# Geometry and Time

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Unit 7: Geometry and Time

At a Glance

Unit 7 is estimated to be completed in 19 days including 2 days for assessment.

This unit is divided into three sections including 17 lessons.

- Section A—Flat and Solid Shapes (Lessons 1-8)
- Section B—Halves and Quarters (Lessons 9-12)
- Section C—Tell Time in Hours and Half Hours (Lessons 13-17)

On pages 7-8 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.

- Geoblocks
- How Are They the Same?
- Capture Squares
- Compare
- How Close?
- Picture Books
- Match Mine
- Can You Draw It?
- Target Numbers
- Which One?
Unit 7: Geometry and Time

Unit Learning Goals

- Students reason with shapes and their attributes, partition shapes into equal pieces, and tell time to the hour and half hour.

In this unit, students focus on geometry and time. They expand their knowledge of two- and three-dimensional shapes, partition shapes into halves and fourths, and tell time to the hour and half of an hour. Center activities and warm-ups continue to enable students to solidify their work with adding and subtracting within 20 and adding within 100.

In kindergarten, students learned about flat and solid shapes. They named, described, built, and compared shapes. They learned the names of some flat shapes (triangle, circle, square, and rectangle) and some solid shapes (cube, sphere, cylinder, and cone).

Here, students extend those experiences as they work with shape cards, pattern blocks, geoblocks, and solid shapes. They develop increasingly precise vocabulary as they use defining attributes (“squares have four equal length sides”) rather than non-defining attributes (“the square is blue”) to describe why a specific shape belongs to a given category. Students should, however, focus on manipulating, comparing, and composing shapes and using their own language, rather than learning the formal definitions of shapes.

Draw 3 shapes that are not rectangles.

How do you know these are not rectangles?

Next, students transition to thinking about how to partition shapes into halves and fourths or quarters. These experiences allow them to learn the language of fractions. Students come to understand that as they continue to make more equal pieces, each piece gets smaller.

In the last section, students tell time to the hour and half hour. They learn about the hour and minute hands and what an analog clock looks like when the hour hand moves from one hour to the next. The experience of partitioning circles helps students make sense of time on the clock. Students see that half hours are when the minute hand has moved halfway around the clock, and the time can be written as “half past” or __ : 30.
Section A: Flat and Solid Shapes

Standards Alignments
Building On 1.G.A.2

Section Learning Goals
- Build and draw shapes to possess defining attributes.
- Compose two-dimensional or three-dimensional shapes to create a composite shape.
- Describe attributes of two-dimensional and three-dimensional shapes.

In this section, students explore and reason about attributes of two- and three-dimensional shapes. They begin by sorting and describing shapes in ways that make sense to them. They name shapes (cone, sphere, cylinder, cube, square, rectangle, triangle, rhombus and hexagon), but do not need to hear or produce formal definitions of the shape.

Students identify the defining attributes (number of straight sides and corners) of triangles, rectangles, and squares, and distinguish them from non-defining attributes (color, orientation, size). They describe why a shape belongs in a certain category using their own language. For example, “These are all triangles because they have three straight sides and three corners. This is not a triangle because the sides don’t touch.”

Students learn that a square is a special rectangle, because it has all of the defining attributes of a rectangle (4 sides, 4 square corners) and also has the defining attribute of a square (4 equal length sides).
Students then compose shapes from smaller shapes to deepen their understanding of two- and three-dimensional shapes. The spatial reasoning here builds a foundation for understanding future mathematical concepts such as symmetry, congruence, fraction, area, and volume.

Geoblocks are used throughout the section. Standard geoblock sets do not include cylinders, spheres, and cones. When these shapes are required, “solid shapes” are indicated as required materials. If solid shapes are not available, students can work with everyday items that represent each shape.

PLC: Lesson 4, Activity 1, Draw Shapes on Dot Paper
Section B: Halves and Quarters

Standards Alignments
Building On 1.G.A.3

Section Learning Goals
- Partition circles and rectangles into two and four equal pieces and describe the pieces with words (halves and fourths).

In this section, students explore the idea of halves and fourths as equal pieces of a whole.

Students learn that when decomposing a shape into two equal pieces, each piece is “a half of” the shape, and the pieces are called halves. When a shape is decomposed into four equal pieces, each piece is “a fourth of” the shape, and the pieces are called fourths or quarters.

To create two and four equal pieces, students fold paper shapes and then draw lines to split the shapes. They consider the size of a fourth and a half in relation to the same whole, and notice that as the number of pieces increases, each piece gets smaller.

Split each shape into fourths. Split each shape into halves.

PLC: Lesson 11, Activity 1, Which is Bigger?
Section C: Tell Time in Hours and Half Hours

Standards Alignments
Addressing 1.G.A, 1.G.A.2, 1.MD.B.3, 1.NBT.A.1, 1.NBT.C.4, 1.OA.C.6, 1.OA.D.7

Section Learning Goals
• Tell and write time in hours and half-hours.

In this section, students learn to tell time in hours and half hours on both analog and digital clocks by interpreting the position of the hands on the former and the digits of the latter. They connect the language of “o’clock” and “half past” to the times shown on analog and digital clocks.

Students begin by interpreting clock faces that only show an hour hand. This is to draw their attention to the fact that the hour hand will point directly to a number at the hour and halfway in between two numbers at the half hour. Given their understanding of halves of shapes, students see that when the minute hand starts at the 12 and rotates to point at the 6, it has moved halfway around the clock.

To build students’ concept of time, consider preparing an alarm that goes off each half-hour to draw attention to time in hours and half hours. When the alarm goes off, students can look at the clock, draw the hands on a blank clock, and record the time using numbers.

*Fill in the clocks to show what time each activity starts.*
Although the lessons in this section focus on 12-hour clocks, some students who are familiar with 24-hour clocks should be invited to share what they know.

PLC: Lesson 14, Activity 1, Put Times in Order

Throughout the Unit

Throughout the unit, Notice and Wonder and Which One Doesn't Belong warm-ups allow students to make sense of two-dimensional and three-dimensional shapes, halves and fourths, and clocks. In Number Talks and True and False, students add within 100.

