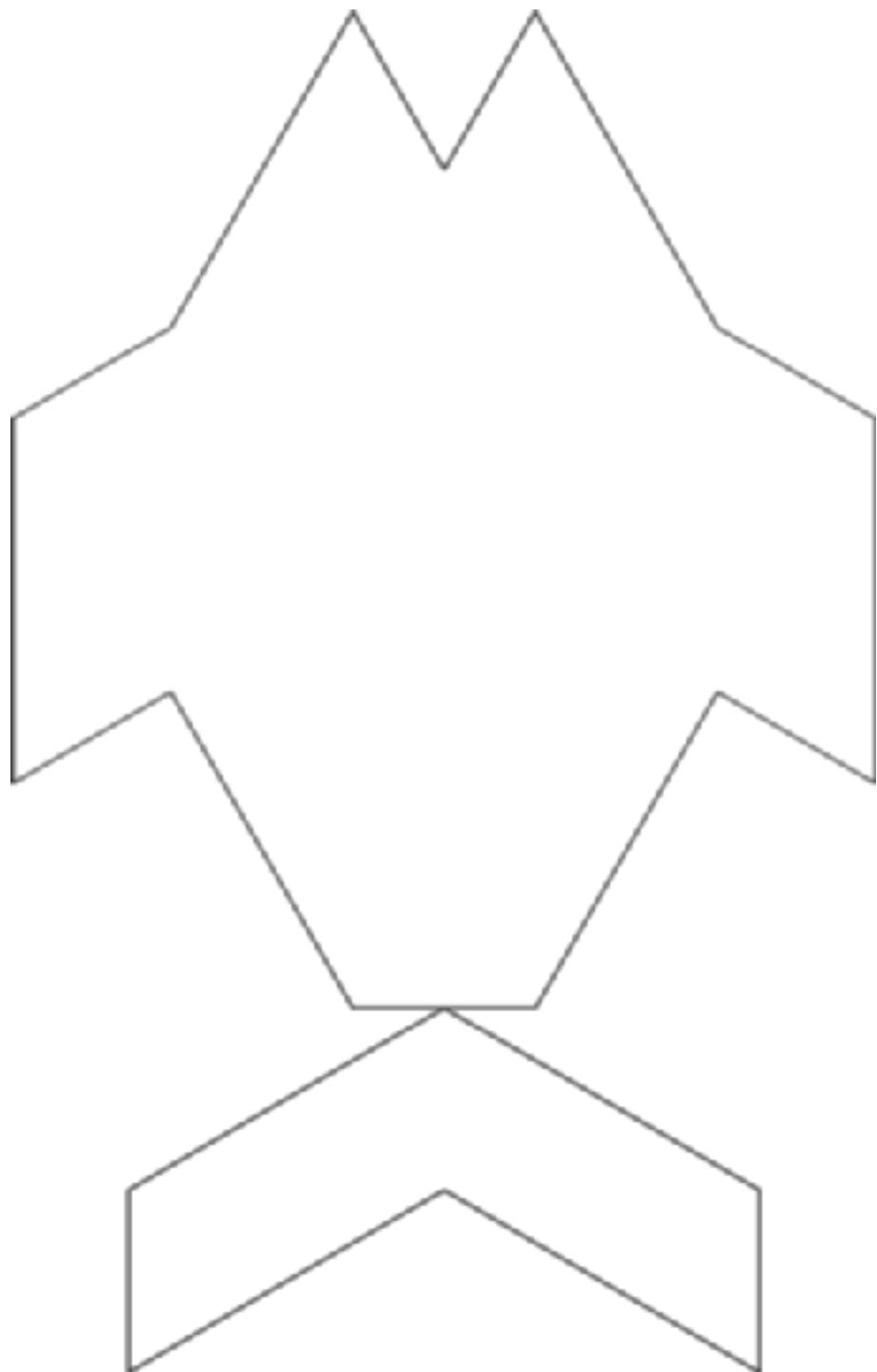


Title: Architectonic Painting
Artist: Liubov Popova (Russia, 1889-1924)

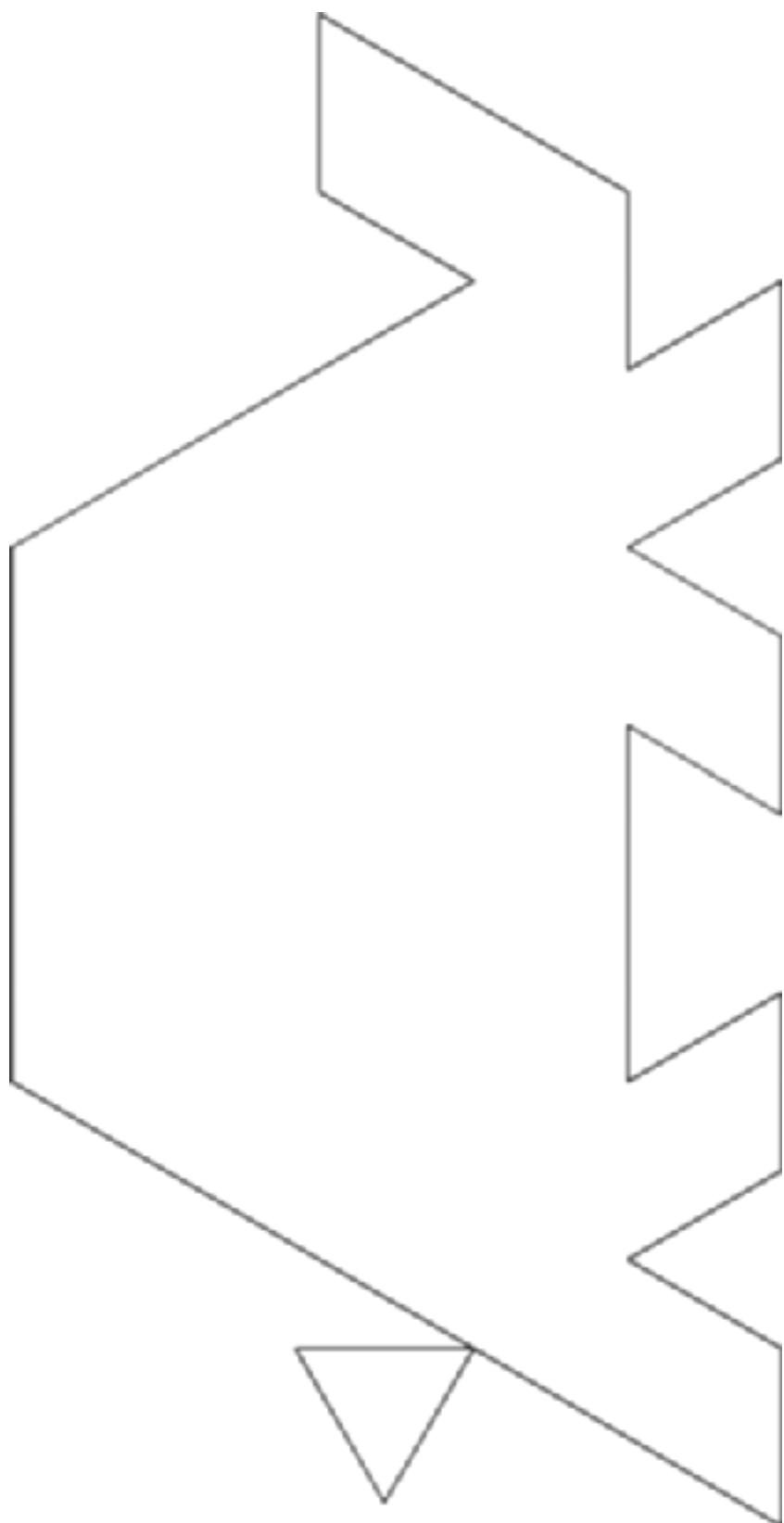


Title: Books and Scholars' Accouterments
Artist: Yi Taek-gyun (Korea, 1808-after 1883)

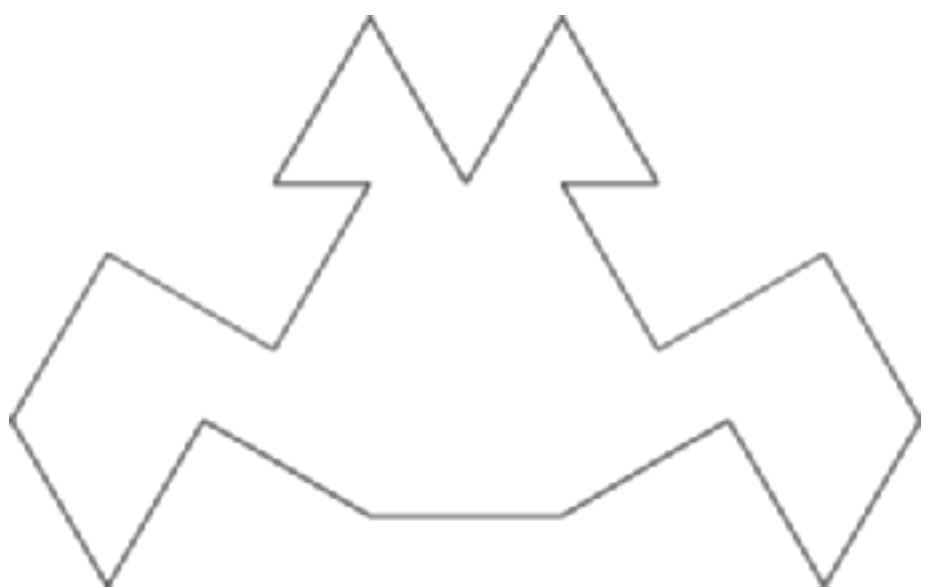
Pattern Blocks Stage 5 Mat



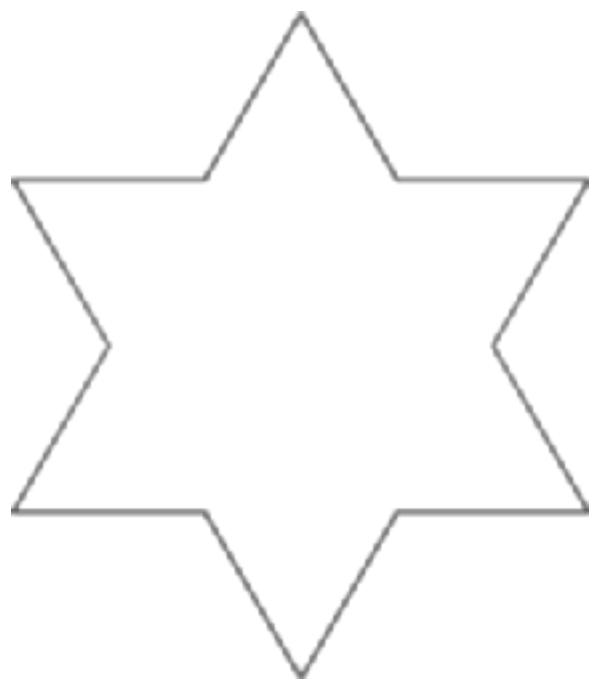
Pattern Blocks Stage 5 Mat



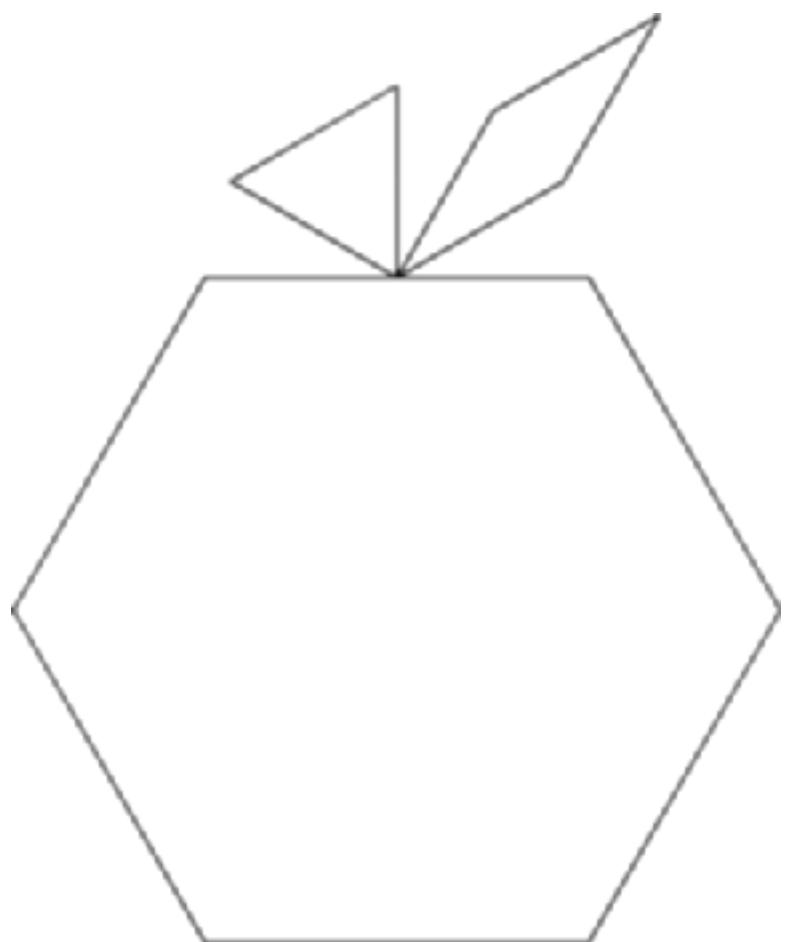
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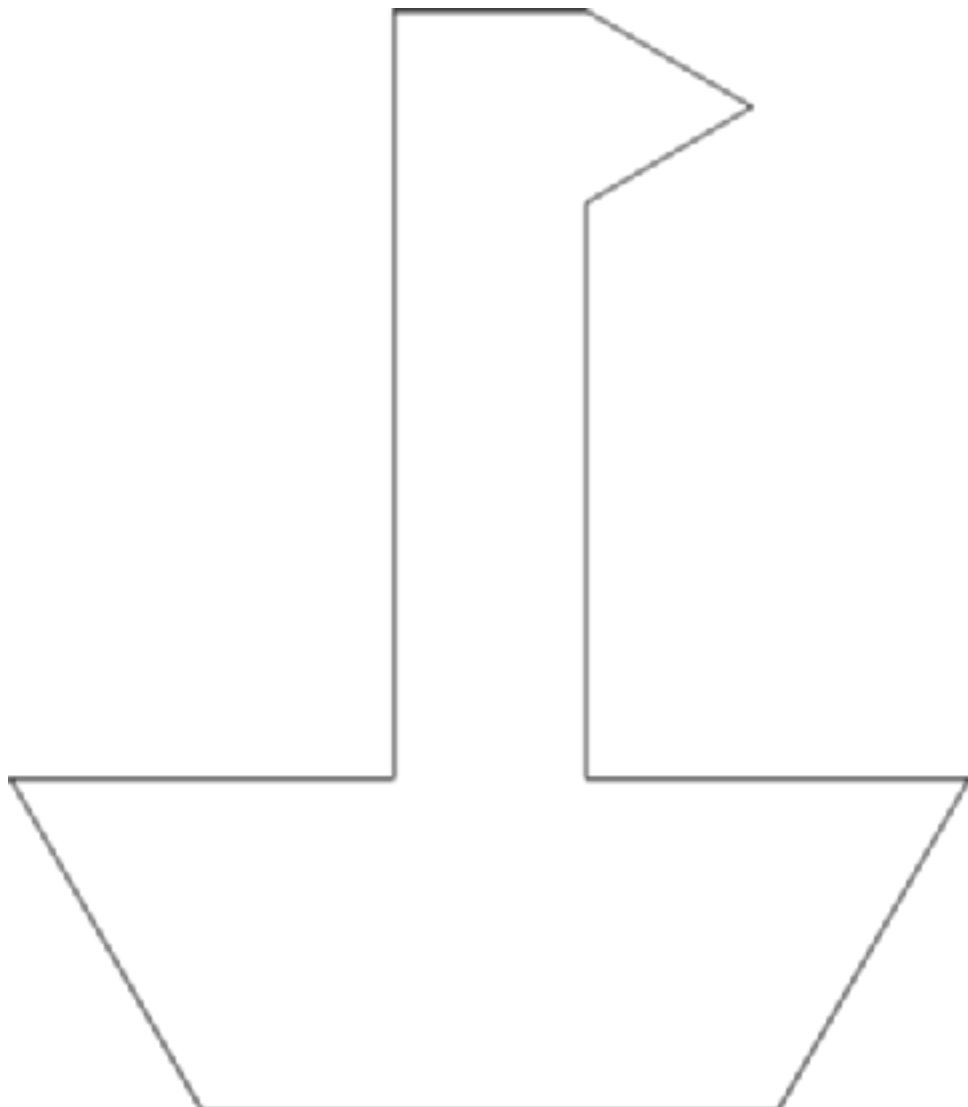
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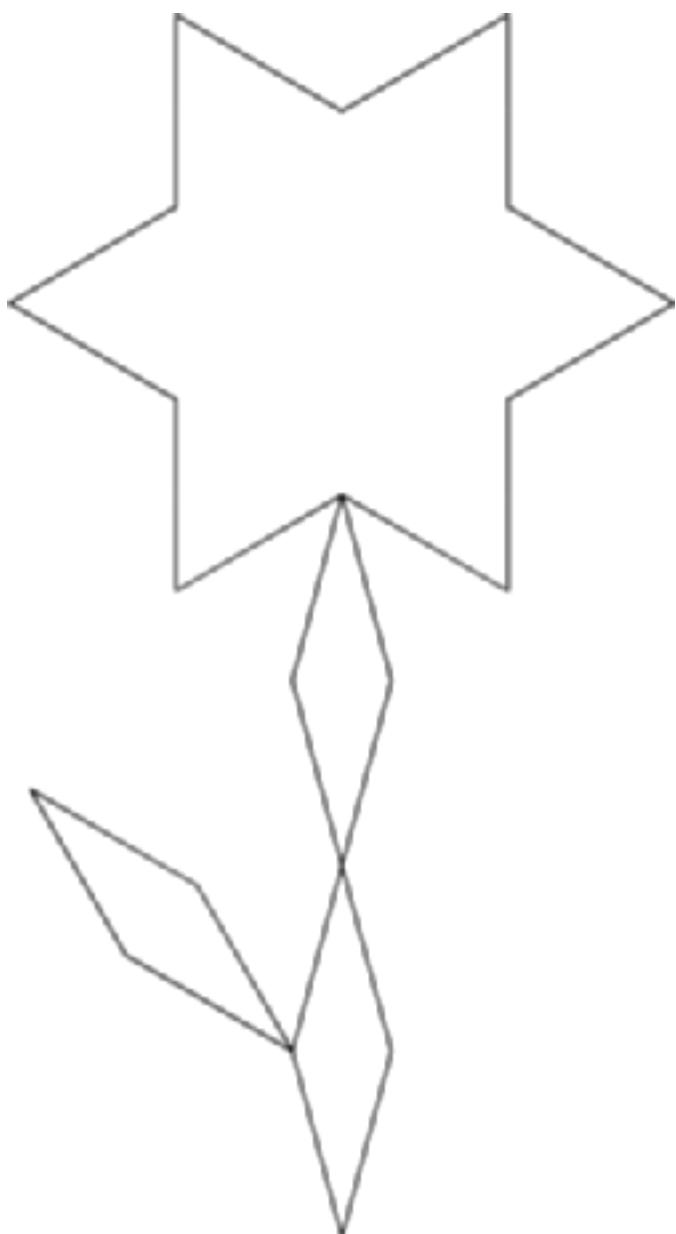
Pattern Blocks Stage 5 Mat