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 and are opportunities for students to continue working with addition and subtraction during this unit. Feel free to incorporate other centers that have been previously introduced based on student need and interest.
## Materials Needed

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<th>GATHER</th>
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• Geoblocks  
• Materials from a previous activity  
• Solid shapes | • none | |
| A.2    | • Geoblocks  
• Geoblocks  
• Solid shapes | • none | |
| A.3    | • Materials from a previous activity | • Flat Shape Cards Grade 1 (groups of 2) | |
| A.4    | • Materials from a previous activity  
• Materials from a previous lesson  
• Materials from previous centers | • Centimeter Dot Paper - Standard (groups of 1) | |
| A.5    | • Materials from a previous activity  
• Materials from a previous lesson  
• Materials from previous centers | • Centimeter Dot Paper - Standard (groups of 1) | |
| A.6    | • Chart paper  
• Materials from a previous activity  
• Materials from a previous lesson | • Centimeter Dot Paper - Standard (groups of 1) | |
| A.7    | • Pattern blocks  
• Picture books | • Flat Shapes Puzzles (groups of 1)  
• Picture Books Stage 3 Recording Sheet (groups of 1) | |
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Center: Geoblocks (K–1)

Stage 3: Describe and Find

Activities
- Grade1.7.A2.3 (addressing)
- Grade1.7.A5.3 (addressing)

Stage Narrative
Students describe solid shapes so their partner can identify the shape out of a set of 4–6 solid shapes.

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

Materials to Gather
Geoblocks, Solid shapes

Stage 4: Feel and Guess

Activities
- Grade1.7.B11.3 (addressing)

Stage Narrative
Students feel the shape without looking at it and guess the shape.

Standards Alignments

Materials to Gather
Bags, Geoblocks, Solid shapes
Stages used in Kindergarten

Stage 1

Addressing
- Kindergarten.1.A
- Kindergarten.1.B
- Kindergarten.1.C
- Kindergarten.1.D

Supporting
- Kindergarten.2.C
- Kindergarten.3.B
- Kindergarten.7.A
- Kindergarten.7.B

Stage 2

Addressing
- Kindergarten.1.A
- Kindergarten.1.B
- Kindergarten.1.C
- Kindergarten.1.D

Supporting
- Kindergarten.2.C
- Kindergarten.3.B
- Kindergarten.7.A
- Kindergarten.7.B

Stage 3

Addressing
- Kindergarten.7.B

Stage 4

Addressing
- Kindergarten.7.B
Center: How Are They the Same? (1–5)

Stage 1: Grade 1 Shapes

Activities

- Grade1.7.A4.2 (addressing)
- Grade1.7.A5.3 (addressing)
- Grade1.7.A8.2 (addressing)

Stage Narrative

Students lay six shape cards face up. One student picks two cards that have an attribute in common. All students draw a shape that has a shared attribute with the two shapes. Students get a point if they draw a shape that no other student drew. It is possible that students will draw a shape with a different shared attribute than what the original student chose. This can be an interesting discussion for students to have.

Variation:

Students can choose a different shape card that matches, rather than draw a shape.

Standards Alignments

Addressing 1.G.A.1

Materials to Copy

- Centimeter Dot Paper - Standard (groups of 1), Flat
- Shape Cards Grade 1 (groups of 2)
Center: Capture Squares (1–3)

Stage 1: Add within 10

Activities

- Grade1.7.A4.3 (supporting)
- Grade1.7.A8.2 (supporting)
- Grade1.7.B12.2 (supporting)
- Grade1.7.C17.2 (supporting)

Stage Narrative

Students roll two number cubes and find the sum.

Standards Alignments

Addressing 1.OA.C.6

Materials to Gather

Colored pencils or crayons, Number cubes

Materials to Copy

Capture Squares Stage 1 Gameboard (groups of 2)

Additional Information

Each group of 2 needs two number cubes.

Stage 2: Subtract within 10

Activities

- Grade1.7.A4.3 (supporting)
- Grade1.7.A8.2 (supporting)
- Grade1.7.B12.2 (supporting)
- Grade1.7.C17.2 (supporting)

Stage Narrative

Students choose two cards and find the difference.

Standards Alignments

Addressing 1.OA.C.6

Materials to Gather

Colored pencils or crayons, Number cards 0–10

Materials to Copy

Capture Squares Stage 2 Gameboard (groups of 2)
Center: Compare (1–5)

Stage 1: Add and Subtract within 10

Activities
- Grade 1.7.A4.3 (supporting)
- Grade 1.7.A5.3 (supporting)

Stage Narrative
Students use cards with addition and subtraction expressions within 10.

Standards Alignments
Addressing 1.OA.C.6

Materials to Copy
Compare Stage 1 Addition Cards to 10 (groups of 2),
Compare Stage 1 Subtraction Cards to 10 (groups of 2)
Center: How Close? (1–5)

Stage 1: Add to 20

Activities
- Grade1.7.A4.3 (supporting)
- Grade1.7.A5.3 (supporting)

Stage Narrative
Before playing, students remove the cards that show 10 and set them aside.

Each student picks 5 cards and chooses 3 of them to write an addition expression with 3 addends. The student whose sum is closest to 20 wins a point for the round. Students pick new cards so that they have 5 cards in their hand and then start the next round.

Standards Alignments
Addressing 1.OA.C.6, 2.OA.B.2

Materials to Gather
Number cards 0–10

Materials to Copy
How Close? Stage 1 Recording Sheet (groups of 1)

Stage 2: Subtract from 20

Activities
- Grade1.7.A4.3 (supporting)
- Grade1.7.A5.3 (supporting)

Stage Narrative
Before playing, students remove the cards that show the number 10 and set them aside.

Each student picks 4 cards and chooses 2 or 3 to subtract from 20 to get close to 0. The student whose difference is closest to 0 wins a point for the round. Students pick new cards so that they have 4 cards in their hand and then start the next round.

Standards Alignments
Addressing 1.OA.C.6, 2.OA.B.2

Materials to Gather
Number cards 0–10

Materials to Copy
How Close? Stage 2 Recording Sheet (groups of 1)
Stage 3: Add to 100

Activities
- Grade 1.7.A4.3 (supporting)
- Grade 1.7.A5.3 (supporting)

Stage Narrative
Before playing, students remove the cards that show the number 10 and set them aside.

Each student picks 7 cards and chooses 4 of them to create 2 two-digit numbers. Each student adds the numbers and the student whose sum is closest to 100 wins a point for the round. Students pick new cards so that they have 7 cards in their hand and then start the next round.

Standards Alignments
Addressing 1.NBT.C.4, 2.NBT.B.5

Materials to Gather
Number cards 0–10

Materials to Copy
How Close? Stage 3 Recording Sheet (groups of 1)
Center: Picture Books (K-5)

Stage 2: Create

Activities
- Grade1.7.A8.2 (addressing)
- Grade1.7.B12.2 (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
- Grade1.7.A7.3 (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

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.
Stages used in Kindergarten

Stage 1

Addressing
- Kindergarten.1.B
- Kindergarten.1.C
- Kindergarten.1.D

Supporting
- Kindergarten.2.A
- Kindergarten.3.A

Stage 2

Addressing
- Kindergarten.1.B
- Kindergarten.1.C
- Kindergarten.1.D
- Kindergarten.3.A

Supporting
- Kindergarten.2.A

Stage 3

Addressing
- Kindergarten.3.A
Center: Match Mine (K-1)

Stage 2: Solid Shapes

Activities
- Grade 1.7.A8.1 (addressing)
- Grade 1.7.B12.2 (addressing)
- Grade 1.7.C17.2 (addressing)

Stage Narrative
Students make larger shapes from solid shapes.

Variation:
Students may use folders to hide their shape.

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

Materials to Gather
Folders, Geoblocks, Solid shapes

Stages used in Kindergarten

Stage 1
Addressing
- Kindergarten.3.B

Supporting
- Kindergarten.4.A
- Kindergarten.7.B

Stage 2
Addressing
- Kindergarten.7.B
Center: Can You Draw It? (1–5)

Stage 1: Grade 1 Shapes

Activities

- Grade1.7.B12.1 (addressing)
- Grade1.7.C17.2 (addressing)

Stage Narrative

Partner A chooses a shape card and describes it to their partner. If Partner B draws the shape correctly, they keep the card. Shape cards include triangles and quadrilaterals.

Standards Alignments

Addressing 1.G.A.1

Materials to Copy

Centimeter Dot Paper - Standard (groups of 1), Flat Shape Cards Grade 1 (groups of 2)

Additional Information

Before playing, remove any cards that do not show a triangle or quadrilateral.
Center: Target Numbers (1–5)

Stage 1: Add Ones

Activities
- Grade1.7.B12.2 (supporting)
- Grade1.7.C17.2 (supporting)

Stage Narrative
Before playing, students remove the cards that show 0 and 10 and set them aside.

Students add a one-digit number to a two-digit number with composing a ten in order to get as close to 95 as possible. Students start their first equation with 55 and turn over a number card and add it to their starting number for the round. The sum becomes the first addend in the next round. The player who gets closest to 95 in 6 rounds, without going over, is the winner.

Standards Alignments
Addressing 1.NBT.C.4

Materials to Gather
Connecting cubes in towers of 10 and singles,
Number cards 0–10

Materials to Copy
Target Numbers Stage 1 Recording Sheet (groups of 1)

Stage 2: Add Tens or Ones

Activities
- Grade1.7.B12.2 (supporting)
- Grade1.7.C17.2 (supporting)

Stage Narrative
Before playing, students remove the cards that show 0 and 10 and set them aside.

Students add tens or ones to get as close to 95 as possible. Students start their first equation with 25. Students take turns flipping a number card and choosing whether to add that number of tens or ones and write an equation. The sum becomes the first addend in the next round. The player who gets closest to 95 in 6 rounds, without going over, is the winner.

Standards Alignments
Addressing 1.NBT.C.4
Stage 3: Add Two-digit Numbers

Activities

- Grade1.7.B12.2 (supporting)
- Grade1.7.C17.2 (supporting)

Stage Narrative

Students add two-digit numbers to get as close to 95 as possible. Students start by rolling two number cubes to get a starting number. Then, they take turns rolling the three cubes to get a number to add. They choose one of the numbers on the cubes to represent the tens and a different number to represent the ones. Students add their tens and ones to the starting number. The sum becomes the first addend in the next round. The player who gets closest to 95 in 6 rounds, without going over, is the winner.

Standards Alignments

Addressing 1.NBT.C.4

Materials to Gather

Connecting cubes in towers of 10 and singles, Number cards 0–10

Materials to Copy

Target Numbers Stage 2 Recording Sheet (groups of 1)

Additional Information

Each group of 2 needs three number cubes.
Center: Which One? (K–5)

Stage 2: Grade 1 Shapes

Activities
- Grade 1.7.C17.1 (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 triangles and quadrilaterals.

Standards Alignments

Addressing 1.G.A

Materials to Gather  Materials to Copy
- Counters  Which One Stage 2 Gameboard (groups of 2)

Stages used in Kindergarten

Stage 1

Addressing
- Kindergarten.3.A
Section A: Flat and Solid Shapes

Lesson 1: Shapes That Are Solid

**Standards Alignments**
Addressing 1.G.A

**Teacher-facing Learning Goals**
- Sort three-dimensional shapes in a way that makes sense to them.
- Use their own language to describe three-dimensional shapes.

**Student-facing Learning Goals**
- Let’s sort and describe solid shapes.

**Lesson Purpose**
The purpose of this lesson is for students to sort three-dimensional shapes and use their own language to describe them.

In kindergarten, students were introduced to the names of squares, rectangles, triangles, circles, cubes, spheres, and cylinders. They sorted these shapes into categories and used their own language to describe them.

The purpose of this lesson is for students to use the language they already have to talk about three-dimensional shapes. This gives teachers a chance to informally assess students’ language, such as shape names, as well as words used to describe them (MP6). Students will be re-introduced to the names of three-dimensional shapes (cube, sphere, cylinder, and cone) over the next two lessons. Students do not need to use specific geometric vocabulary in this lesson; however, the teacher should use precise language to identify and describe shapes, especially rectangular prisms and triangular prisms, which may be new terms for students.