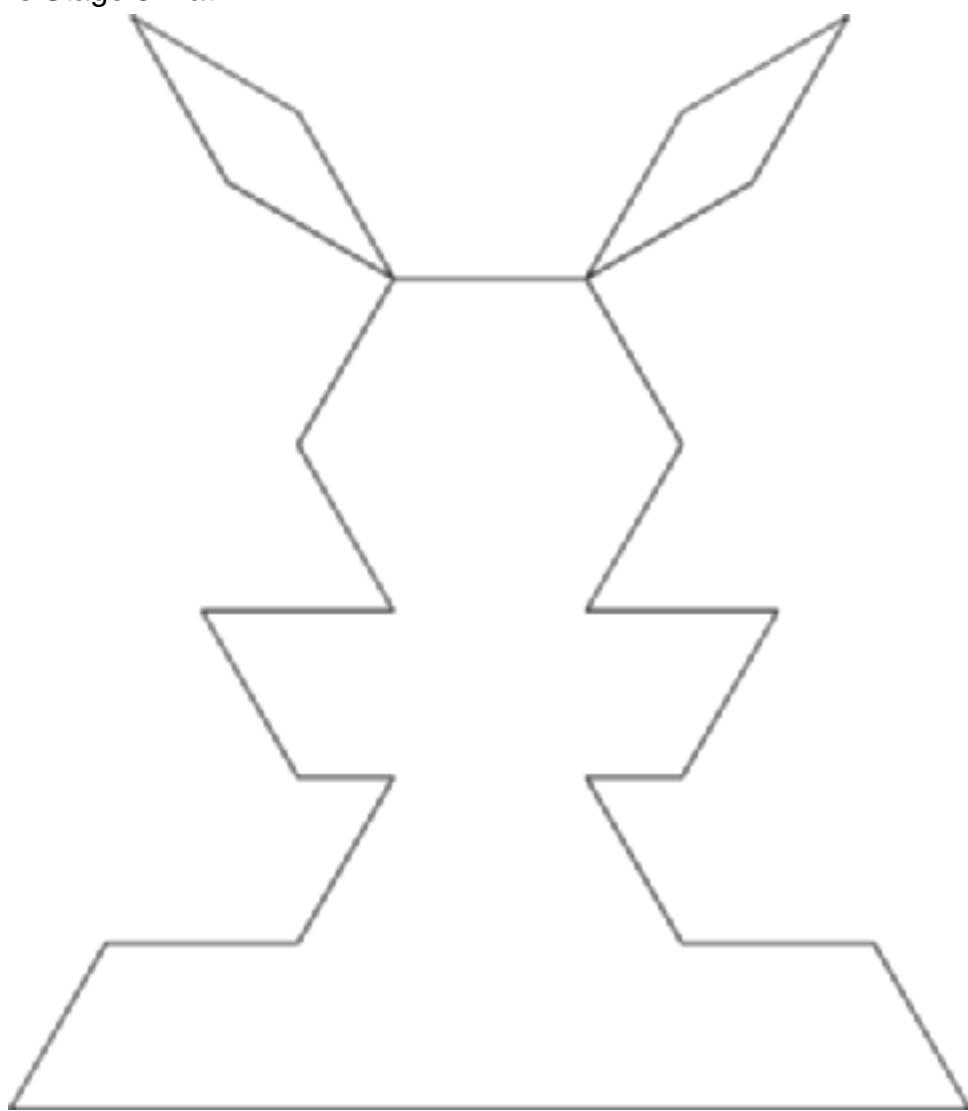
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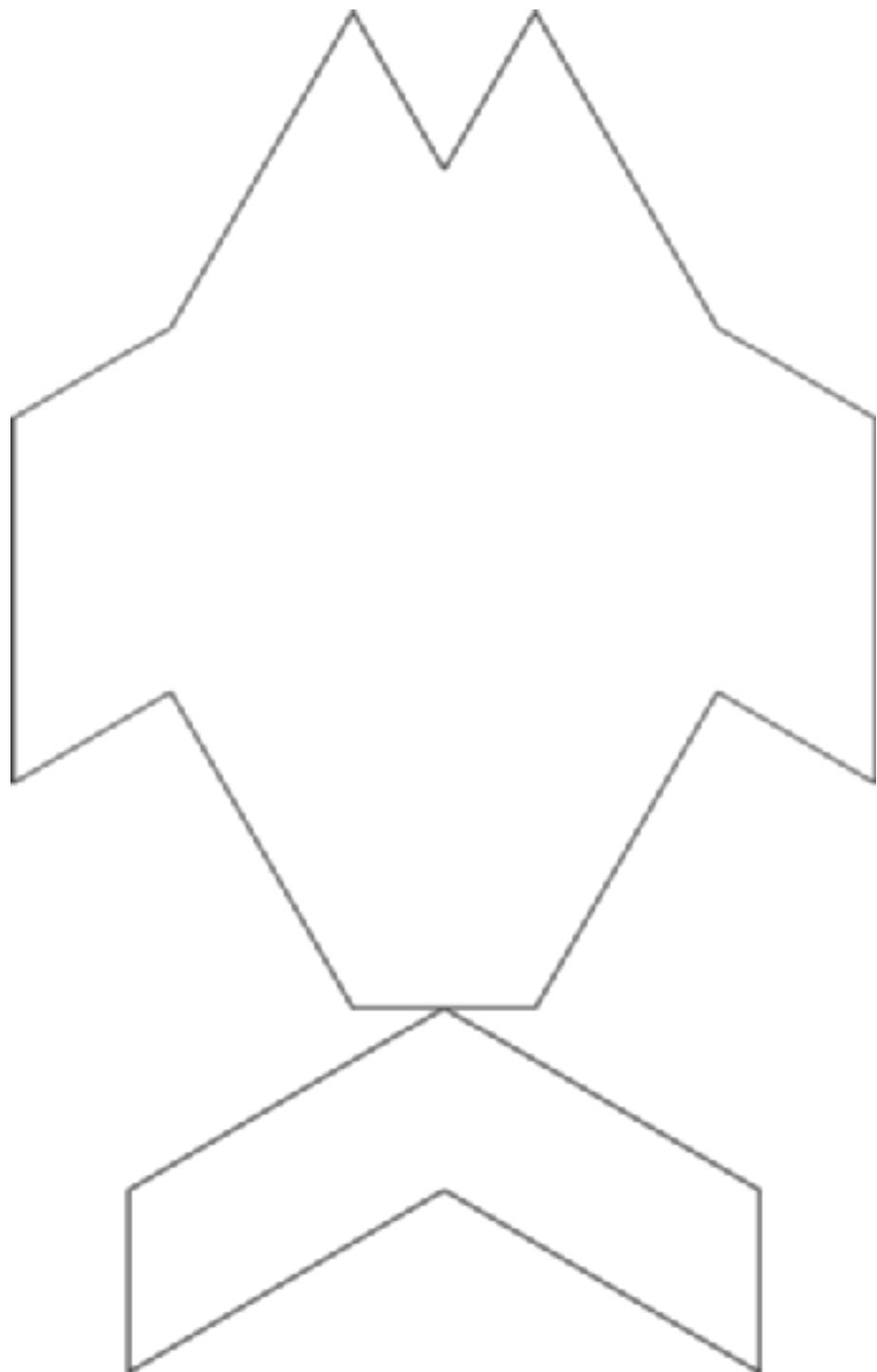
Pattern Blocks Stage 5 Mat



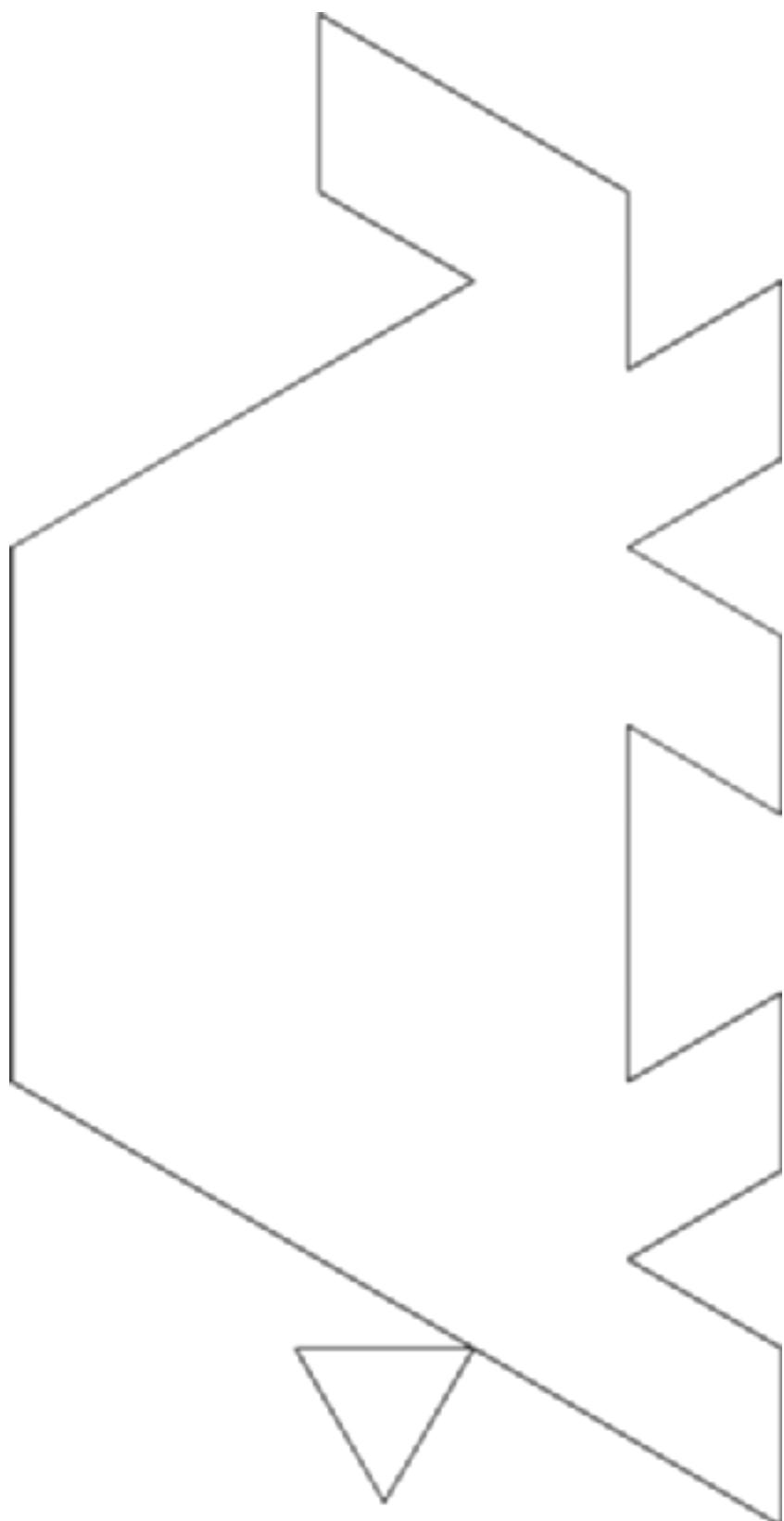
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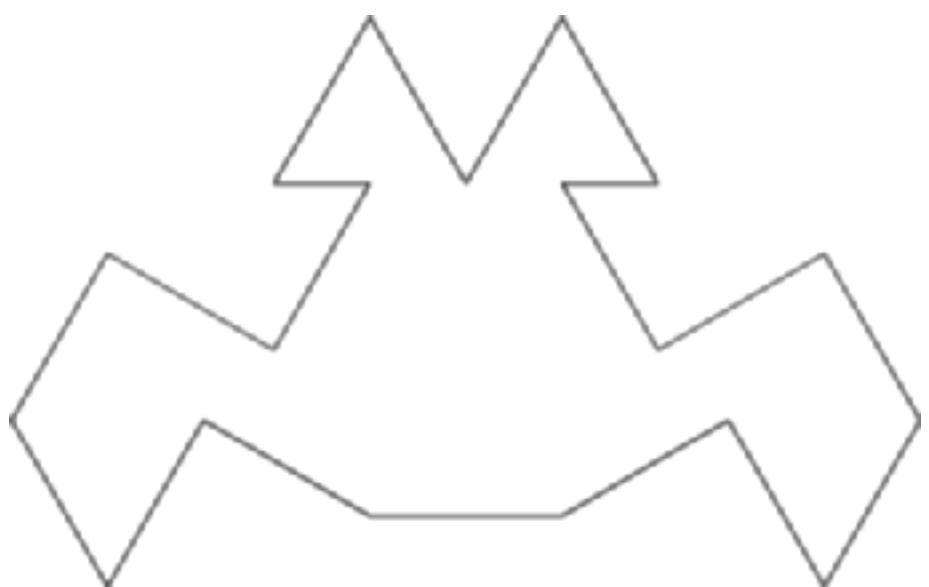
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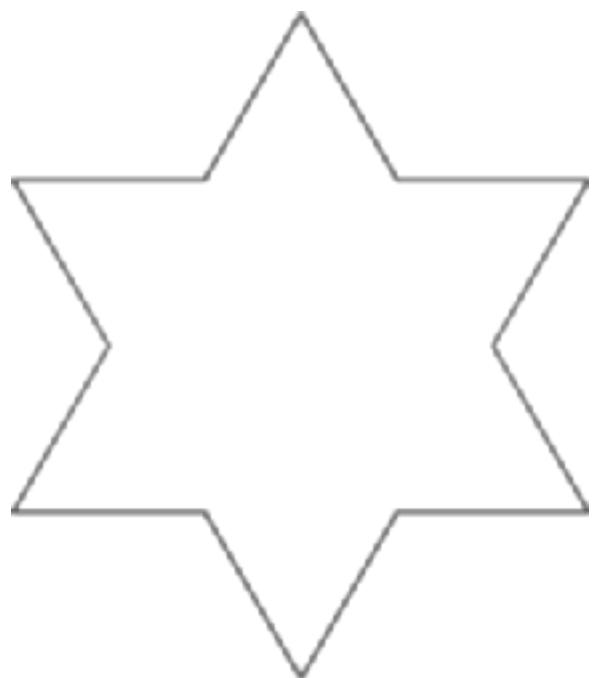
Pattern Blocks Stage 5 Mat



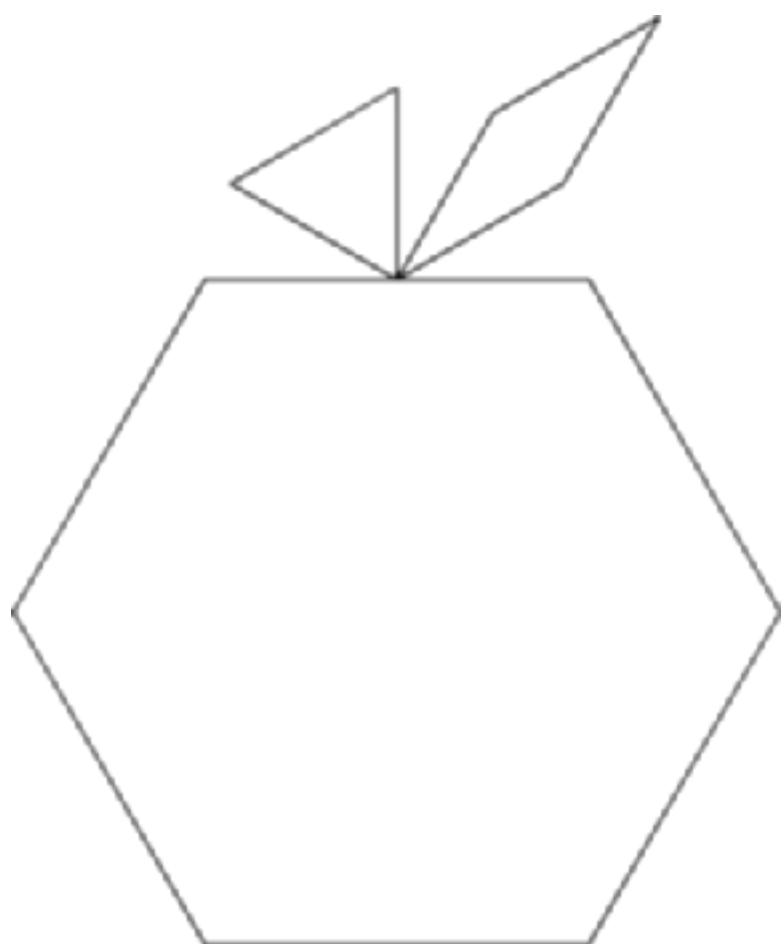
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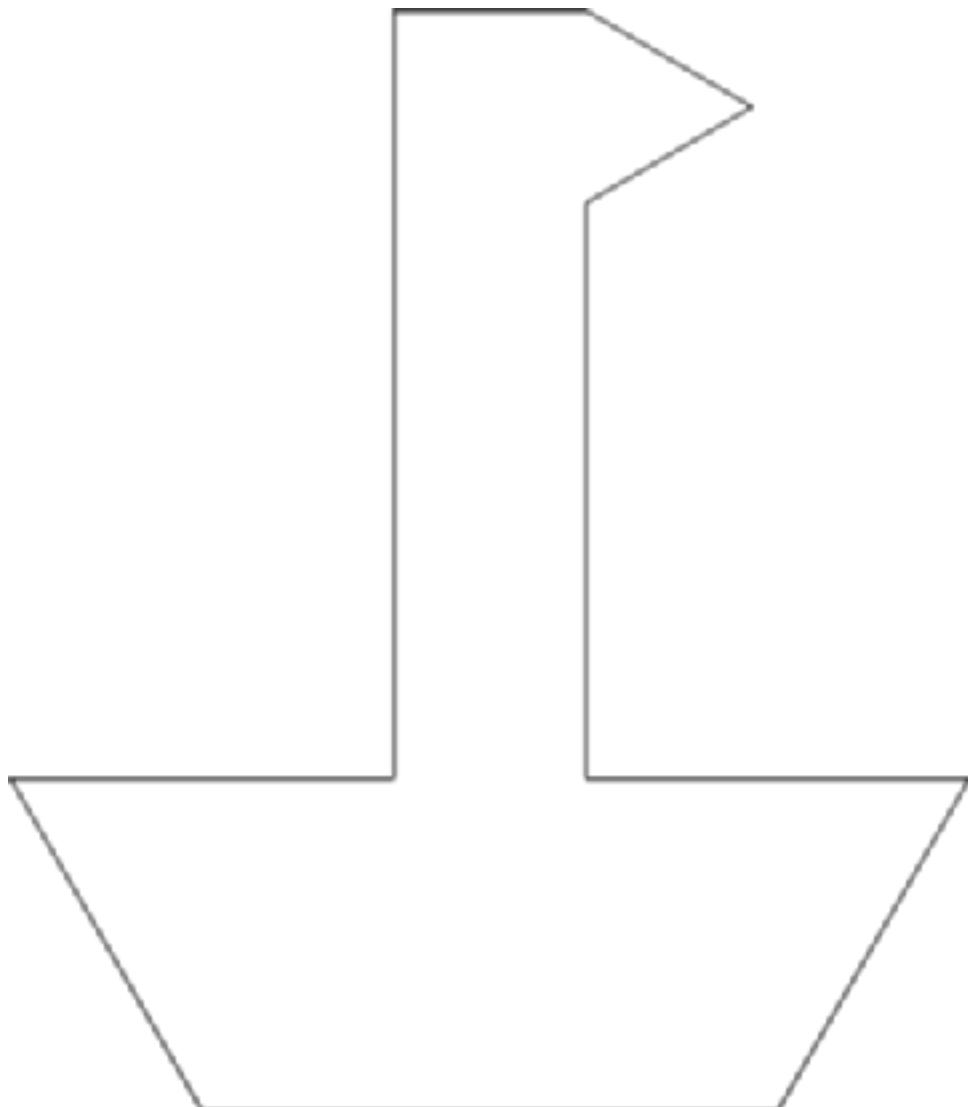
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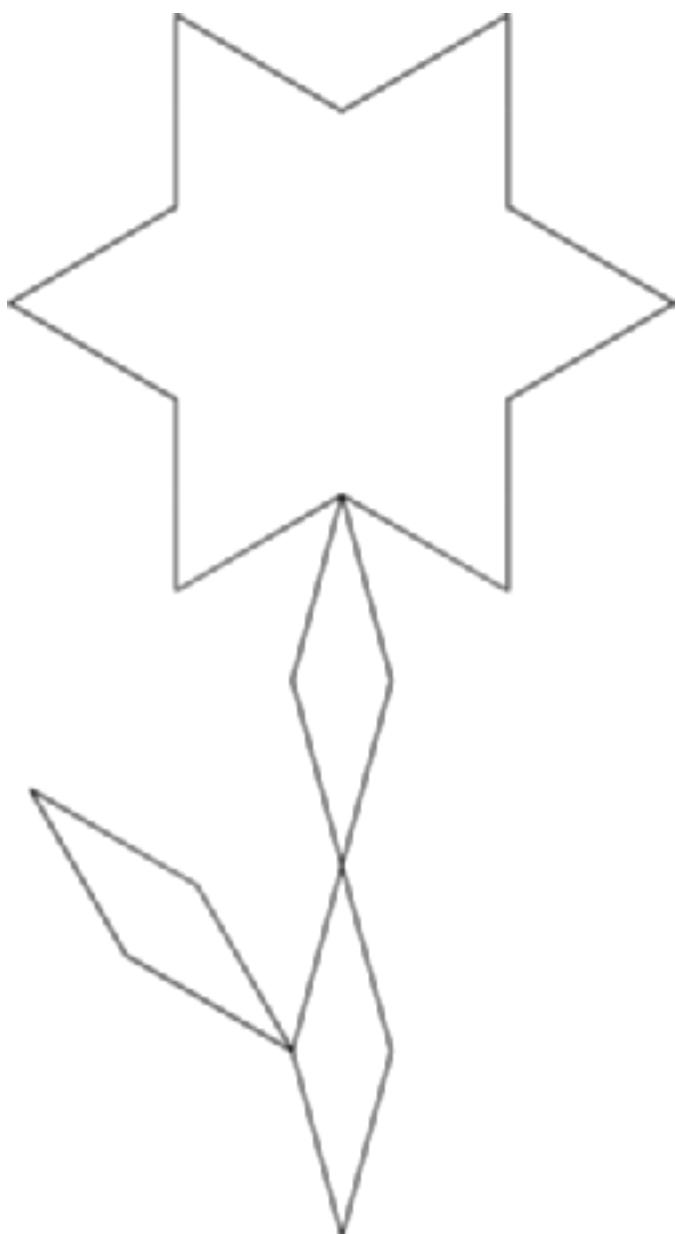
Pattern Blocks Stage 5 Mat



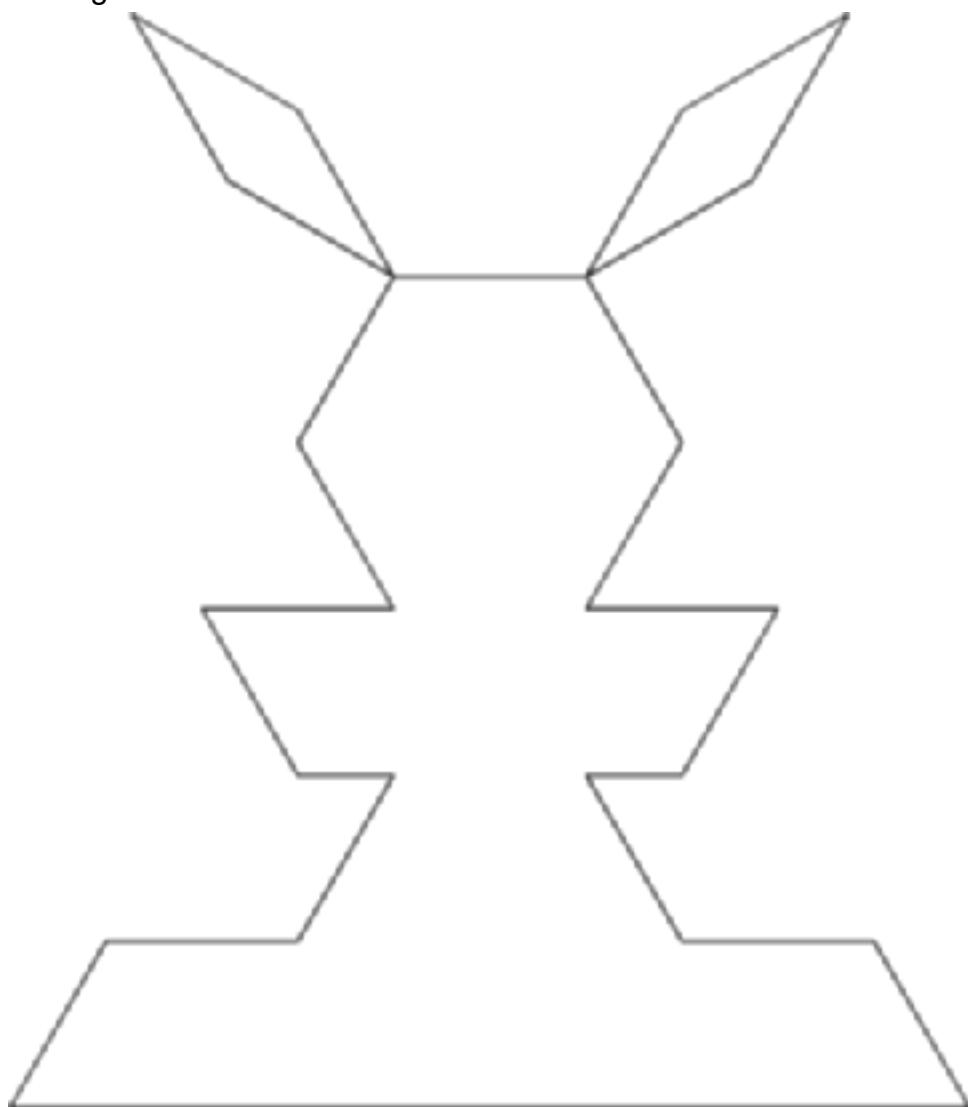
Pattern Blocks Stage 5 Mat



Pattern Blocks Stage 5 Mat



Pattern Blocks Stage 5 Mat



Picture Books Stage 3 Recording Sheet

Look for shapes in your book.