**Access for:**

⚠️ **Students with Disabilities**
- Action and Expression (Activity 1)

**Instructional Routines**
MLR2 Collect and Display (Activity 1), Which One Doesn’t Belong? (Warm-up)
Materials to Gather

- Bags (brown paper): Activity 2
- Geoblocks: Activity 1, Activity 2
- Materials from a previous activity: Activity 2
- Solid shapes: Activity 1, Activity 2

Lesson Timeline

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<th>Activity</th>
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<tr>
<td>Warm-up</td>
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<tr>
<td>Activity 1</td>
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<td>Activity 2</td>
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<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
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<tr>
<td>Cool-down</td>
<td>5 min</td>
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Teacher Reflection Question

Reflect on the language students used to describe solid shapes. How can you help students begin to use more precise language in the next lesson?

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

What Did You Learn?

Standards Alignments

Addressing 1.G.A

Student-facing Task Statement

List at least two things you learned about solid shapes.

Student Responses

Sample responses:
- A cube looks like a box. It has 6 sides or flat sides.
- A cylinder has two sides that are circles.
- Some shapes have some of the same attributes. For example, a cube and a rectangular block can have square sides.
- Some solid shapes roll and some don't.
Warm-up

Which One Doesn’t Belong: Shapes

Standards Alignments
Addressing 1.G.A

This warm-up prompts students to compare four images. It gives students a reason to use language precisely (MP6). It gives the teacher an opportunity to hear how students use geometric language and talk about characteristics of the items in comparison to one another. During the synthesis, ask students to explain the meaning of any terminology they use, such as square, cube, triangle, circle, flat, and solid.

Instructional Routines

Which One Doesn’t Belong?

Student-facing Task Statement

Launch

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

Activity

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

Synthesis

- “Let’s find at least one reason why each one doesn’t belong.”
- “What are the names of the shapes?”
- “I heard someone say _____. What does that mean?”
Student Responses

- A doesn't belong because it's the only shape that isn't white.
- B doesn't belong because it's the only one that isn't flat (two-dimensional). It is the only one that doesn't show just one flat shape.
- C doesn't belong because it's the only shape that doesn't have straight lines.
- D doesn't belong because it's the only shape that has 3 sides. It is the only one with a slanted side.

Activity 1

Sort Solid Shapes

Standards Alignments

Addressing 1.G.A

The purpose of this activity is for students to sort cubes, cylinders, cones, and spheres, as well as other three-dimensional shapes including rectangular prisms and triangular prisms. Students describe the shapes with their own language. They may sort and classify shapes by attributes such as number of sides, number of corners, or whether shapes have corners or not.

This activity uses MLR2 Collect and Display. Advances: conversing, reading, writing
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

Instructional Routines

MLR2 Collect and Display

Materials to Gather

Geoblocks, Solid shapes

Required Preparation

- Each group of 2 students needs about 15 different geoblocks and solid shapes, including different-sized cubes, cylinders, cones, spheres, rectangular prisms, and triangular prisms.

Student-facing Task Statement

1. Sort some of the shapes into categories in a way that makes sense to you. Explain how you sorted the shapes.
2. Sort some of your shapes into categories in a different way. Explain how you sorted the shapes.

Launch

- Groups of 2
- Give each group about 15 geoblocks and solid shapes.
- Display a cylinder and a cone.
- “Think of one way that these shapes are the same and one way that they are different.” (The cone and cylinder roll. The cone has a point but the cylinder doesn’t.)
- 30 seconds: quiet think time
- 1 minute: partner share
- Share and record responses.
- “Think about how all of the shapes are the same and different. Sort them with your partner. Explain how you sorted. Then sort in a different way.”

Activity

- 10 minutes: partner work time

MLR2 Collect and Display
• shapes that have squares/shapes that don't have squares
• tall shapes/short shapes
• wide shapes/thin shapes

• Circulate, listen for, and collect the language students use to describe and identify the shapes. Listen for: words such as flat, round, side, edge, corner, number of sides, names of two-dimensional shapes, and names of three-dimensional shapes.
• Record students’ words and phrases on a visual display and update it throughout the lesson.

Synthesis
• Invite students to share their sorts without telling how they sorted.
• “How do you think _____ sorted their solid shapes?”
• “Are there any other words or phrases that are important to include on our display?”
• As students share responses, update the display by adding (or replacing) language.
• Ask students to clarify the meaning of a word or phrase.
• Remind students to borrow language from the display as needed.

Advancing Student Thinking
If students find only one way to sort the shapes, display one shape and consider asking:
• “What do you notice about this shape?”
• “How could you sort your shapes using what you just noticed about this shape?”

Activity 2
Describe and Find Shapes

15 min
Standards Alignments

Addressing 1.G.A

The purpose of this activity is for students to identify three-dimensional shapes that they cannot see. Students use the attributes shared in the last activity to try to identify shapes by touch. Students are given a set of shapes so they can see and touch them in order to identify the shape in the bag. Students use their own language as they identify and describe the shapes, using words like corners, sides, edges, points, the number of sides, and names of two-dimensional and three-dimensional shapes learned in kindergarten.

Materials to Gather

Bags (brown paper), Geoblocks, Materials from a previous activity, Solid shapes

Required Preparation

- Place one solid shape (sphere, cone, cylinder, cube, triangular prism, and rectangular prism) in each bag. Each group of 2 needs 1 bag.
- Consider making 1-2 more so there are extra bags if students finish a bag.
- The chart made during the previous activity should be displayed for all to see.

Student-facing Task Statement

- Pick a bag.
- Each partner feels the shape in the bag without looking at it and thinks about which shape it is.
- Each partner tells which shape they think it is and why.
- Look in the bag to check.
- Pick a different bag.

Student Responses

Sample responses:
- It's a sphere because I could roll it in the bottom of the bag. It was like holding a small baseball.
- It's a cube because each side is flat and
square.

- It's a triangle block because one of the sides has three edges.

Activity

- “We're going to play a game with our shapes. You will take a bag, and without looking at what is inside, each partner will feel the shape inside. After each partner has had a turn to feel the shape, take turns telling which shape you think it is and how you know. Use language from the chart to help describe the shape. Look in the bag to see which shape it is.”

- 8 minutes: partner work time

Synthesis

- “What helped you identify which shape was in the bag?” (Feeling flat sides or round sides. Feeling how many corners were on the shape. Feeling the shape of the sides.)

Lesson Synthesis

10 min

Display a cube and a rectangular prism.

“Today we worked with solid shapes. Find one way that these solid shapes are the same and one way that they are different.” (They both have 6 sides. They both have 8 corners. The cube has all flat square sides and this one has flat rectangle sides.)

Response to Student Thinking

Students do not yet identify at least two things they know about solid shapes.

Next Day Support

- Throughout the lesson, ask, “What did you learn yesterday that was helpful in this activity?”
Lesson 2: Build Shapes from Other Shapes

Standards Alignments

Teacher-facing Learning Goals
- Compose shapes from other three-dimensional shapes.

Student-facing Learning Goals
- Let’s use solid shapes to build new shapes.

Lesson Purpose
The purpose of this lesson is for students to use three-dimensional shapes to compose larger shapes.

In the previous lesson, students sorted three-dimensional shapes and used their own language to describe them.

In this lesson, students put together three-dimensional shapes to compose larger shapes. Students begin by using solid shapes to build any way they would like. They describe what they create and the shapes they used. Students then make three-dimensional shapes (prisms and cubes) from smaller shapes. Students do not need to use formal names for the three-dimensional shapes such as rectangular prism or triangular prism.

Access for:

Students with Disabilities
- Engagement (Activity 1)

English Learners
- MLR8 (Activity 1)

Instructional Routines
Notice and Wonder (Warm-up)

Materials to Gather
- Geoblocks: Activity 1, Activity 2
- Geoblocks: Activity 3
- Solid shapes: Activity 1, Activity 3
Lesson Timeline

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<tr>
<td>Lesson Synthesis</td>
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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 7, Section A Checkpoint

Standards Alignments

Addressing 1.G.A.2

Student-facing Task Statement

Lesson observations

Student Responses

- Put two-dimensional or three-dimensional shapes together to form larger shapes or objects.
- Describe the composite shape and the shapes that make up the composite shape.

Warm-up

Notice and Wonder: A Shape Bridge

Standards Alignments

Addressing 1.G.A.2
The purpose of this warm-up is to elicit the idea that three-dimensional shapes can be used to make larger shapes. Students are introduced to the terms rectangular prism and triangular prism, but are not expected to produce those terms in grade 1.

**Instructional Routines**

Notice and Wonder

**Student-facing Task Statement**

What do you notice?
What do you wonder?

**Student Responses**

Students may notice:
- It looks like a bridge.
- There are 13 geoblocks.
- There are 2 cubes.

Students may wonder:
- Will we use the geoblocks to build new shapes?
- What's the name of the triangle block?
- What’s the name of the rectangle block?

**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 solid shapes do you see in this image?” (cube, triangle blocks, rectangle blocks)
- Display a triangular prism.
- “You saw some of these shapes in this image. It is called a triangular prism. Say triangular prism.”
- Display a rectangular prism.
- “You saw some of these shapes in this image. It is called a rectangular prism. Say rectangular prism.”
- Display each shape a few times and invite students to chorally repeat the names in unison 1–2 times:
  - Rectangular prism
  - Triangular prism
Activity 1
Build With Solid Shapes

Standards Alignments
Addressing 1.G.A.2

The purpose of this activity is for students to use solid shapes to create objects. As they build, encourage students to name the new object and talk about the shapes they used. For example, students may use a cube and a triangular prism and describe it as a house. They continue to use their own language to name the shapes and may recognize three-dimensional shapes such as cube, cylinder, cone, and sphere. Students may use the terms rectangular prism and triangular prism, but it is not expected that they do so.

Access for English Learners

MLR8 Discussion Supports. Display sentence frames to support small-group discussion: “I made a...” and “The shapes I used were...”
Advances: Speaking, Conversing

Access for Students with Disabilities

Engagement: Provide Access by Recruiting Interest. Use visible timers or audible alerts to help learners anticipate and prepare to transition between activities.
Supports accessibility for: Attention, Social-Emotional Functioning

Materials to Gather
Geoblocks, Solid shapes

Student Responses
Students build and describe new objects.

Launch
• Groups of 4
• Give each group geoblocks and solid shapes.
• Display a cube, cylinder, sphere, and cone.
• “What are the names of these solid shapes?” (cube, cylinder, sphere, and cone)
• 30 seconds: quiet think time
• Share responses. For each shape, ask the class to repeat the name of the shape.

**Activity**

• “Use the shapes to build a new object. You can build anything you want. Be sure you can describe your new object.”
• 5 minutes: independent work time
• “Show the object you built to your group. Describe what you made and what shapes you used.”
• 5 minutes: small group discussion
• Monitor for 3 or 4 objects to share during the synthesis.

**Synthesis**

• Invite previously identified students to share.
• “What shapes did they use to make their object?” (They used 4 cubes and 2 solid triangle blocks.)
• Repeat as time allows.

---

**Activity 2**

Use Shapes to Make Other Shapes

**Standards Alignments**

Addressing 1.G.A.2

The purpose of this activity is for students to create composite shapes and compose new shapes from composite shapes. For example, students may find that a rectangular prism can be made from four triangular prisms or from eight smaller cubes. Students then discover that they can combine two of the composed rectangular prisms to make a new rectangular prism.
Materials to Gather
Geoblocks

Student Responses
Students put together smaller shapes to make larger shapes in different ways.

Launch
- Groups of 4
- Give each group geoblocks.
- Display a large cube.
- “This cube can be built from other shapes. See how many ways you can build a cube using other shapes.”
- 3 minutes: partner work time
- Share responses.

Activity
- “Choose a different shape. Try to find smaller shapes you can use to build that shape.”
- 5 minutes: partner work time

Synthesis
- Display a cube and a composite cube—for example, a cube composed of four small cubes and one rectangular prism.
- Demonstrate putting the shapes together.
- “What new shape did I make with the cube and the cube I made?”
- “Put your shapes together to make a rectangular prism.”
- Display a rectangular prism and two triangular prisms.
- “Find these shapes. Put them together. What new shape can you make?” (a cube, a rectangular block)
Activity 3
Introduce Geoblocks, Describe and Find

Standards Alignments
Addressing 1.G.A

The purpose of this activity is for students to learn stage 3 of the Geoblocks center. Students describe solid shapes so their partner can identify the shape out of a set of 4-6 solid shapes. Students may describe the shapes in many ways.