Sketch what you see.	Describe what you see.	What shape is it?

Picture Books Stage 2 Recording Sheet



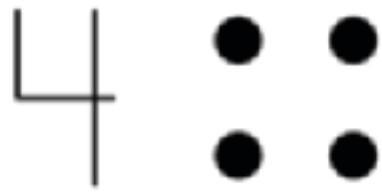
Picture Books Stage 2 Recording Sheet

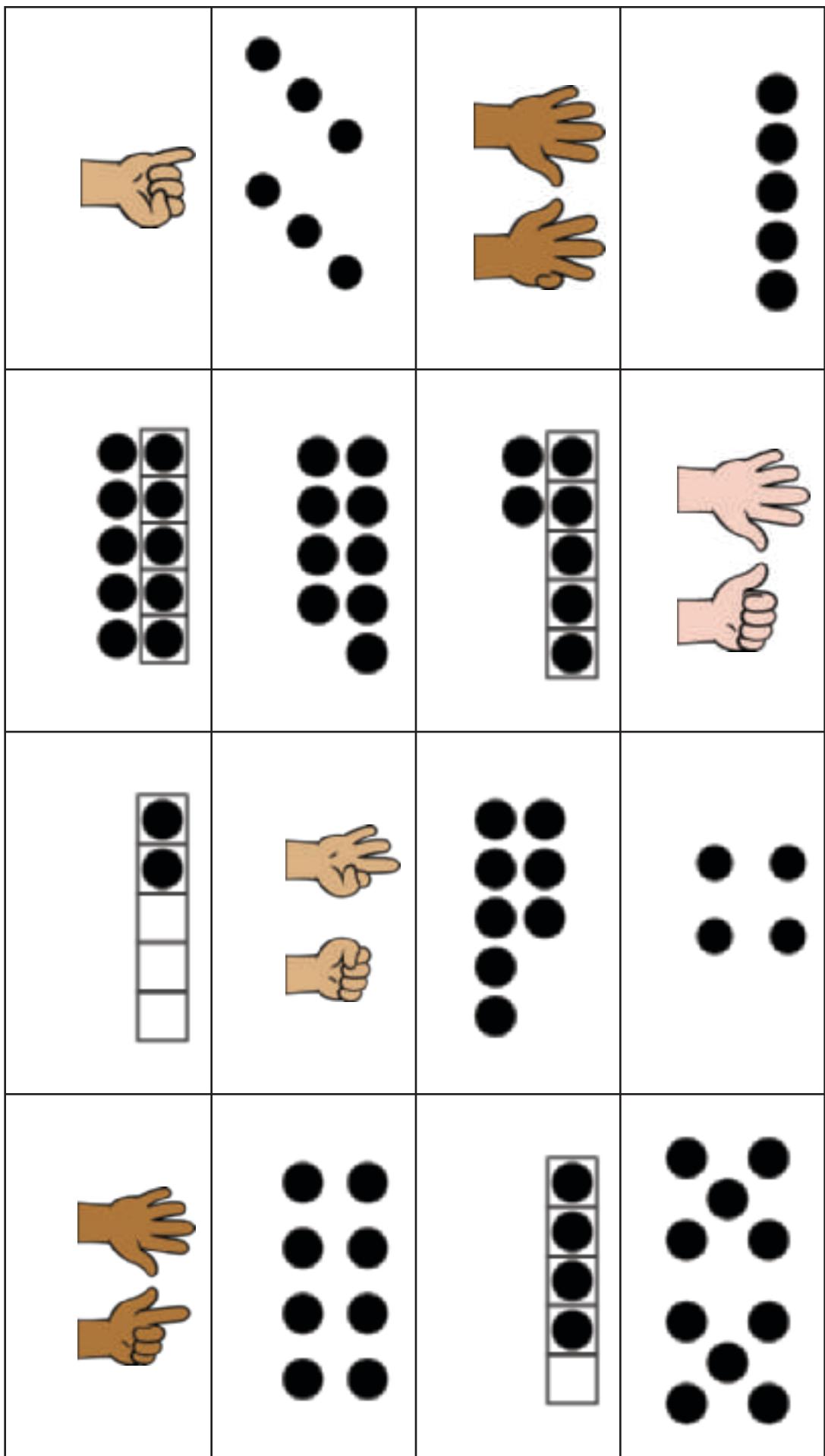
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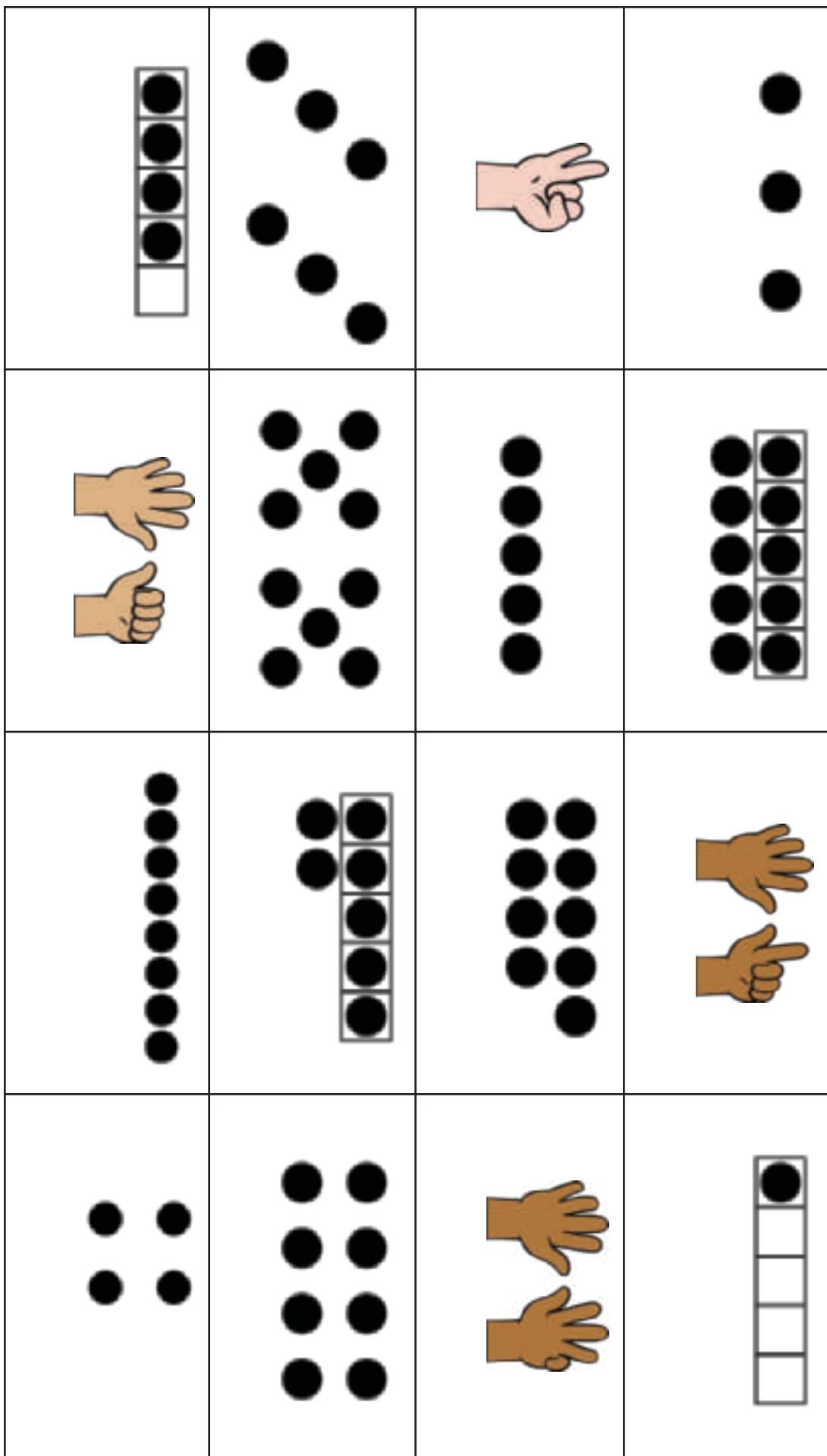
Picture Books Stage 2 Recording Sheet

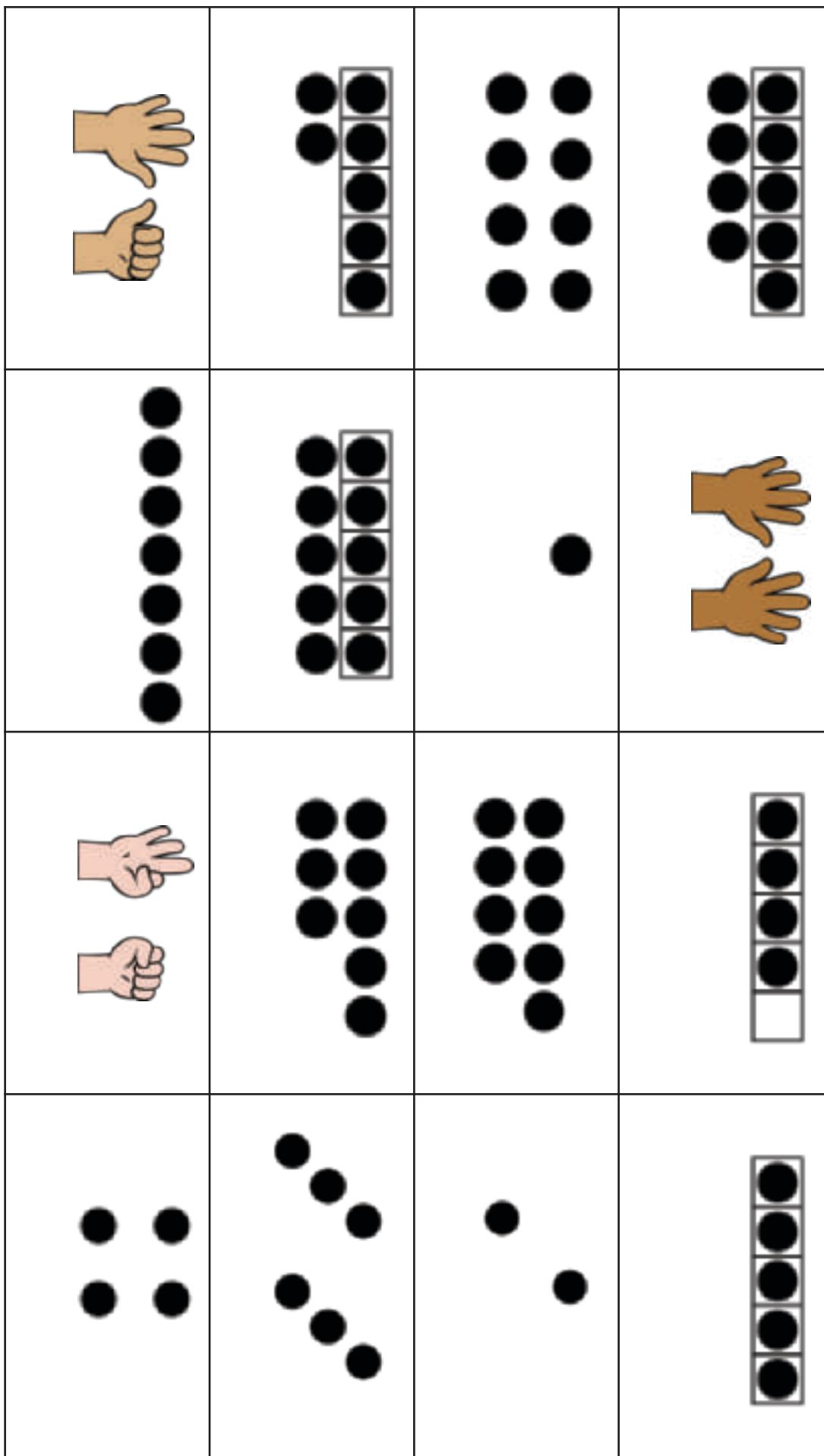
3 

Picture Books Stage 2 Recording Sheet

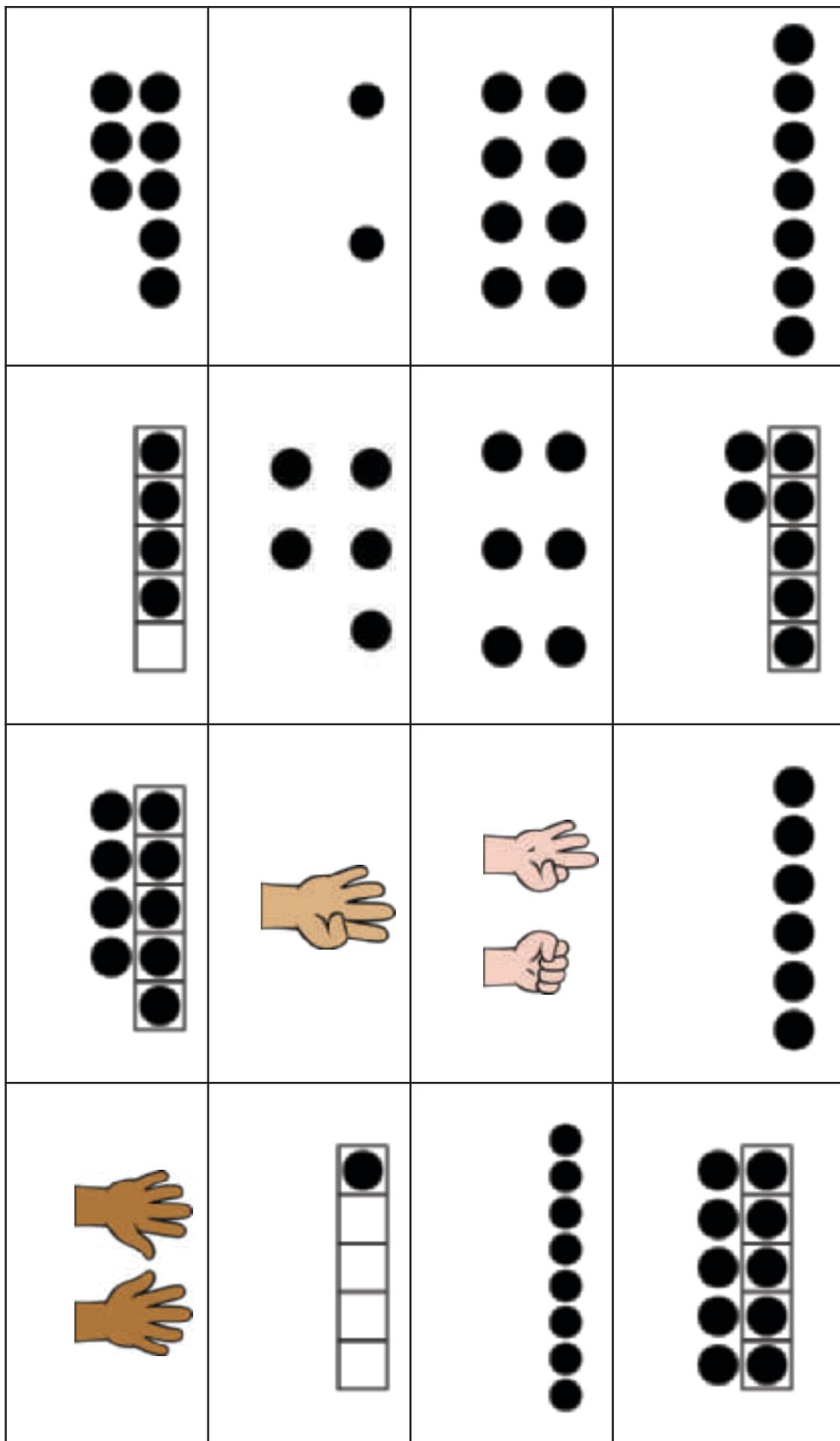


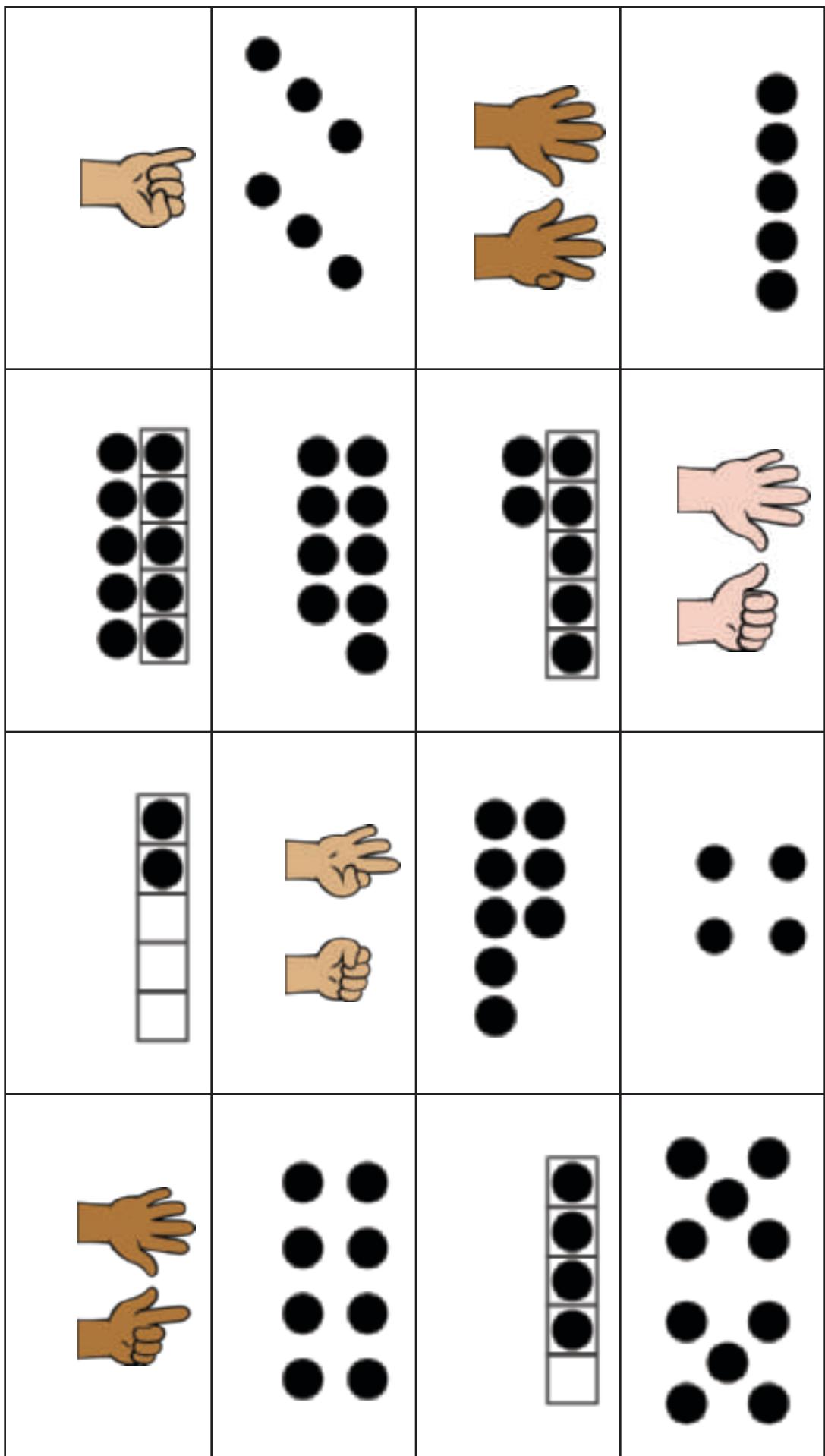


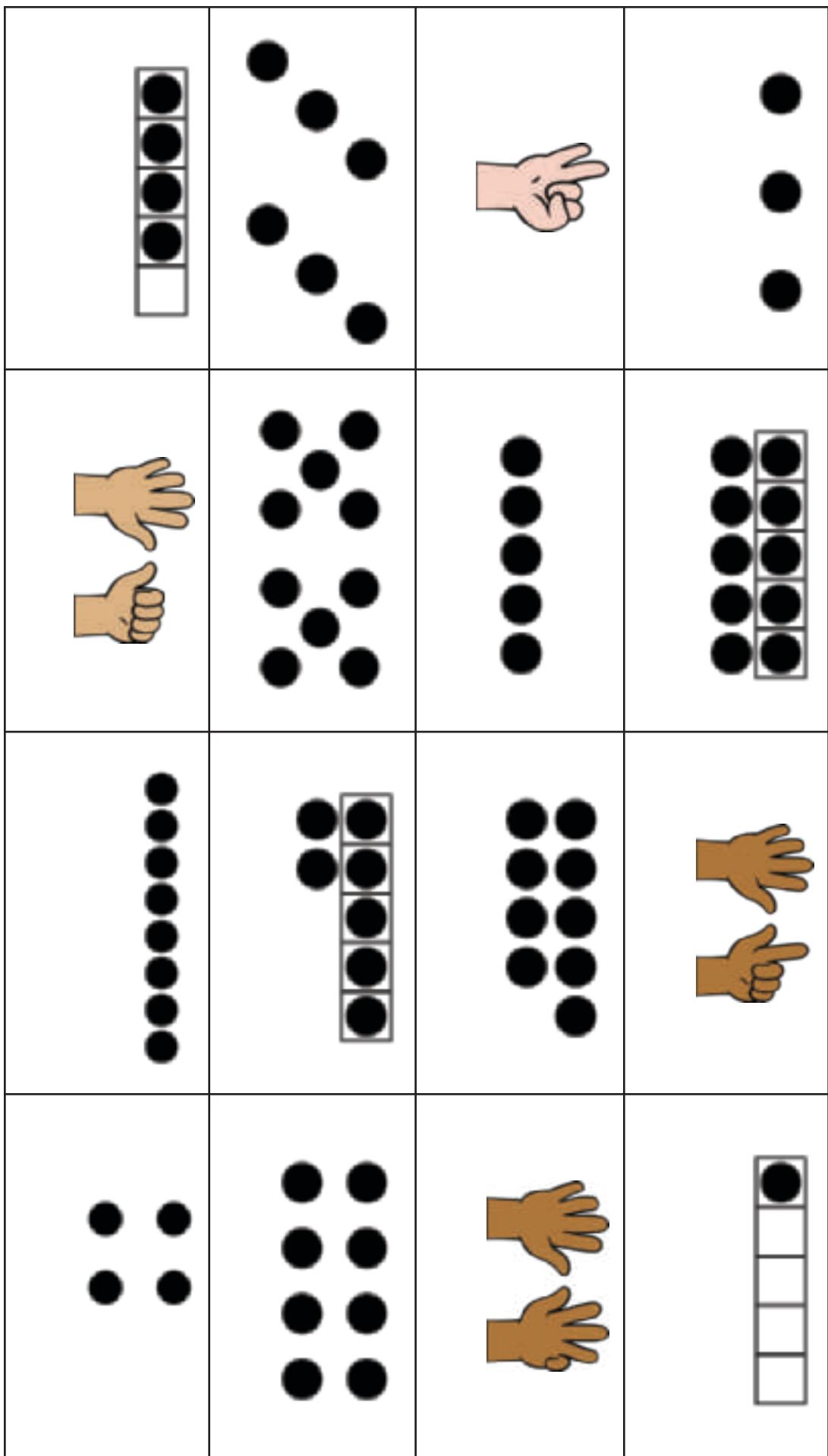


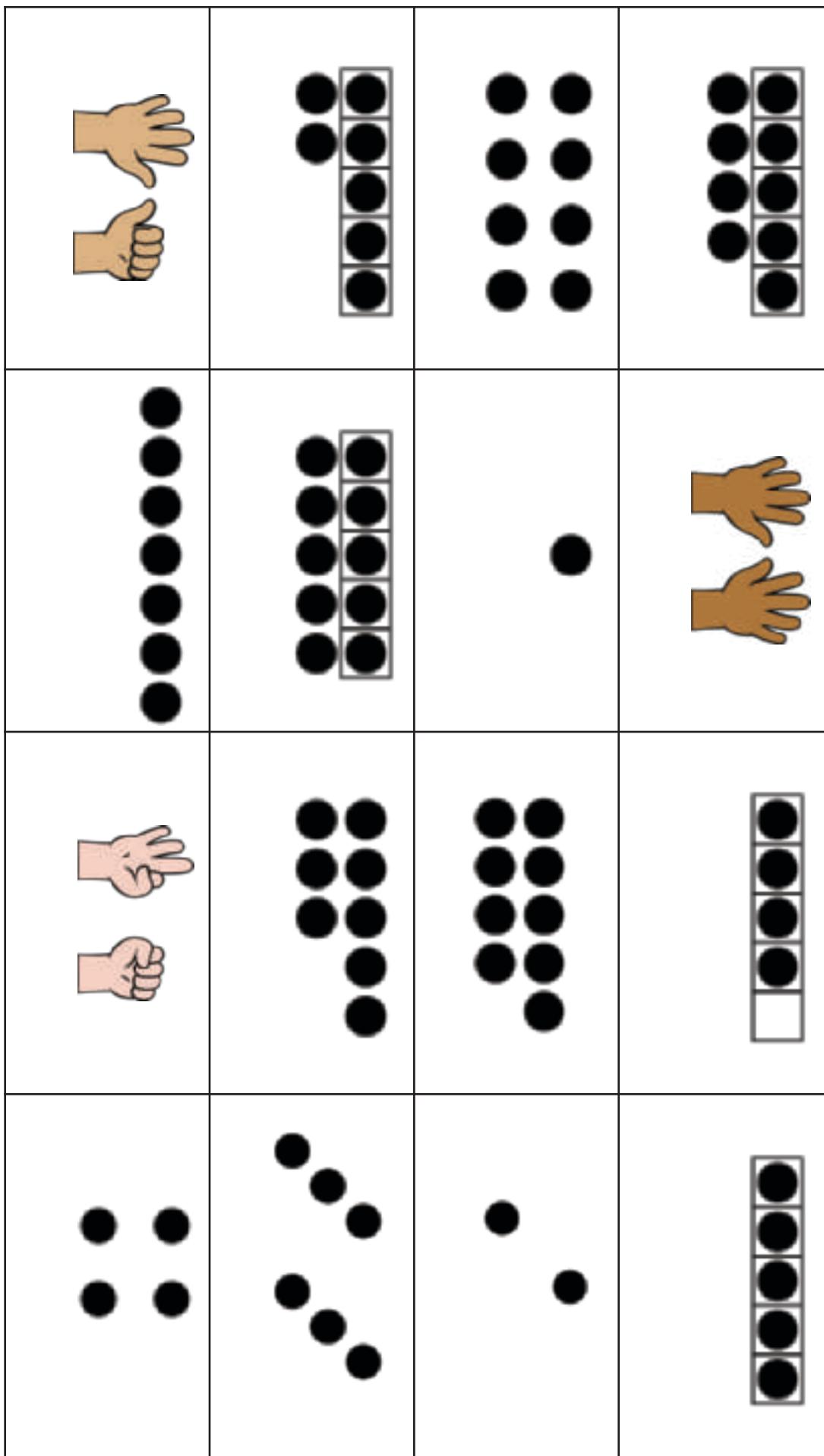


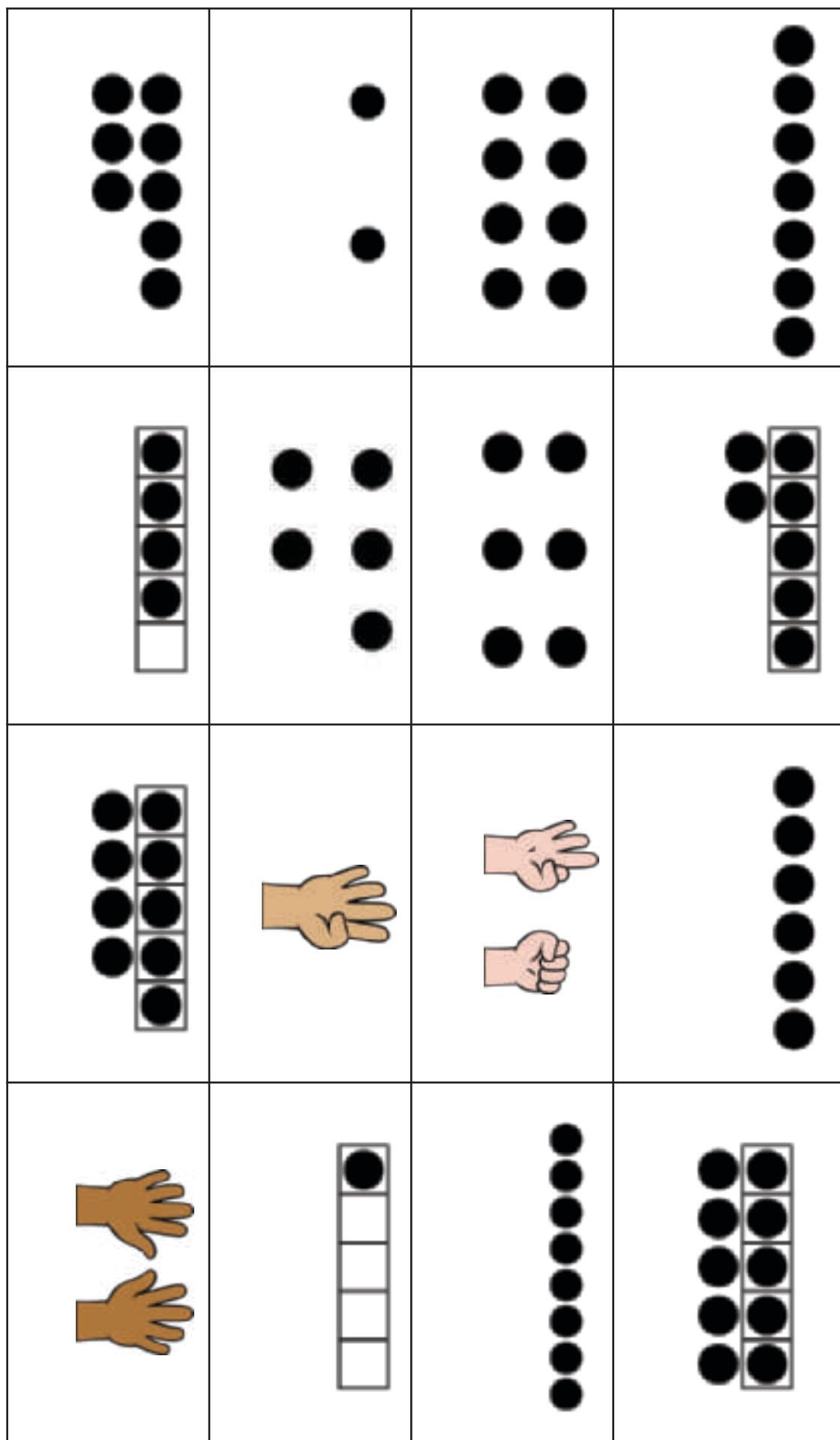
Bingo Stages 1-3 Gameboard











Bingo Stage 1 Cards

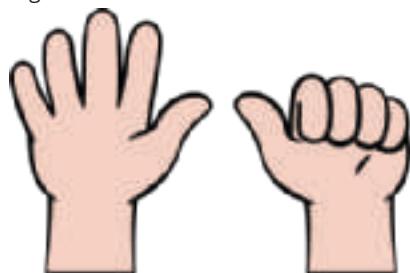
Bingo Image Card



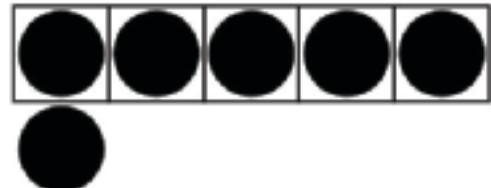
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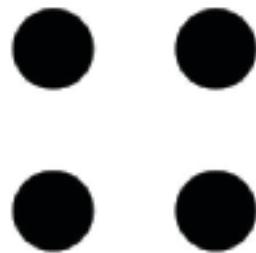
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Bingo Image Card



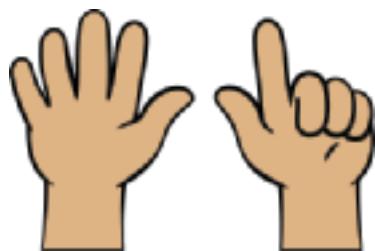
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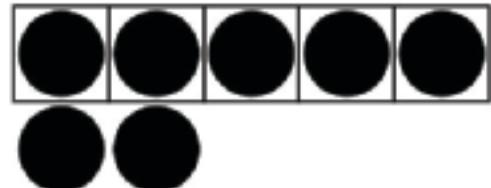
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Bingo Image Card

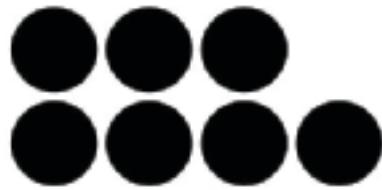


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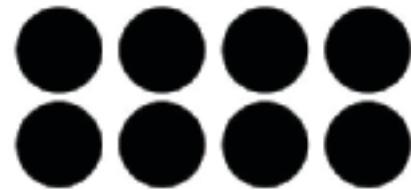


Bingo Stage 1 Cards

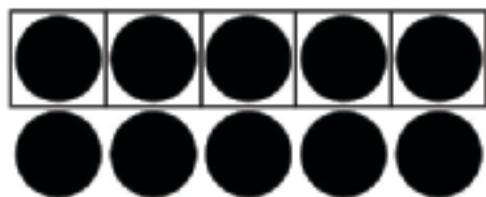
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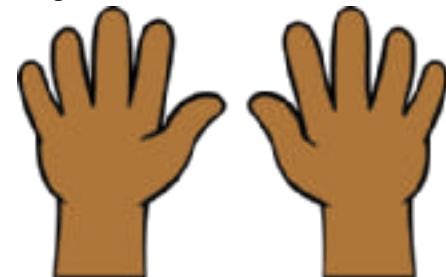
Bingo Image Card



Bingo Image Card



Bingo Image Card



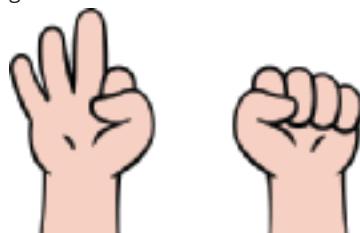
Bingo Image Card



Bingo Image Card



Bingo Image Card

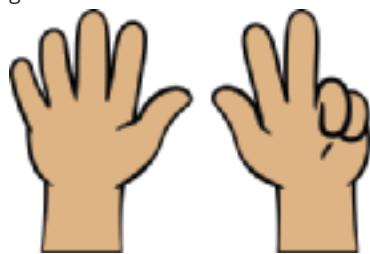


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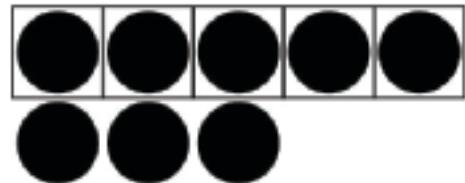


Bingo Stage 1 Cards

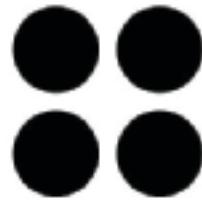
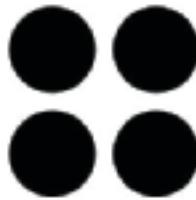
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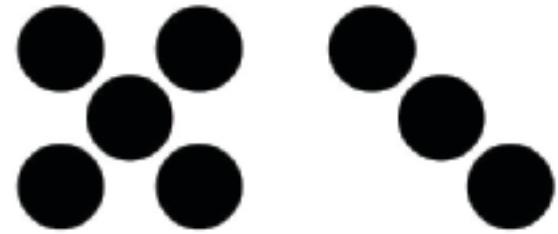
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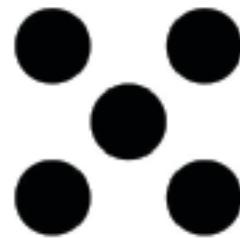
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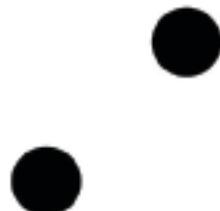
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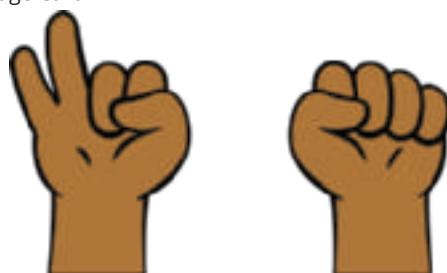
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Bingo Image Card



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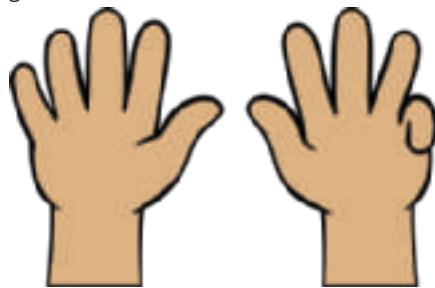


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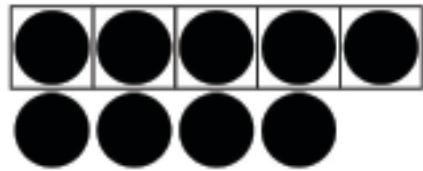


Bingo Stage 1 Cards

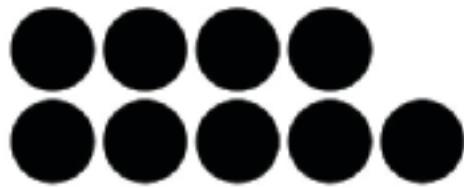
Bingo Image Card



Bingo Image Card



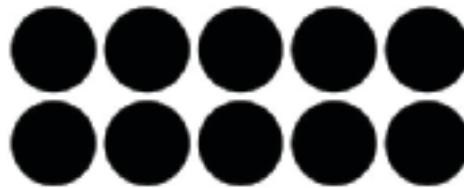
Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Counting Collections Stages 1 and 2 Recording Sheet

How many are there? Show how you counted.

My count:

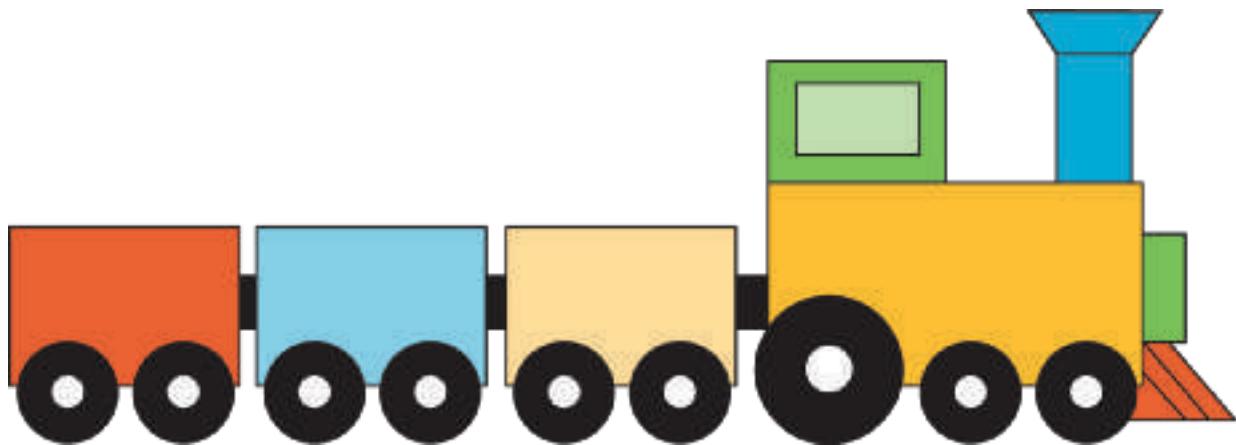
How many? _____

Picture A

Use blocks to build a house.