Materials to Gather
Geoblocks, Solid shapes

Launch
- Groups of 2
- Give each group 4-6 different geoblocks and solid shapes.
- “We are going to learn a new way to play Geoblocks, which is a center that was introduced in kindergarten.”
- “Put the solid shapes in the middle, between you and your partner.”
- 30 seconds: partner work time
- “Think of a shape but don't tell your partner. Describe one of the shapes to your partner. Your partner's job is to guess which shape you are describing. Once your partner figures out which shape you are describing, switch roles.”

Activity
- 10 minutes: partner work time
- Monitor for students who describe the shapes in different ways.
Synthesis

- Invite previously identified students to share.
- “Which clues did your partner give that were helpful to you?” (My partner said the shape had a flat side that is a circle and it had a point on the other end.)

Lesson Synthesis

“Today we worked with solid shapes to make new shapes and objects. We also described shapes. What were some of the ways you described the shapes?” (I told my partner how many sides it had. I said what the shape of the sides were. I counted the points and told my partner how many.)

“Mai was describing a shape for her partner. She said the shape was hard and smooth. Do you think her partner will be able to find the shape she is describing? Why or why not?” (No because all of these shapes are hard and smooth. She didn’t describe the things that make her shape different than the other shapes.)
Lesson 3: Shapes That Are Flat

Standards Alignments

Addressing 1.G.A

Teacher-facing Learning Goals

- Sort two-dimensional shapes in a way that makes sense to them.
- Use their own language to describe two-dimensional shapes.

Student-facing Learning Goals

- Let’s sort flat shapes and explain how we sorted.

Lesson Purpose

The purpose of this lesson is for students to describe two-dimensional shapes using their own language, sort them, and explain how they sorted.

In kindergarten, students named and described squares, rectangles, triangles, and circles, and the shapes represented by pattern blocks. In prior lessons, students used the names of two-dimensional shapes when describing three-dimensional shapes.

In this lesson, students use their understanding of two-dimensional shapes to sort them. Students may choose to sort according to defining attributes or not. What is most important is that students can name the categories they used to sort. Students look at different ways their classmates sorted the shapes and determine how they sorted.

The shape cards used in this lesson will be used again throughout the section.

Access for:

- Students with Disabilities
  - Engagement (Activity 1)
- English Learners
  - MLR7 (Activity 1)

Instructional Routines

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

Materials to Gather

- Materials from a previous activity: Activity 2

Materials to Copy

- Flat Shape Cards Grade 1 (groups of 2): Activity 1
Lesson Timeline

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<tr>
<td>Cool-down</td>
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Teacher Reflection Question

Reflect on the knowledge of two-dimensional shapes students are bringing with them from kindergarten. What unfinished learning or misunderstandings do your students have about shapes? How did you leverage those misconceptions in a positive way to further the understanding of the class?

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

Sort the Shapes

Standards Alignments

Addressing 1.G.A

Student-facing Task Statement

Han sorted some shapes.
Draw each shape in the group it belongs:

**Student Responses**

1. Draws the shape in the group of shapes with four sides.
2. Draws the shape in the group of shapes with three sides.
Warm-up

Which One Doesn't Belong: All the Shapes

Standards Alignments
Addressing 1.G.A

This warm-up prompts students to compare four shapes. It gives students a reason to use language precisely (MP6). It gives the teacher an opportunity to hear how students use terminology and talk about characteristics of two- and three-dimensional shapes.

Instructional Routines
Which One Doesn't Belong?

Student-facing Task Statement
Which one doesn't belong?

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

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

Synthesis
- “Let's find at least one reason why each one doesn't belong.”
- “What solid shapes do the images for A, B, and C show?” (cube, cone, and cylinder)
- “Does D show a solid shape? Why or why not?” (Maybe it is supposed to be a sphere. It looks like it is just a circle.)
- “A circle is not one of our solid shapes. We call it a flat shape.”
Student Responses

Sample responses:
- A doesn’t belong because it’s the only one that doesn’t have a circle.
- B doesn’t belong because it’s the only one that has a circle and a point.
- C doesn’t belong because it is the only one that is shaded.
- D doesn’t belong because it’s the only flat shape.

Activity 1

Card Sort: Flat Shapes

Standards Alignments
Addressing 1.G.A

The purpose of this activity is for students to sort two-dimensional shapes into categories that make sense to them. As students sort, they may sort by defining attributes such as number of sides or corners. Some students may sort by the name of the shape. Some students may sort by non-defining attributes such as color or size. Students may have leftover shapes depending on how they sort. As students work, encourage them to refine their descriptions of the shapes using more precise language and mathematical terms (MP6). Students’ sorts are displayed for the gallery walk in the next activity.

Access for English Learners

MLR7 Compare and Connect. Synthesis: Lead a discussion comparing, contrasting, and connecting the different ways pairs sorted their cards. Ask, “What was the first way you sorted your cards?” “What was the second way you sorted the cards?” and “How were the two ways you sorted similar and different?” Advances: Representing, Conversing

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Chunk this task into more manageable parts. Give students a subset of the cards to start with and introduce the remaining cards once students have completed their initial sort.
Supports accessibility for: Conceptual Understanding, Attention
Materials to Copy
Flat Shape Cards Grade 1 (groups of 2)

Required Preparation
- Create a set of Flat Shape Cards from the Instructional master for each group of 2.

Student Responses
Sample responses:
- Sort by color: black, white, grey
- Sort by size: small, medium, large
- Sort by shape: triangle, square, rectangle
- Sort by number of sides: 0, 3, 4

Launch
- Groups of 2
- Give each group a set of shape cards.

Activity
- “With your partner, sort your shape cards into groups. Give each group a category. Remember, a category is a label that tells how objects in a group are alike. Explain each category you made. Then sort the cards in a different way.”
- 10 minutes: partner work time
- Consider asking:
  - “How might you describe this shape?”
  - “Why did you place this shape in this group?”
  - “Why didn't you place _____ with this group?”