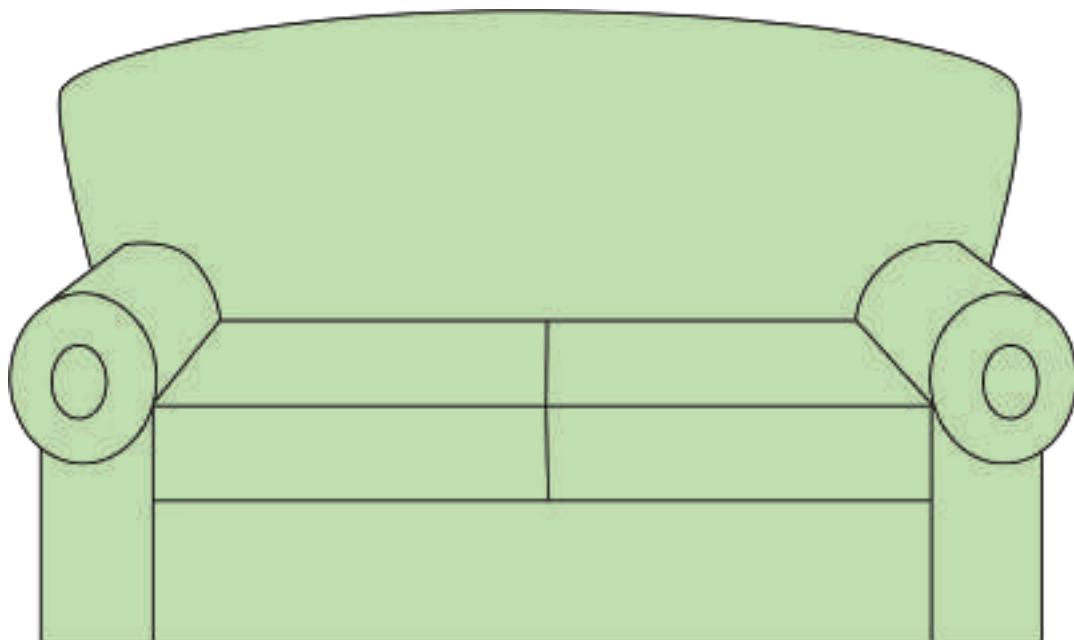


Use blocks to build a train.



Picture C

Use blocks to build a couch.



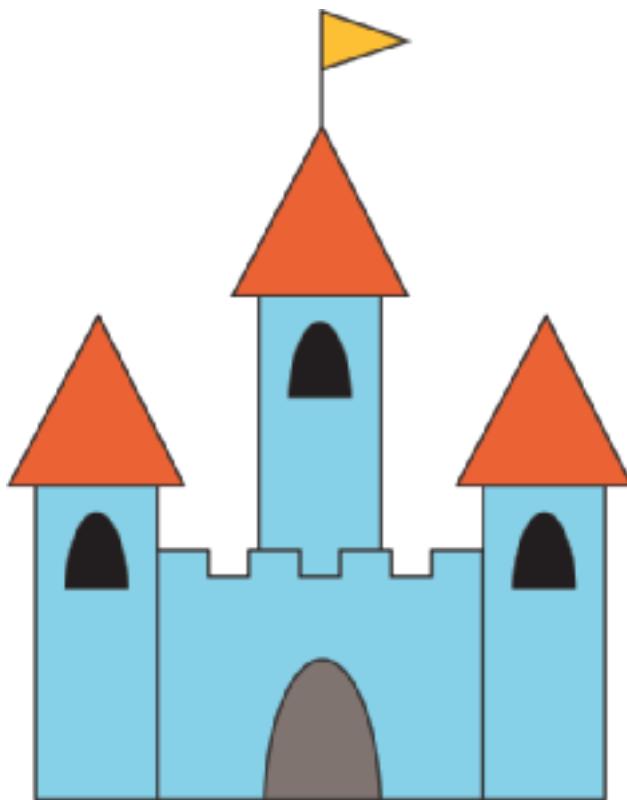
Use blocks to build a bus.



Use blocks to build a school.



Use blocks to build a castle.

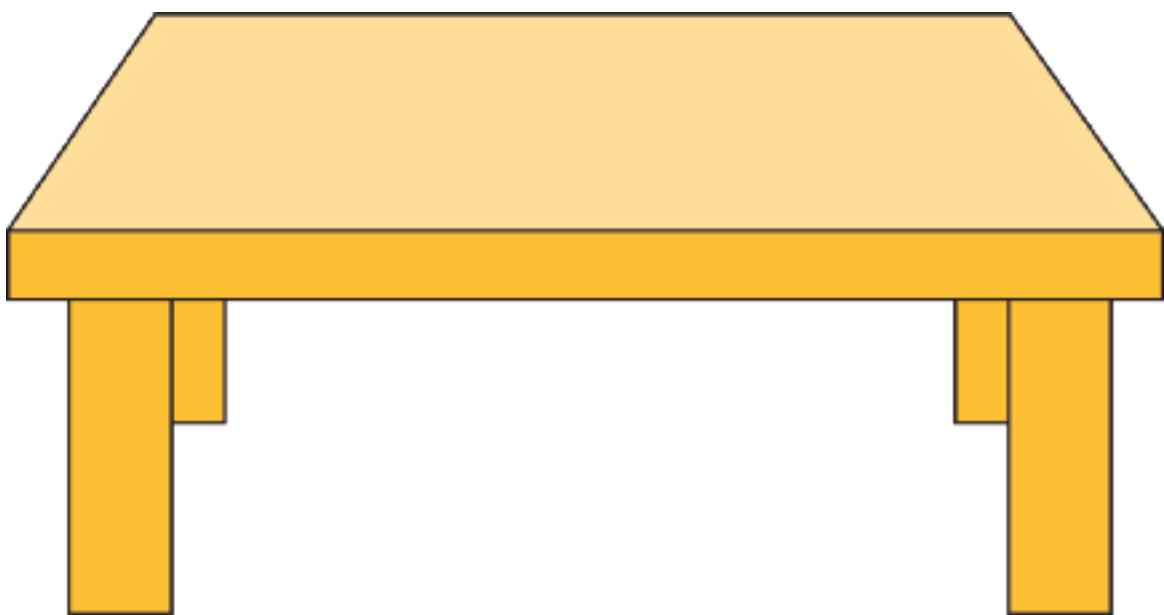


Picture G

Use blocks to build a road.

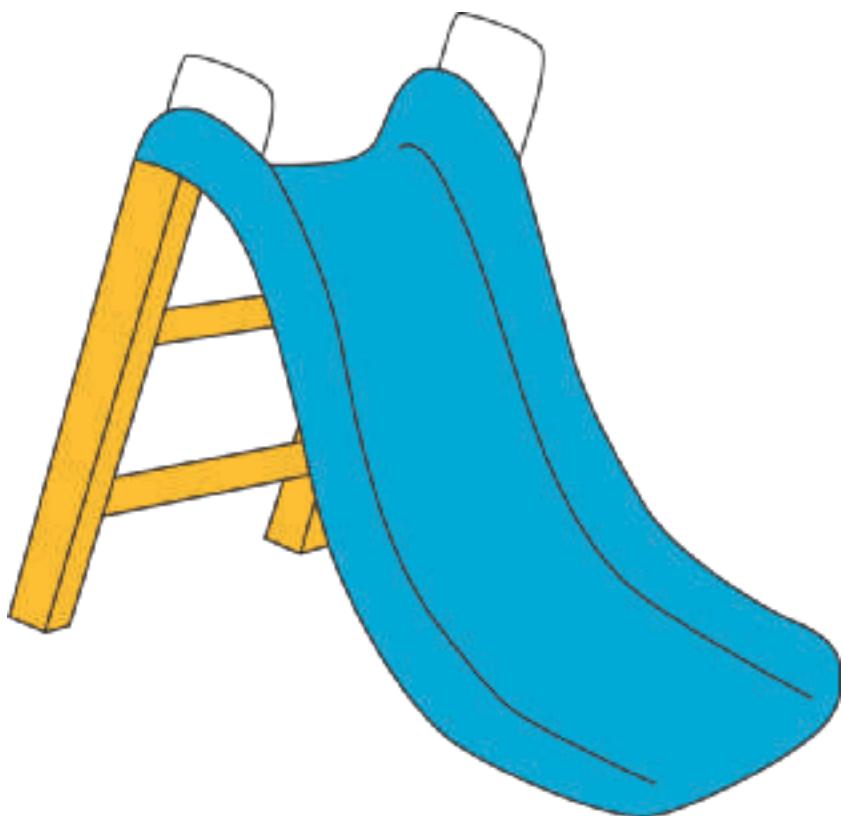


Use blocks to build a table.

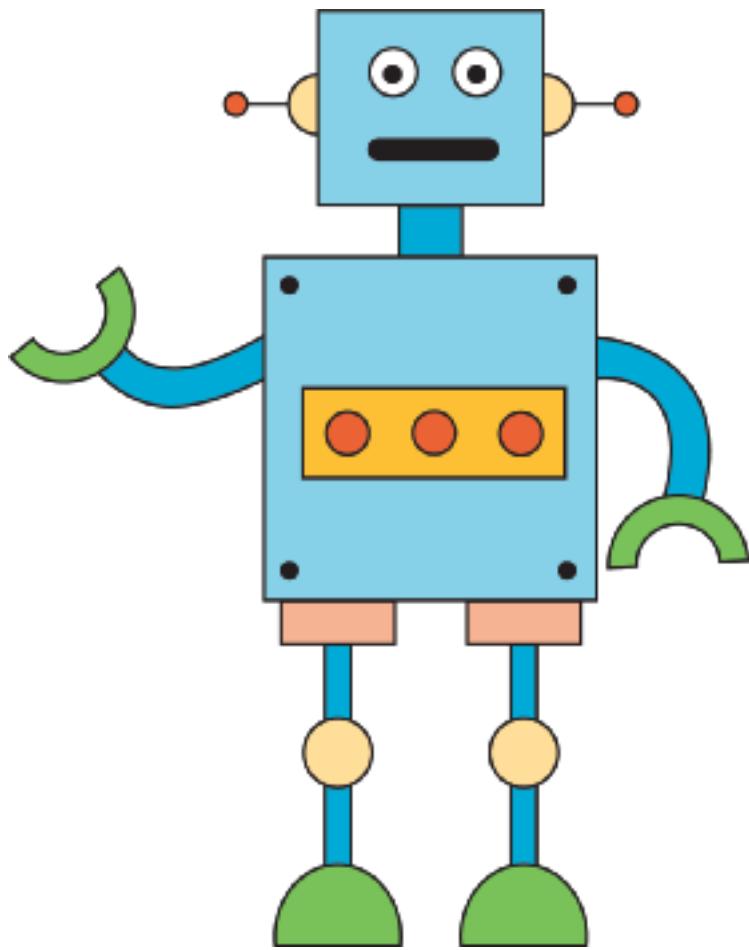


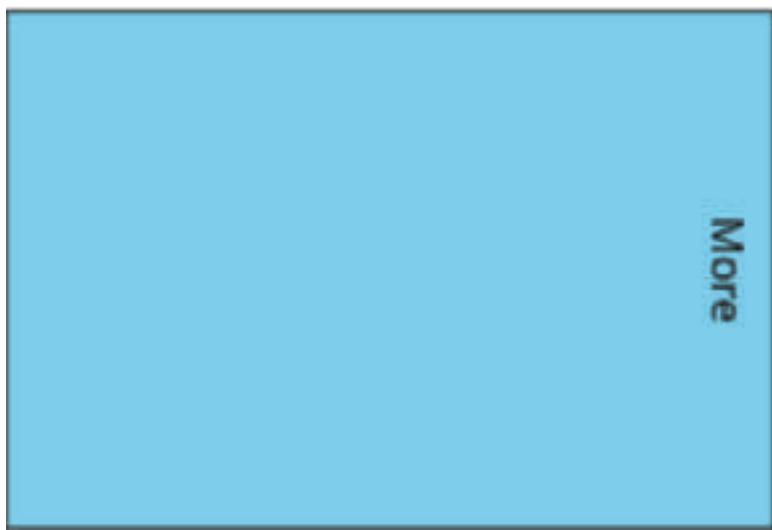
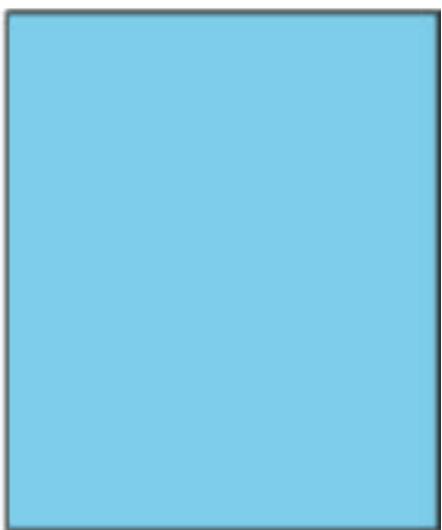
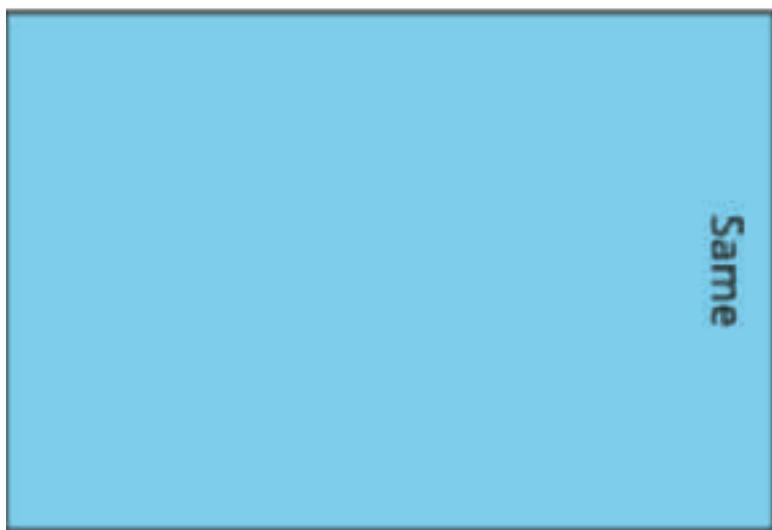
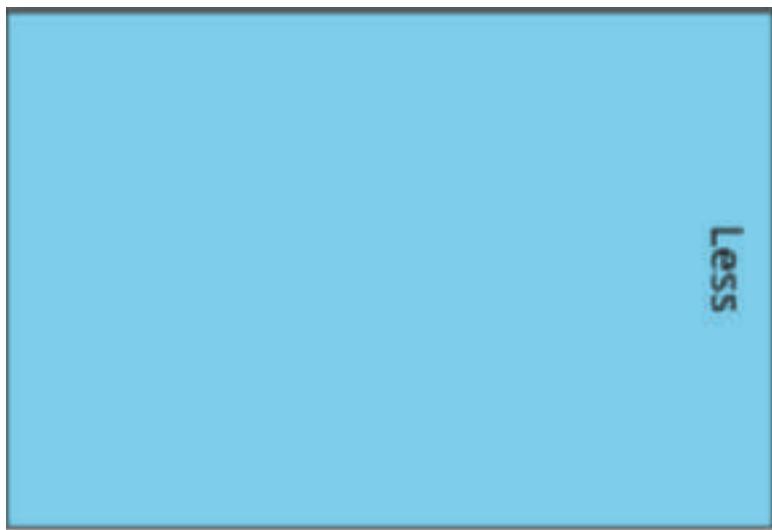
Picture I

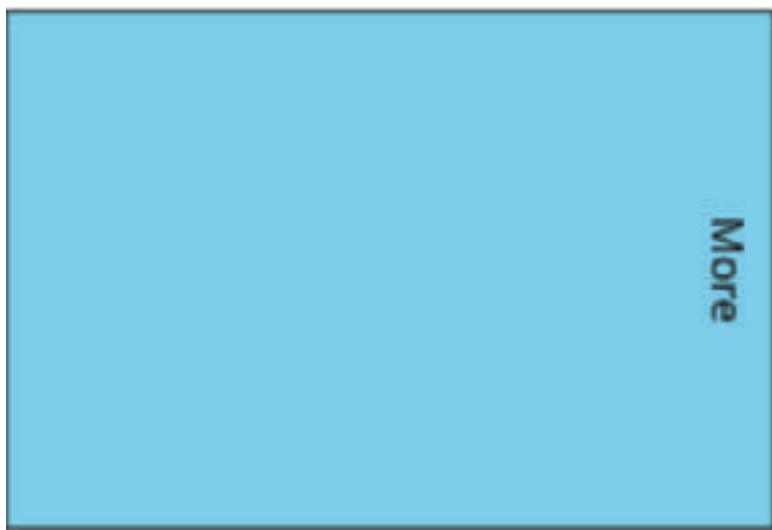
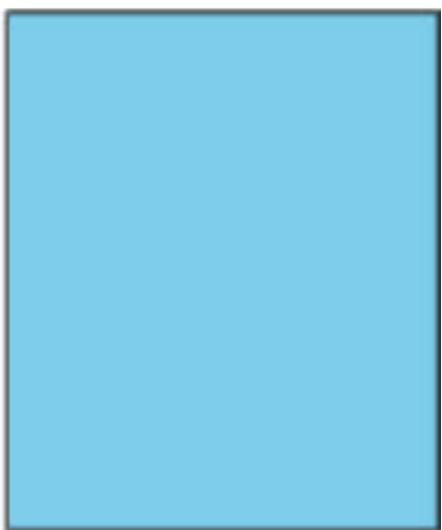
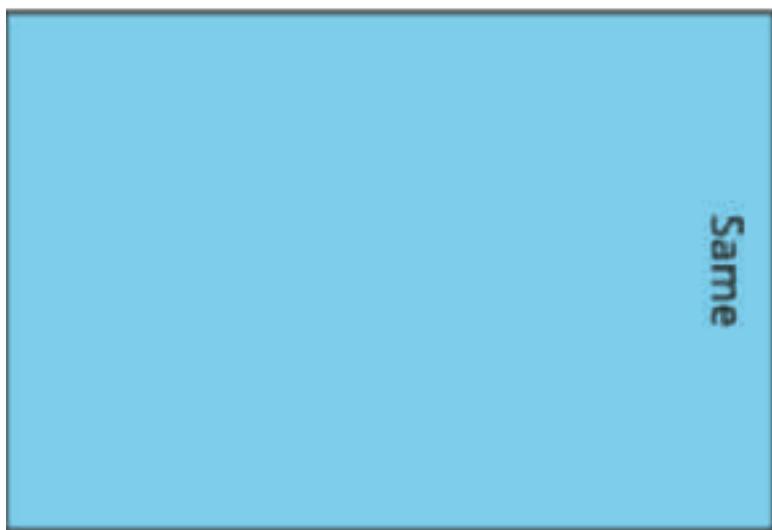
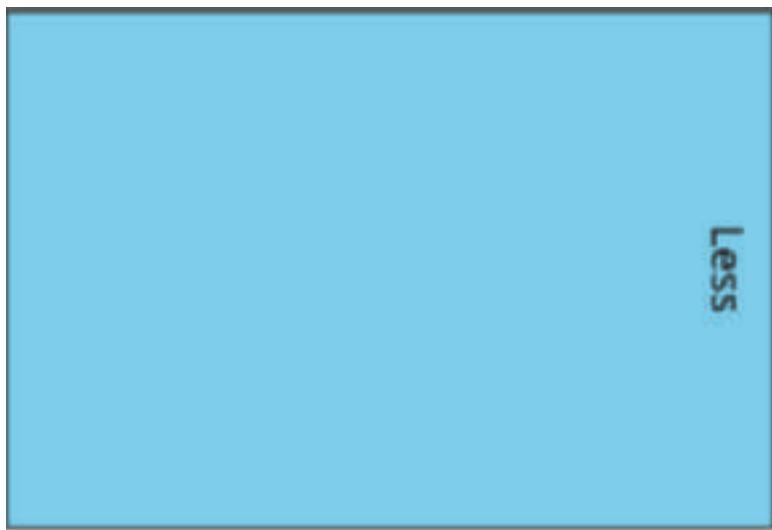
Use blocks to build a slide.