Synthesis
- “What words did you use to explain how you sorted the shapes?” (Number of points, sides, corners, name of shapes)
- Highlight the use of terms like triangle, circle, rectangle, square, hexagon, corners, and sides.
Activity 2
Shape Sort Gallery Walk

Standards Alignments
Addressing  1.G.A

The purpose of this activity is for students to participate in a gallery walk in which they see a variety of ways the flat shapes have been sorted. Student discuss with their partner what they notice about how their classmates sorted the shapes (MP3).

Materials to Gather
Materials from a previous activity

Required Preparation
- Display each group’s work from the previous activity.

Student-facing Task Statement
Group 1: They sorted
Group 2: They sorted
Group 3: They sorted

Launch
- Groups of 2
- “We are going to do a gallery walk to look at different ways we have sorted the flat shapes. Talk with your partner about what you notice about the work. See if you can tell how they sorted the shapes. Record how they sorted in your book.”

Activity
- 3 minutes: partner work time
- “Now we will all move so we can see how a different group sorted the shapes.”
- 3 minutes: partner work time
- Repeat as time permits.

Student Responses
Sample responses:
- They sorted into shapes that have all straight sides and shapes that have curves.
- They sorted by the number of sides each
grade has.

**Synthesis**

- “In what different ways did we sort the shapes?”
- As each different way is mentioned, ask the group that sorted in that way to explain how they decided which shapes belonged in each category.

---

**Lesson Synthesis**

Display Card A.

“Today we looked at flat shapes and described them in different ways in order to sort shapes. How might you describe this shape?” (There are three sides that are the same. There are three corners. It is a triangle.)

Display Card Q.

“How might you describe this shape?” (There are four sides. Three of the sides are the same length and the bottom side is long.)

Continue with shape cards U and C as time allows.

---

**Response to Student Thinking**

Students place the trapezoid in the group of triangles, or the triangle in the group of quadrilaterals.

**Next Day Support**

- During the warm-up, have students share different ways to describe the shapes.
Lesson 4: Draw Flat Shapes

Standards Alignments

Teacher-facing Learning Goals
- Draw two-dimensional shapes based on shared attributes.
- Use increasingly precise language to describe the attributes of two-dimensional shapes.

Student-facing Learning Goals
- Let’s describe and draw shapes.

Lesson Purpose
The purpose of this lesson is for students to draw and describe two-dimensional shapes. As students draw the shapes and describe them, they develop increasingly precise mathematical language.

In previous lessons, students used their own language to talk about two-dimensional shapes. They sorted shapes in whatever way made sense to them which may have included defining or non-defining attributes of familiar shapes.

In this lesson, students use dot paper to draw a shape to match a given shape card. Students identify shapes that have the same attributes, and draw shapes that have at least one shared attribute with two other shapes. Throughout the activities, students describe the shapes they draw to their peers and reflect on the words they use to describe the attributes of shapes. Students develop mathematical language to describe shapes and create a reference poster together to display their language.

The dot paper will be used throughout the section. Consider printing 8–10 copies per student to use throughout this and the following lessons.

Access for:

🧩 Students with Disabilities
- Action and Expression (Activity 2)

Instructional Routines
MLR2 Collect and Display (Activity 1), Notice and Wonder (Warm-up)
Materials to Gather

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

Materials to Copy

- Centimeter Dot Paper - Standard (groups of 1): Activity 1
- Centimeter Dot Paper - Standard (groups of 1): Activity 2

Lesson Timeline

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Teacher Reflection Question

Identify ways the math community you are working to foster is going well. What aspects would you like to work on? What actions can you take to improve those areas?

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

Unit 7, Section A Checkpoint

Standards Alignments

Addressing 1.G.A

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize defining attributes of shapes.
- Draw shapes with given attributes.
- Describe the sides and corners of two-dimensional and three-dimensional shapes using informal vocabulary (corners, points, square corners, sides, long sides, short sides).

Begin Lesson
Warm-up
Notice and Wonder: Dot Paper

Standards Alignments
Addressing 1.G.A

The purpose of this warm-up is to elicit the idea that students can use dots to draw shapes and describe their attributes, which will be useful when students draw shapes in a later activity.

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
- “How did the dots help you describe the shapes in this image?” (The dots helped me count the corners. I could see the lines that connected the dots.)
- “How do you think the dots would help you draw your own shapes?” (They might keep the lines straight. They might help me plan where to start my shape. I can just connect the dots to make a shape.)

Student Responses
Students may notice:
- I see triangles, squares, and rectangles.
- You can draw across, down, or diagonally.
- Each shape’s corner is on a dot.
Students may wonder:
- What other shapes can we draw on the dot paper?
- Are we going to use dot paper to draw shapes?

**Activity 1**

**Draw Shapes on Dot Paper**

**Standards Alignments**
Addressing 1.G.A.1

The purpose of this activity is for students to draw shapes. Students pick a shape card, draw it on dot paper, and describe the shape. While students are working, record the words and phrases they used to describe their shapes on a chart. During the synthesis, students look at the language being used to describe shapes. They add or replace language and look for similarities in the words and phrases listed. When students begin to match the names of shapes to words and phrases that describe their defining attributes, they begin to distinguish between the defining and non-defining attributes of the shape categories they know (MP6).

This activity uses *MLR2 Collect and Display*. Advances: *conversing, reading, writing*

**Instructional Routines**

MLR2 Collect and Display

**Materials to Gather**
Materials from a previous lesson

**Materials to Copy**
Centimeter Dot Paper - Standard (groups of 1)

**Required Preparation**
- Each group of 2 needs the Flat Shape Cards from a previous lesson.

**Student-facing Task Statement**
- Pick a shape card.

**Launch**
- Groups of 2
• Each partner draws the shape on dot paper.
• Take turns describing the shape you drew.

**Student Responses**

Sample responses:
• Draws a triangle. Describes shape: three sides, three corners, triangle
• Draws a parallelogram. Describes shape: four straight sides, four corners
• Draws a hexagon. Describes shape: six sides, six points

• Give each group a set of shape cards and two pieces of dot paper.