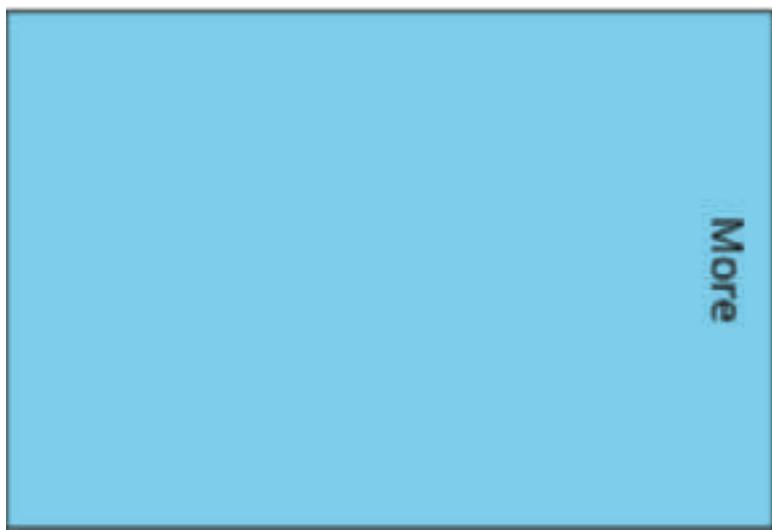
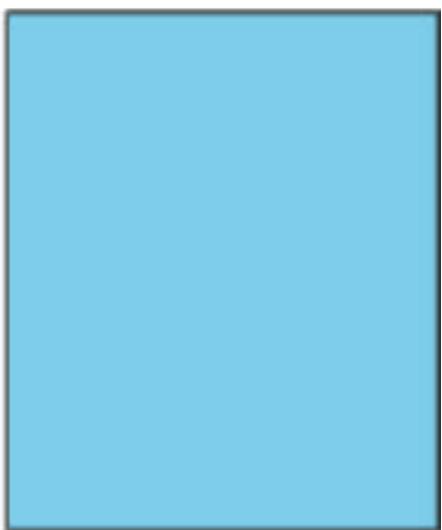
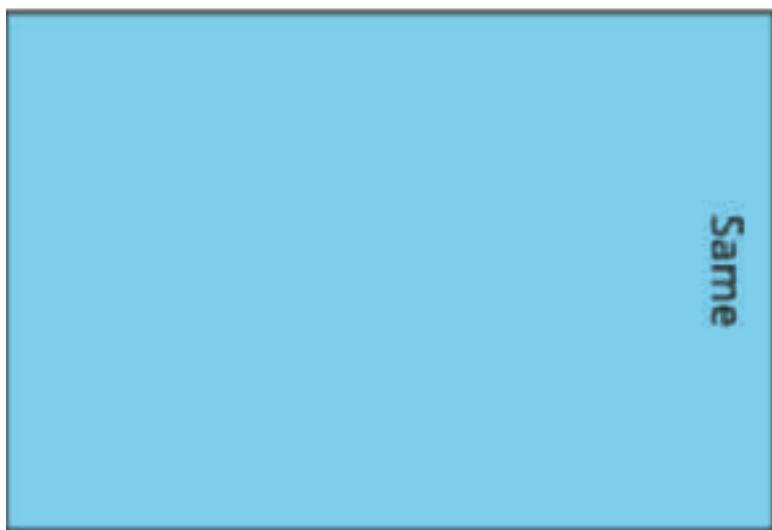
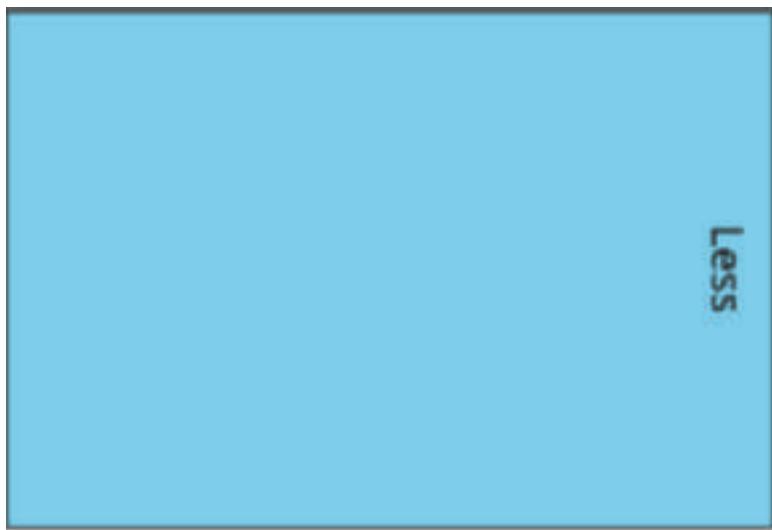


Use blocks to build a robot.









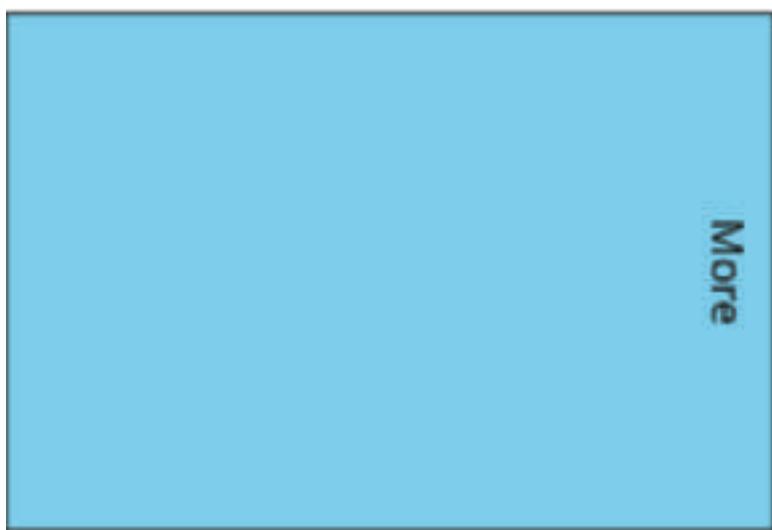
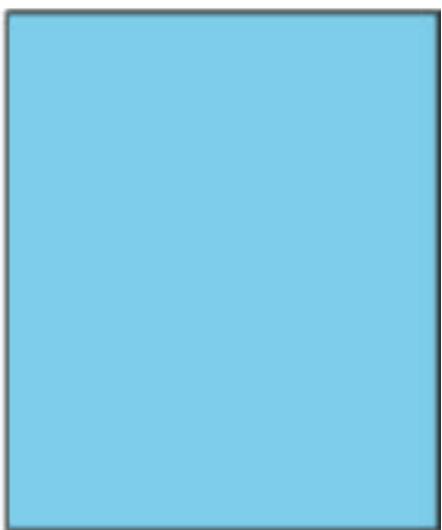
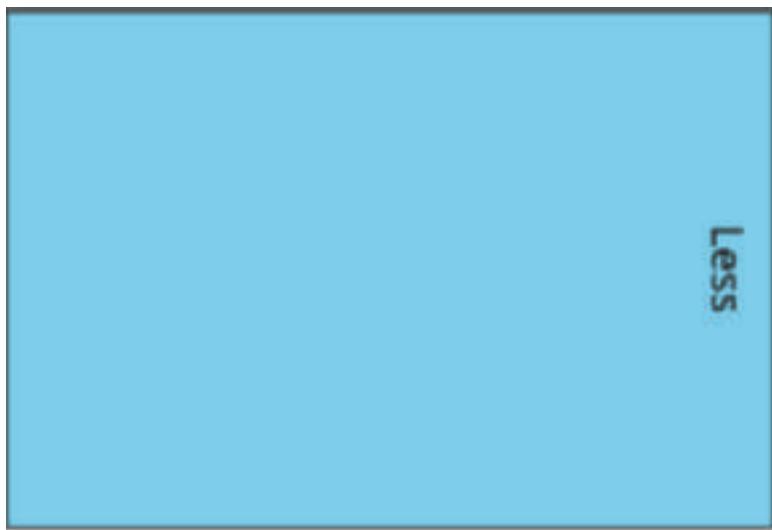


Image Cards Grade K

Image Cards Grade K



Image Cards Grade K



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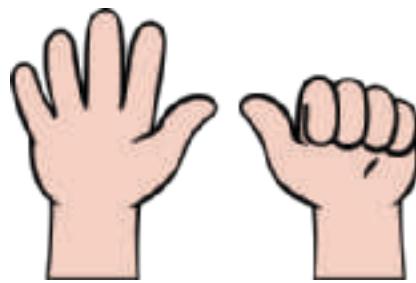


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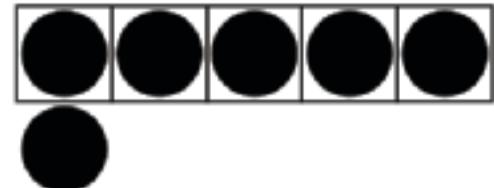


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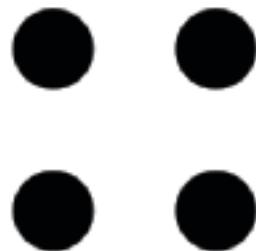


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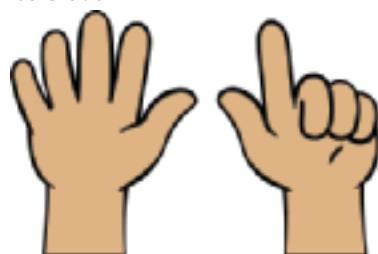


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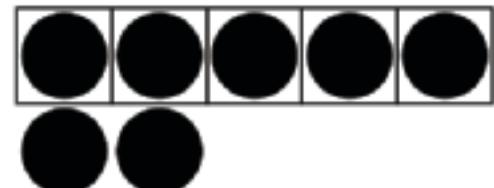


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Image Cards Grade K



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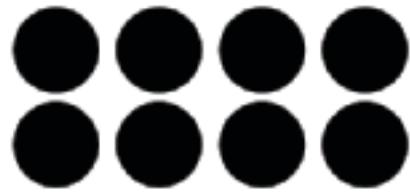


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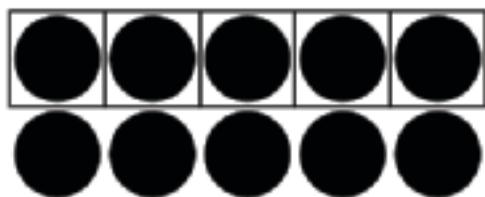


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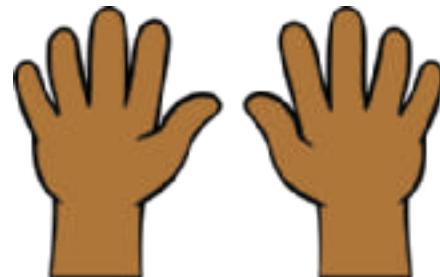


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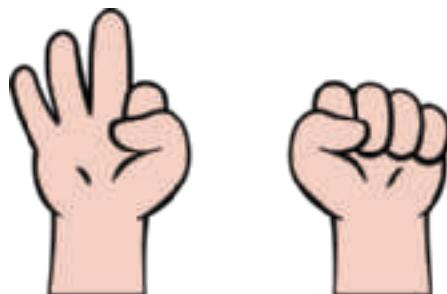


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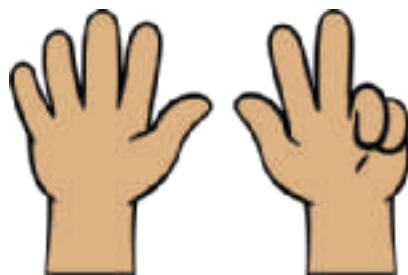


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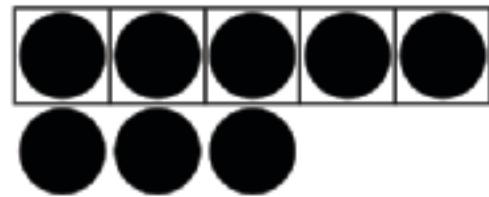


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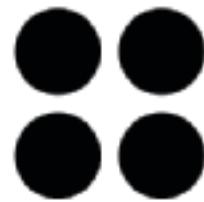


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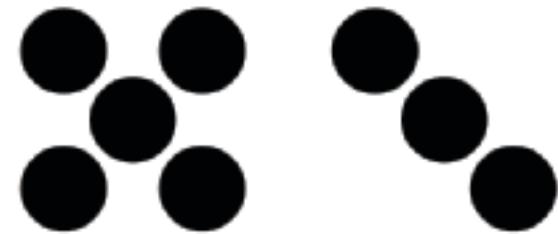


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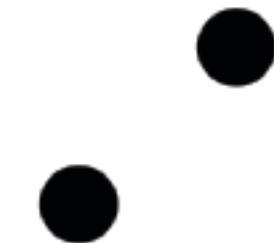


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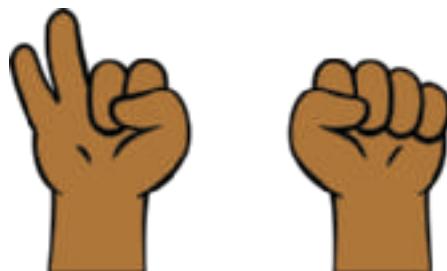


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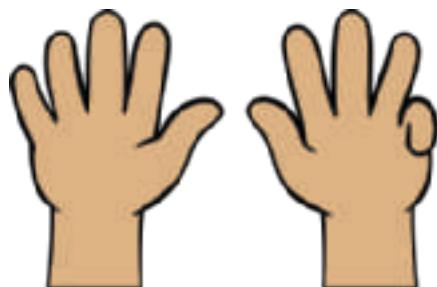


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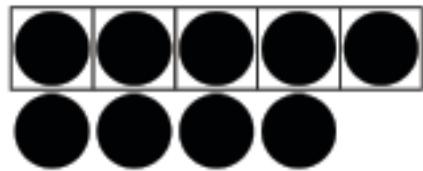


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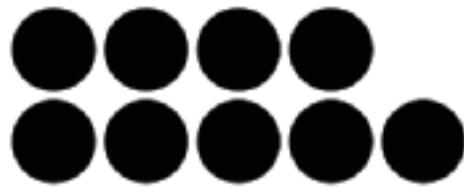


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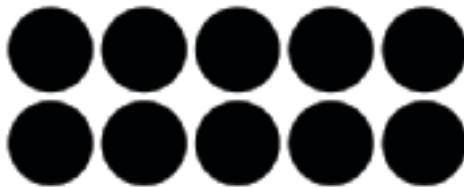


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Image Cards Grade K



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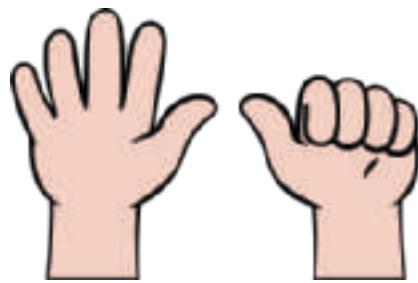


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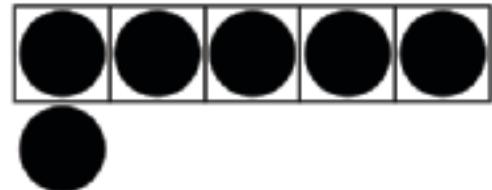


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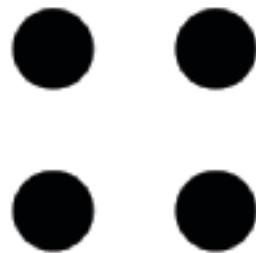


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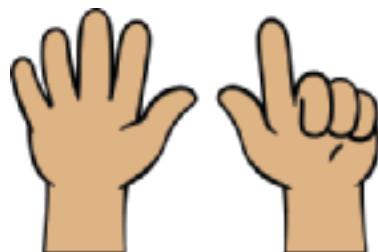


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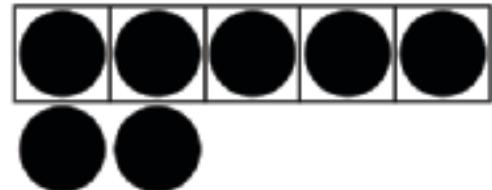


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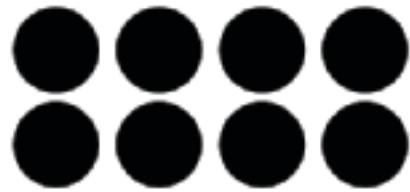


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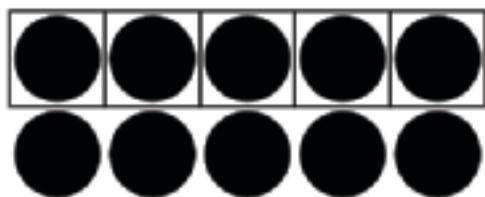


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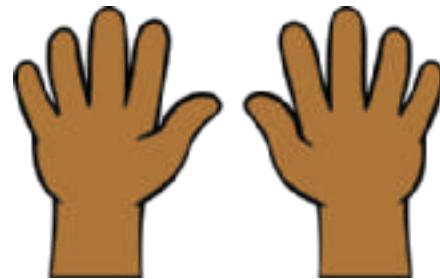


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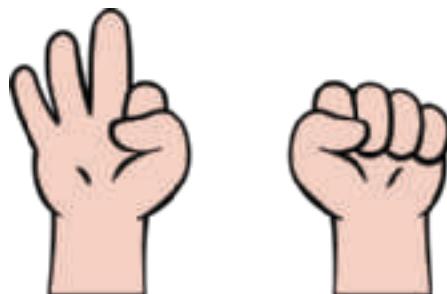


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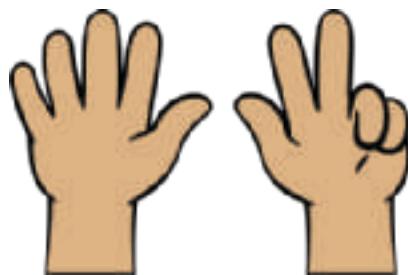


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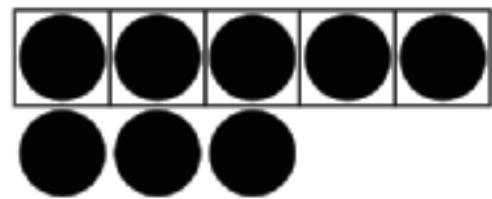


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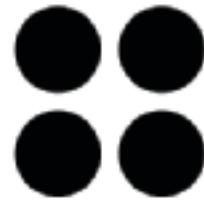
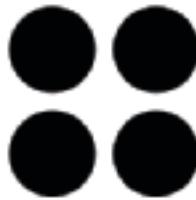


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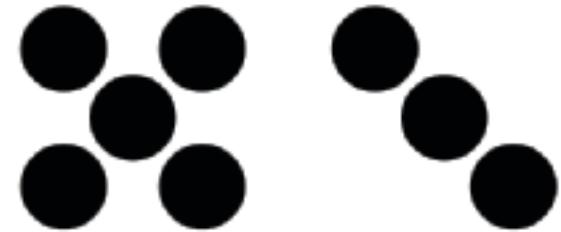


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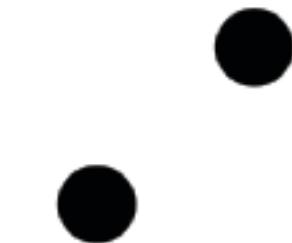


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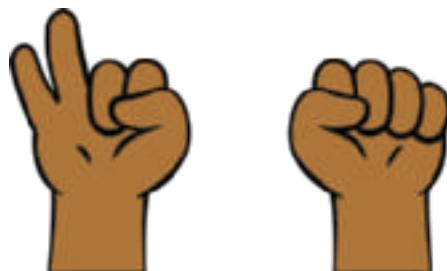


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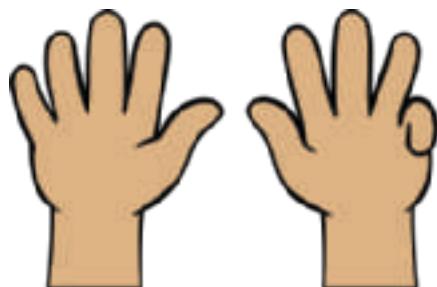


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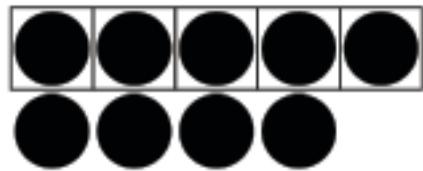


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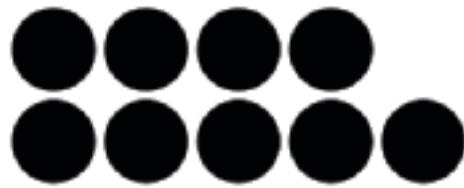


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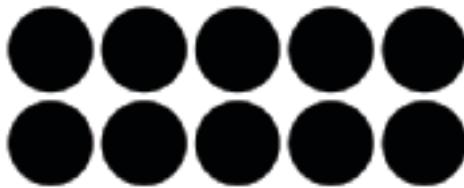


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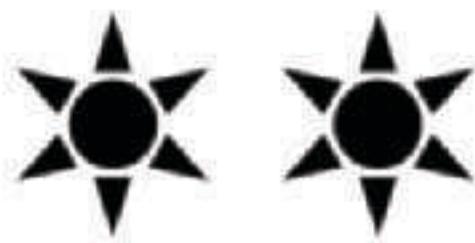


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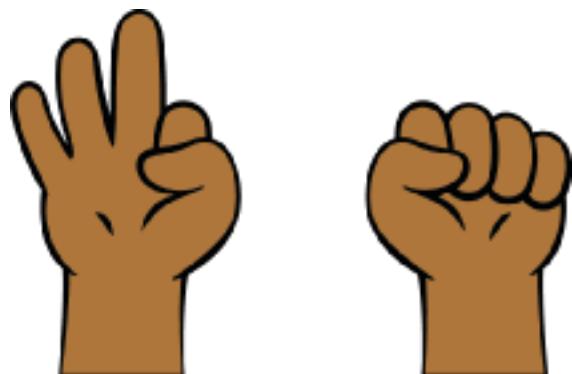
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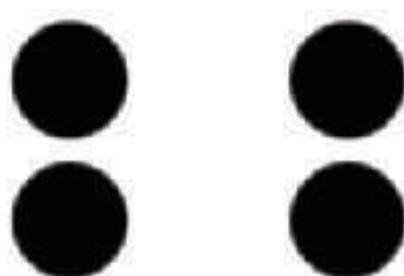
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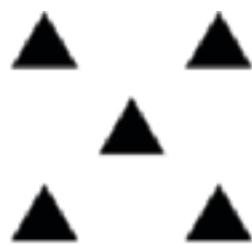


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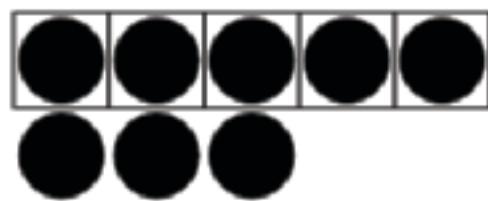
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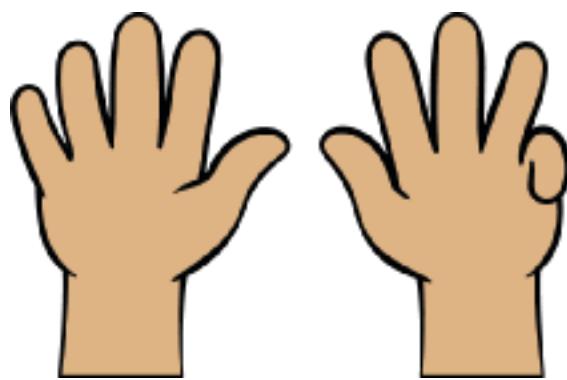


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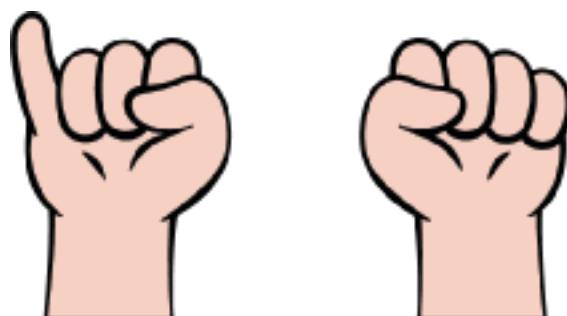


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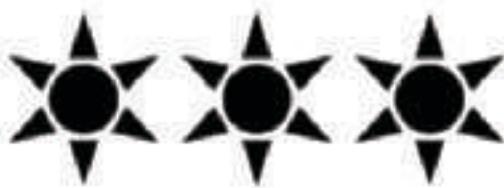
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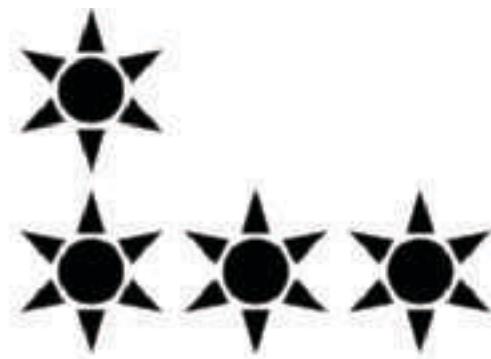


Number and Image Cards

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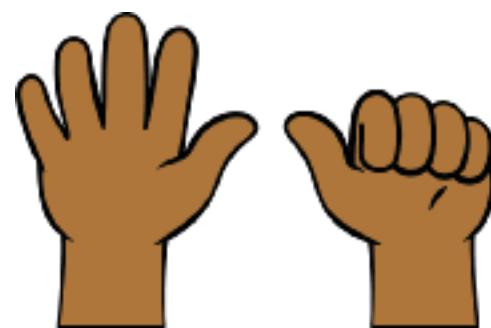
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Number and Image Cards

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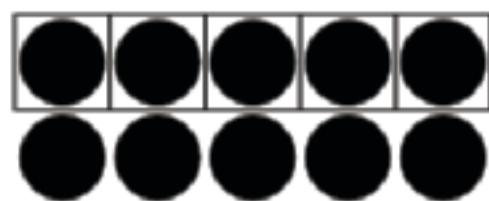
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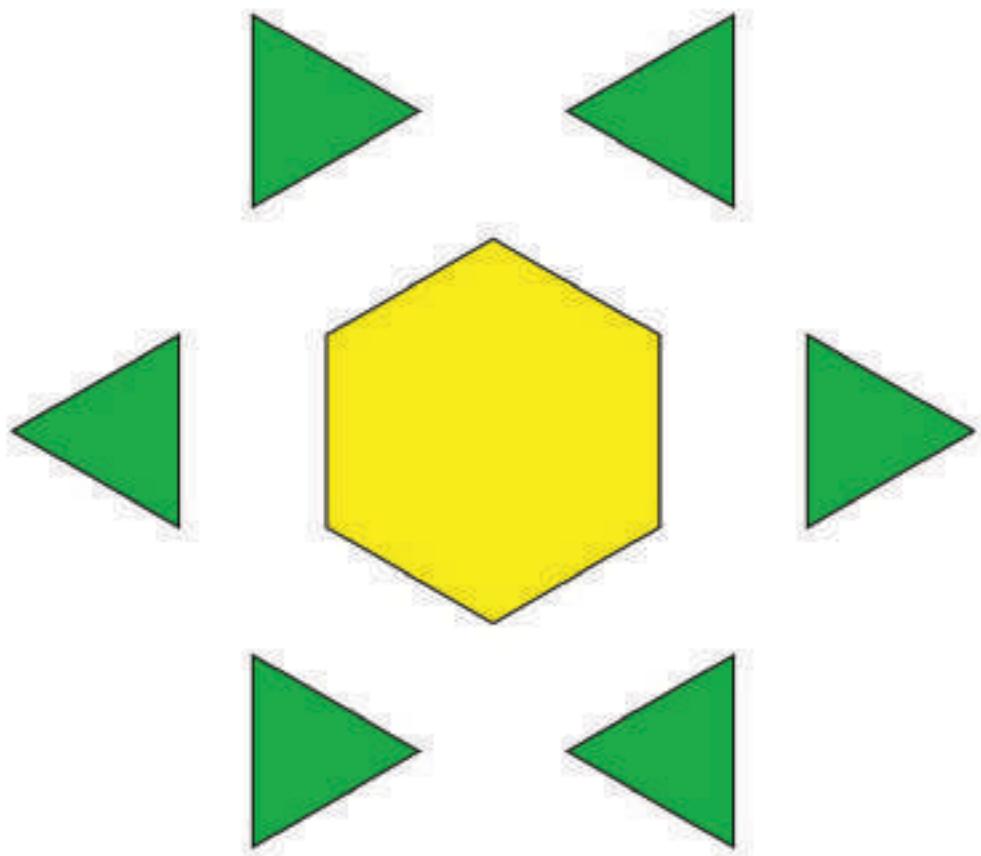
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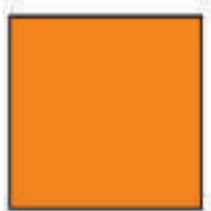
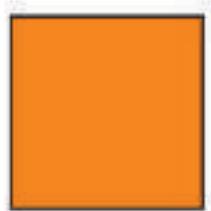
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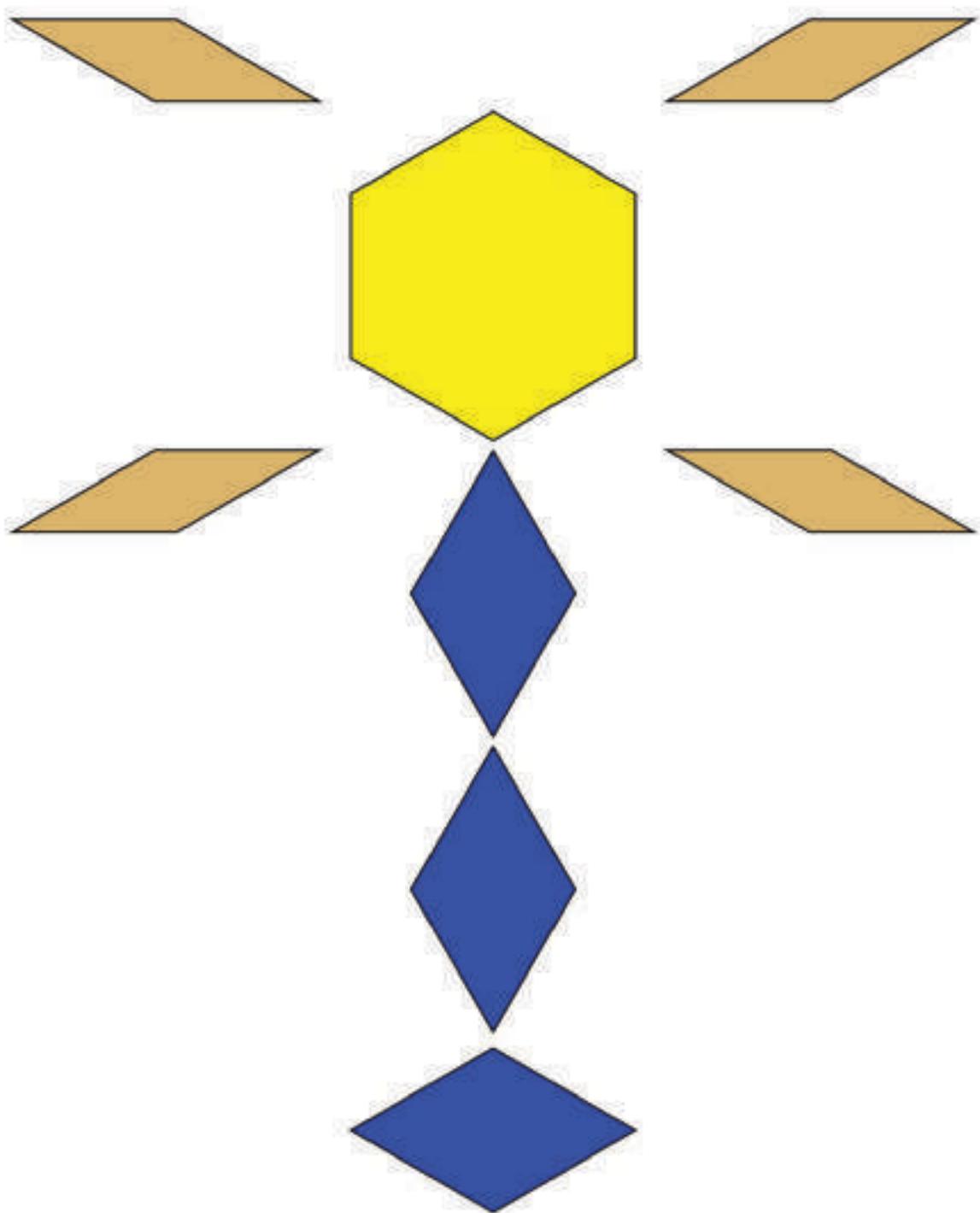
Pattern Blocks Stage 2 Mat



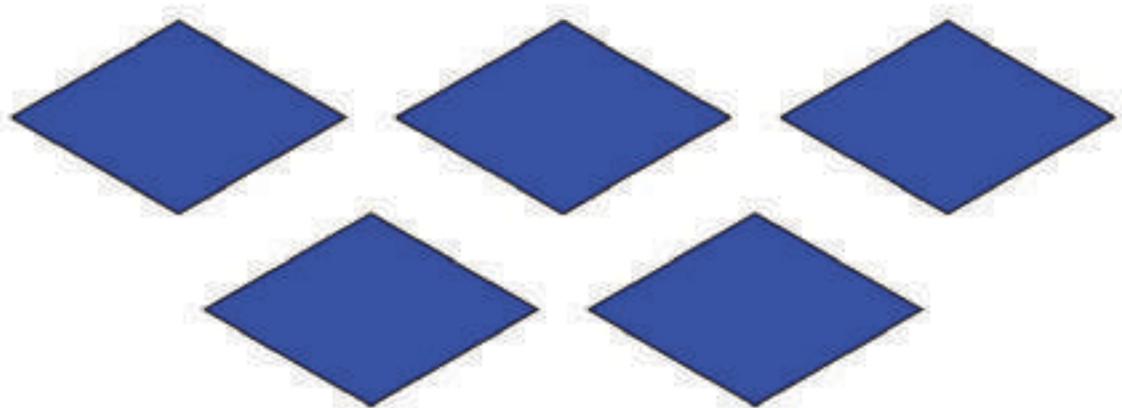
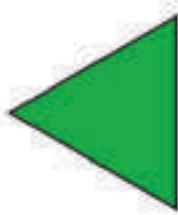
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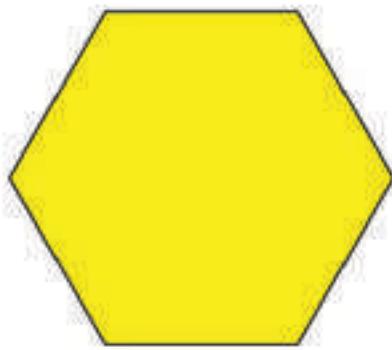
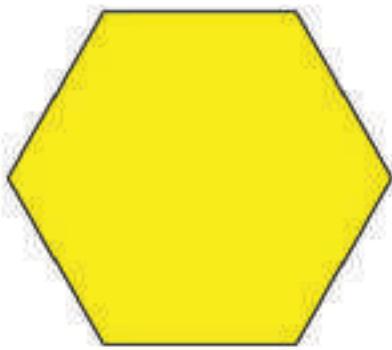
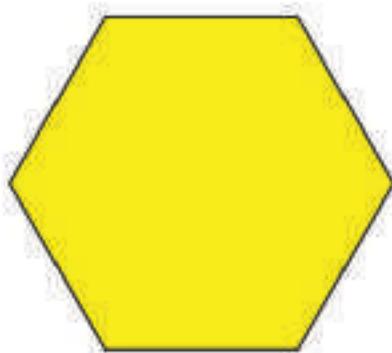
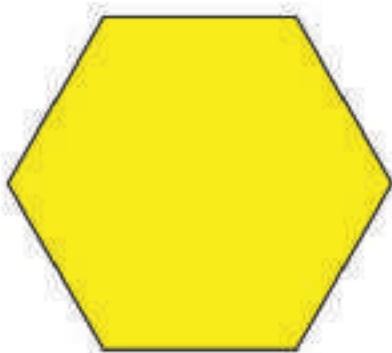
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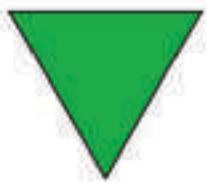
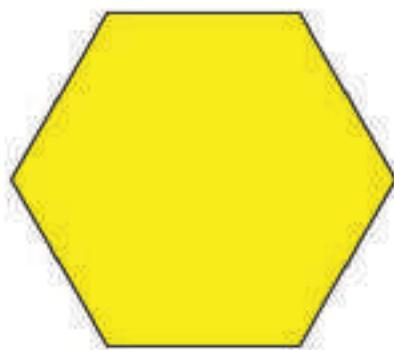
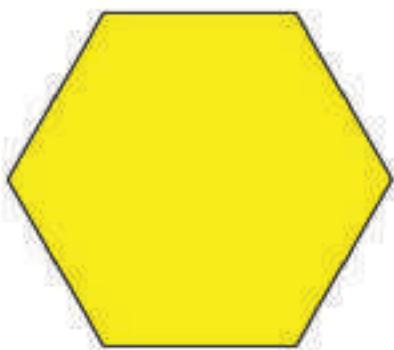
Pattern Blocks Stage 2 Mat



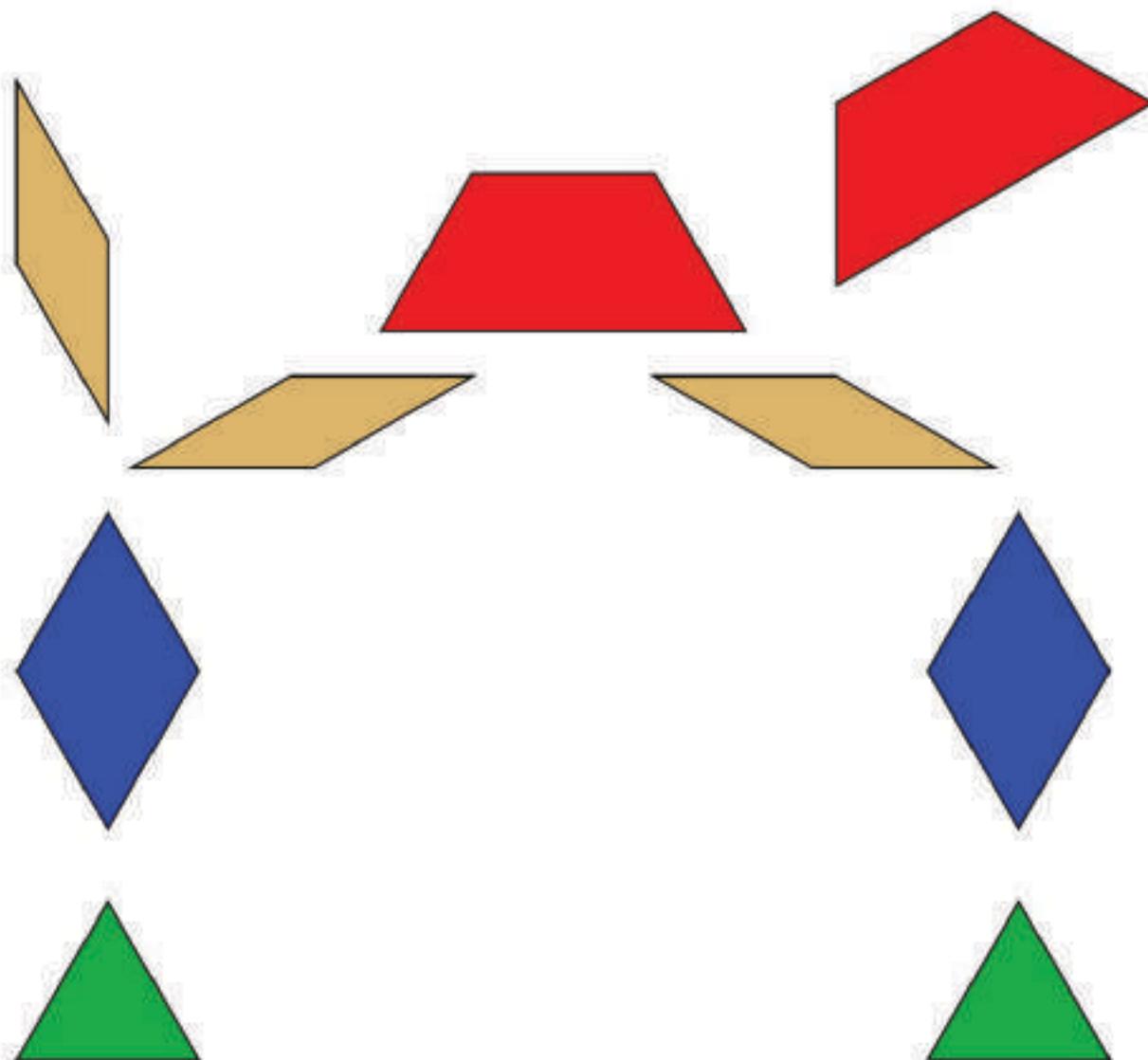
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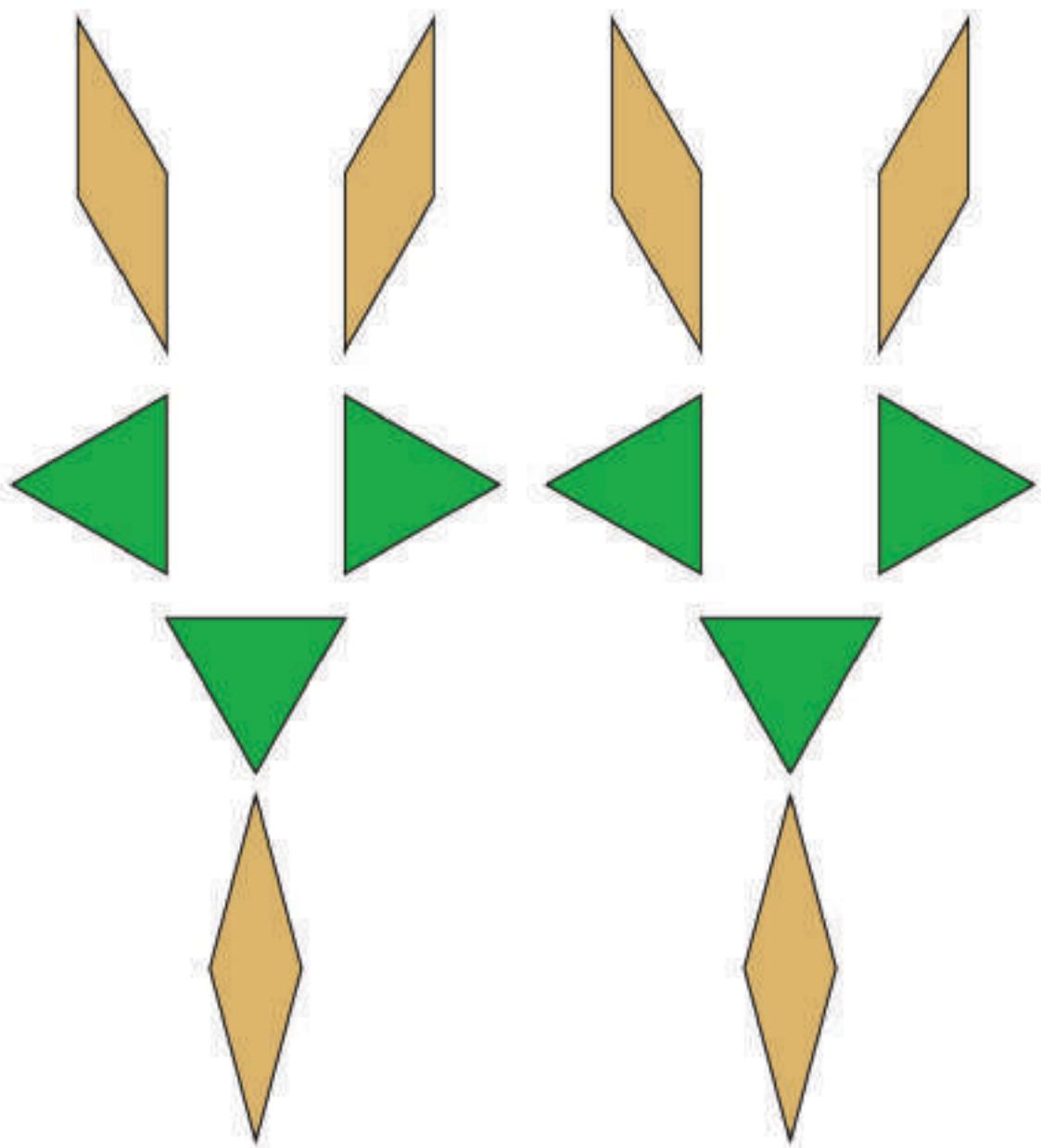
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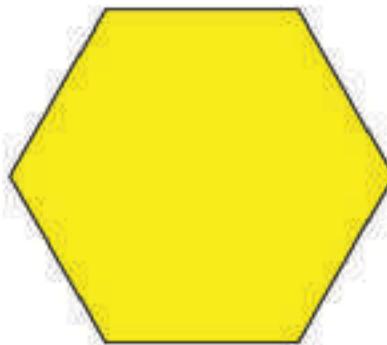
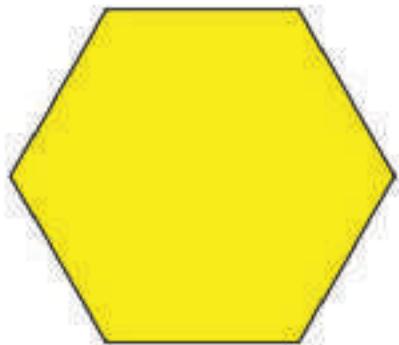
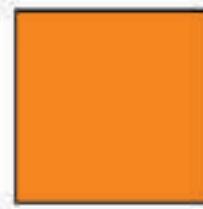
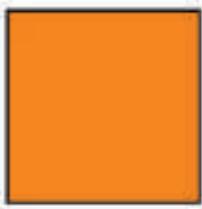
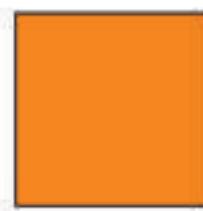
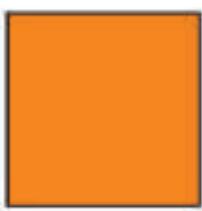
Pattern Blocks Stage 2 Mat



Pattern Blocks Stage 2 Mat



Pattern Blocks Stage 2 Mat

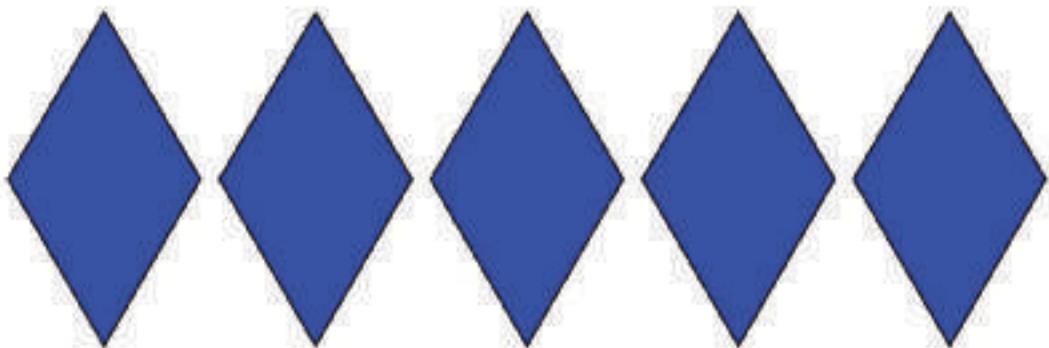


Pattern Blocks Stage 2 Mat

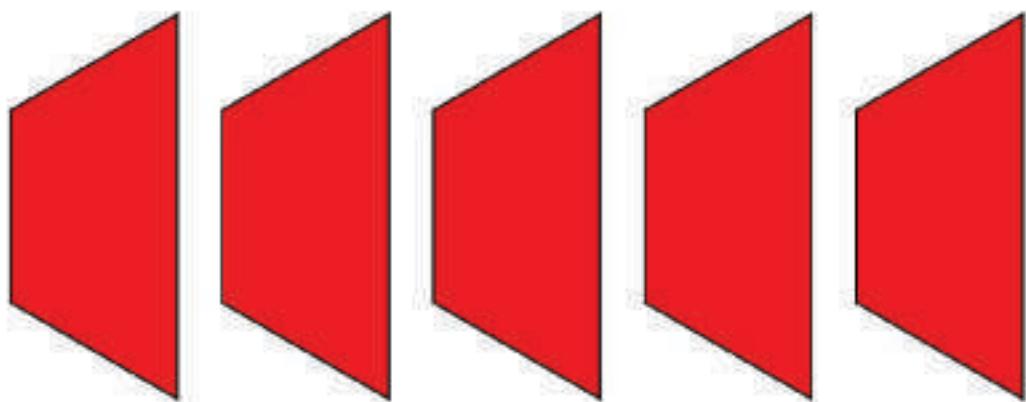


Pattern Blocks Stage 3 Directions

5



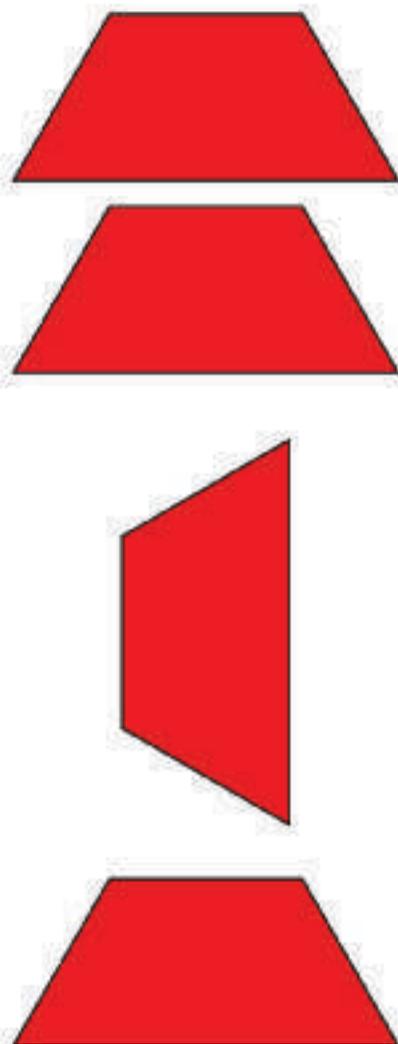
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Pattern Blocks Stage 3 Directions



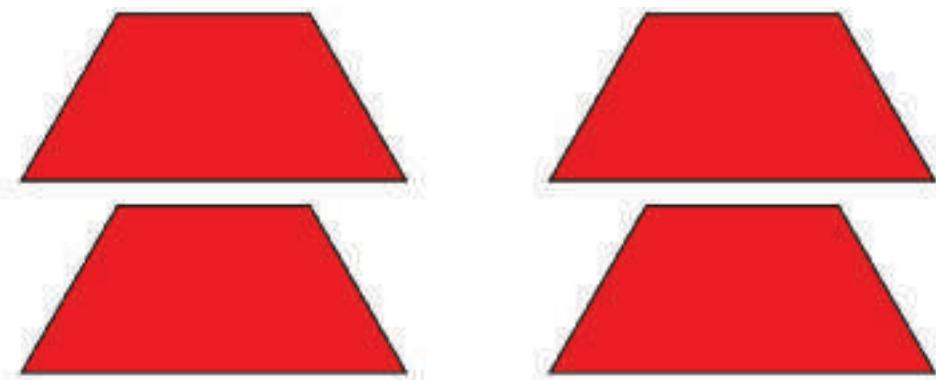
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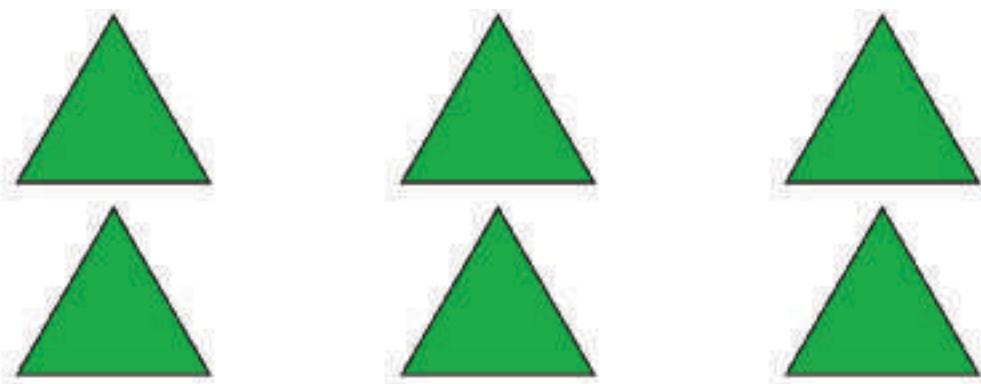
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Pattern Blocks Stage 3 Directions

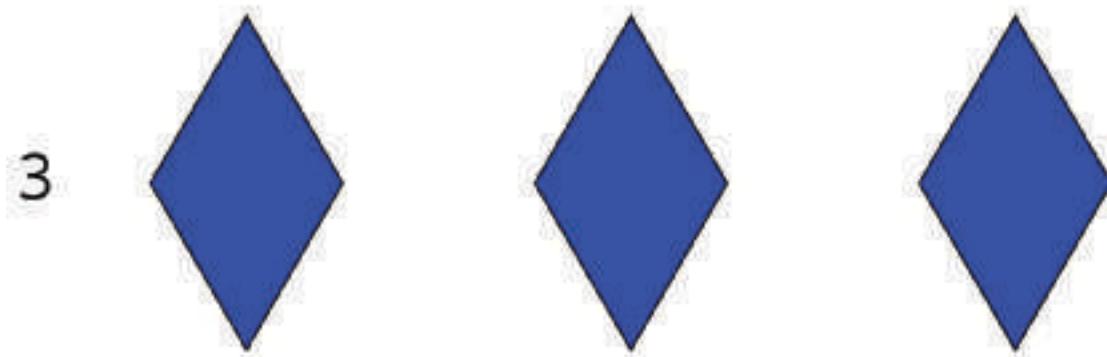
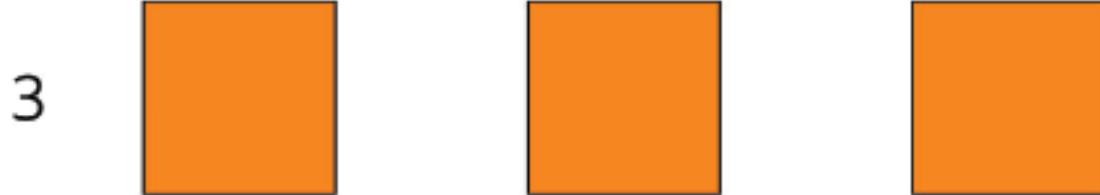
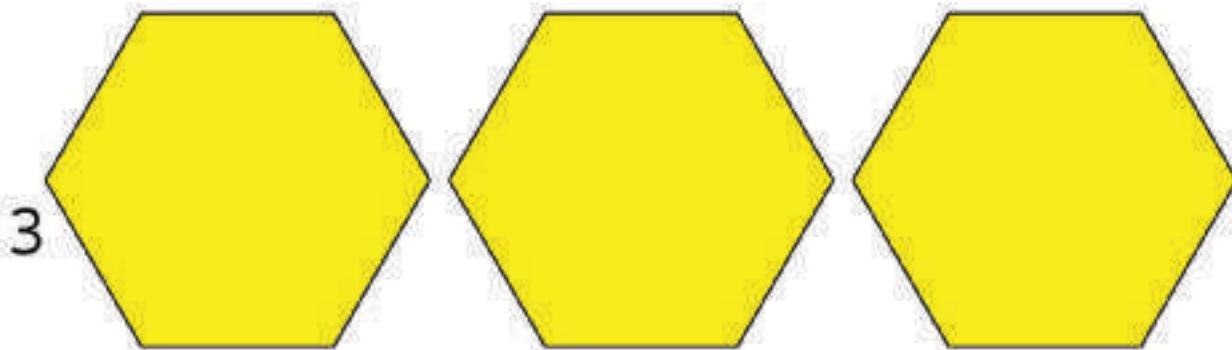
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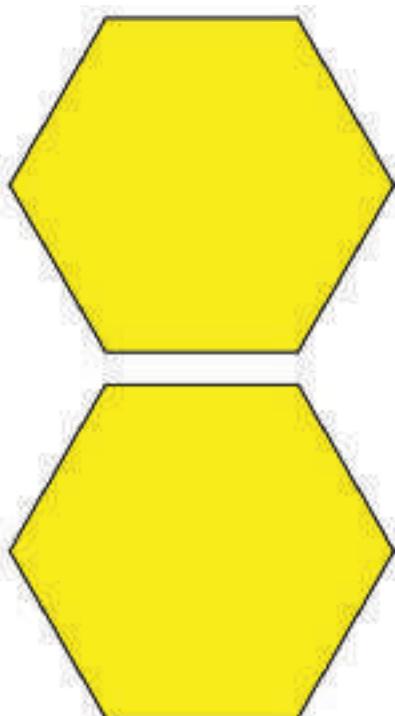
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Pattern Blocks Stage 3 Directions



Pattern Blocks Stage 3 Directions



2



2



2



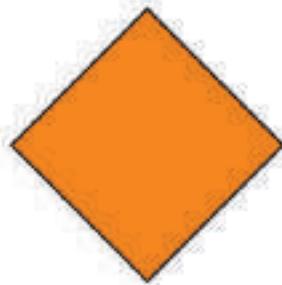
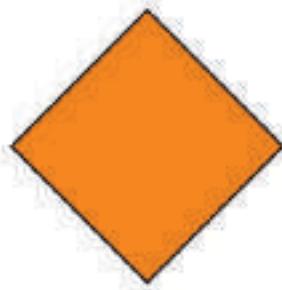
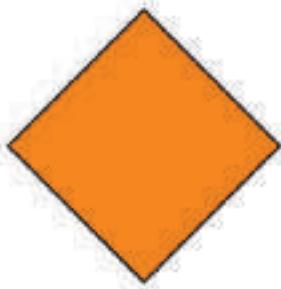
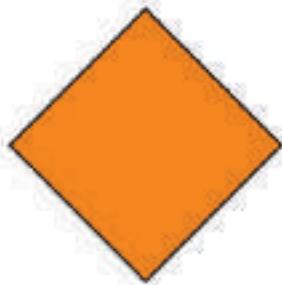
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Pattern Blocks Stage 3 Directions

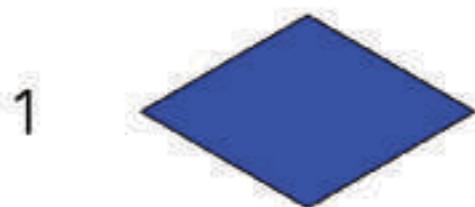
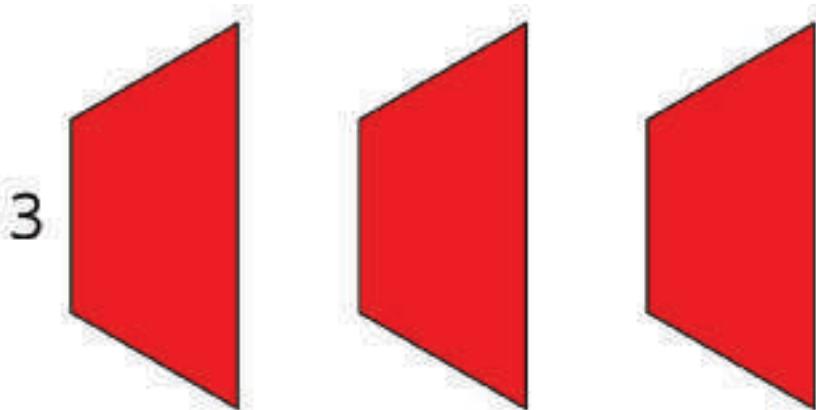
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5



Pattern Blocks Stage 3 Directions

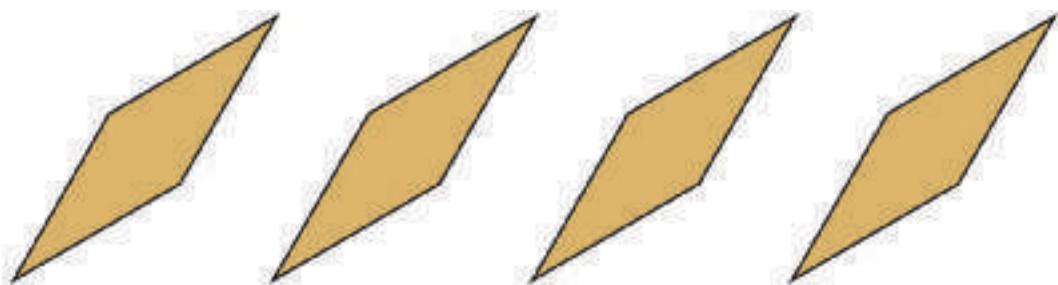


Pattern Blocks Stage 3 Directions

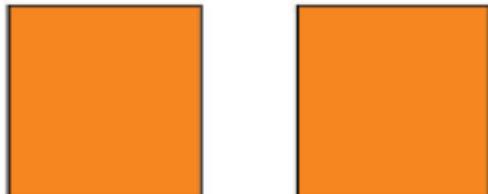
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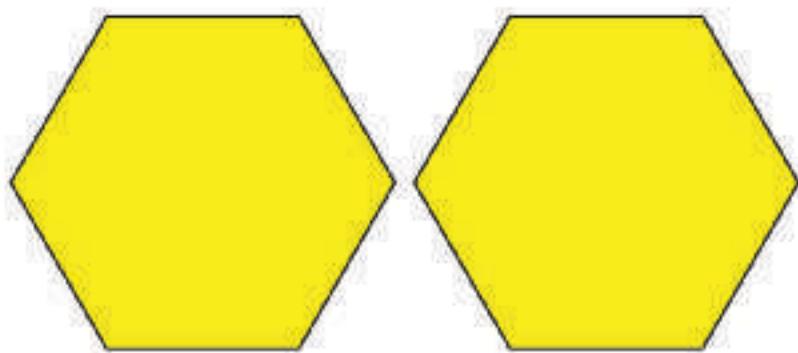
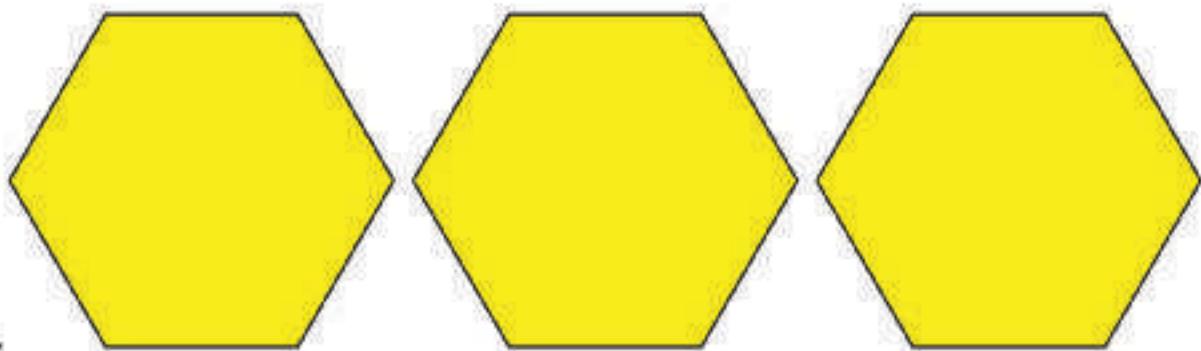
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2



Pattern Blocks Stage 3 Directions



1

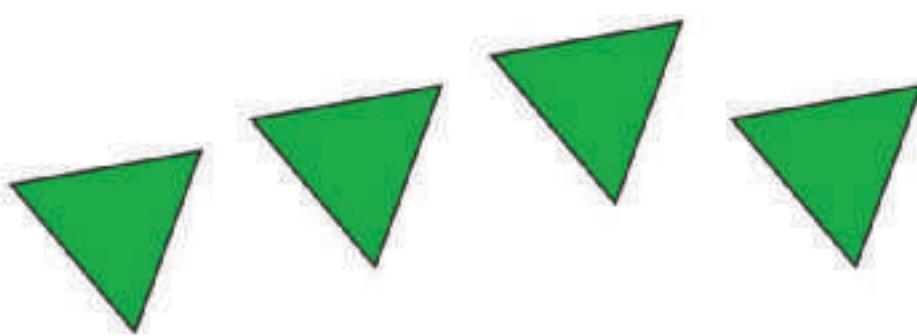


Pattern Blocks Stage 3 Directions



4

4



4



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