**Activity**

• “Pick one of the shape cards. Each partner draws the shape on their dot paper. Share your drawing and take turns describing the shape.”
• 6 minutes: partner work time

**MLR2 Collect and Display**

• Circulate, listen for, and collect the language students use to describe the shapes that they draw. Listen for: triangle, square, rectangle, hexagon, edges, sides, corners, and vertices.
• Record students’ words and phrases on a visual display and update it throughout the lesson.

**Synthesis**

• “While you were describing your shapes, I wrote down some of the words and phrases I heard.”
• Read the words from the chart or invite students to read along.
• “Are there any other words or phrases that are important to include on our display?”
• As students share responses, update the display by adding (or replacing) language and drawing diagrams.
• If needed, ask: “How can we group some of the words and phrases that are written on the chart?” (Triangle, three corners, three sides)
• Record responses and leave them displayed throughout the unit.
Advancing Student Thinking

If students draw shapes that are not closed, consider asking:

- “How did you use the dots to help you draw your shape?”
- “Circle three dots you can use to make your triangle. What do you need to do now to make the triangle?”

Activity 2

Introduce How Are They the Same, Grade 1 Shapes

Standards Alignments

Addressing 1.G.A.1

The purpose of this activity is for students to learn stage 1 of the How Are They the Same center. Students lay six shape cards face up. One student picks two cards that have an attribute in common. All students draw a shape that has a shared attribute with the two shapes. Students get a point if they draw a shape that no other student drew. It is possible that students will draw a shape with a different shared attribute than what the original student chose. This can be an interesting discussion for students to have.

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

Materials from a previous activity

Materials to Copy

Centimeter Dot Paper - Standard (groups of 1)

Required Preparation

- Each group of 4 needs a set of Flat Shape Cards from the previous activity.
Launch

- Groups of 4
- Give each group a set of flat shape cards and multiple copies of dot paper.
- “We are going to learn a new center called How Are They the Same? Let's play one round together.”
- Display six shape cards.
- “You will start by laying out six shape cards. Then one person in your group chooses two shapes that are the same in some way. They show everyone in the group the shapes they chose.”
- Demonstrate choosing two shapes and showing them to the class.
- “Then the other group members draw a different shape that is also the same in some way as the two shapes that were chosen. You can do that now. Draw a shape that is the same as these two shapes in some way.”
- 1 minute: independent work time
- “Finally, everyone shares the shapes they drew and what they have in common with the first two shapes chosen.”
- 3 minutes: whole-class discussion
- “You earn 1 point if you draw a shape that nobody else drew.”

Activity

- “Now you will play with your group.”
- 8 minutes: small-group work time
- Monitor for a group that draws shapes with different attributes in common. For example, the first two shapes chosen both have four sides and are shaded in. Someone in the group draws another four-sided shape, while someone else draws a three-sided shape that is shaded in.
Synthesis

- Invite previously identified groups to share.

Activity 3
Centers: Choice Time

Standards Alignments
Addressing 1.NBT.C.4, 1.OA.C.6

The purpose of this activity is for students to choose from activities that offer practice adding and subtracting within 10 or 20. Students choose from any stage of previously introduced centers.

- Capture Squares
- Compare
- How Close

Materials to Gather
Materials from previous centers

Required Preparation

- Gather materials from previous centers:
  - Capture Squares, Stages 1 and 2
  - Compare, Stage 1
  - How Close, Stages 1-3

Student-facing Task Statement
Choose a center.
Capture Squares

Launch

- Groups of 2
- “Now you are going to choose from centers we have already learned.”
- Display the center choices in the student book.
Compare

How Close?

- “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
- “We all worked on adding and subtracting numbers in our centers today. What was the best part of your center work today?”

Lesson Synthesis

“Today we drew and described flat shapes. We compared flat shapes, looking for ways they were the same.”

Display two flat shapes that have multiple attributes in common, such as a square and a rectangle, and the chart from activity 1.

“What is one way these shapes are the same?” (They both have four sides and four corners. They are both white. They are both rectangles.)
Lesson 5: Some Triangles, All Triangles

Standards Alignments

Teacher-facing Learning Goals
- Draw triangles based on their defining attributes.
- Identify defining and non-defining attributes of triangles.

Student-facing Learning Goals
- Let’s explore what makes a shape a triangle.

Lesson Purpose
The purpose of this lesson is for students to identify defining and non-defining attributes of triangles. Students draw triangles based on defining attributes.

In previous lessons, students used their own language, and continued to refine their language, as they sorted and identified shapes, including triangles, squares, rectangles, circles, and hexagons. They drew shapes based on attributes.

In this lesson, students analyze examples and non-examples of triangles and identify defining and non-defining attributes of triangles. Then, using dot paper, students draw different triangles.

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

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

Materials to Copy

- Centimeter Dot Paper - Standard (groups of 1): Activity 2

Required Preparation

Lesson Timeline

<table>
<thead>
<tr>
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<td>Activity 3</td>
<td>20 min</td>
</tr>
<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
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</table>

Teacher Reflection Question

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

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

Unit 7, Section A Checkpoint

Standards Alignments

Addressing 1.G.A.1

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize defining attributes of shapes.
- Draw shapes with given attributes.
Warm-up

Which One Doesn’t Belong: Shapes

Standards Alignments

Addressing 1.G.A.1

This warm-up prompts students to compare four two-dimensional shapes. It gives students a reason to use language precisely (MP6). It gives the teacher an opportunity to hear how students use informal and formal language to talk about characteristics of the items in comparison to one another. During the synthesis, ask students to explain the meaning of any terminology they use, such as curved and open.

Instructional Routines

Which One Doesn’t Belong?

Student-facing Task Statement

Which one doesn’t belong?

Launch

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

Activity

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

Synthesis

- “Let’s find at least one reason why each one doesn’t belong.”
**Student Responses**

Sample responses:

- A is the only one that does not have straight lines.
- B is the only one that does not show one shape.
- C is the only one that isn't made of four lines.
- D is the only one that is not a closed shape.

---

**Activity 1**

**Triangles and “Not Triangles”**

**Standards Alignments**

Addressing 1.G.A.1

The purpose of this activity is for students to analyze examples and non-examples of triangles. As students compare examples and non-examples, they identify and articulate the defining attributes of triangles (MP6).
Access for English Learners

MLR8 Discussion Supports. Before students share, remind them to use words such as sides, corners, straight, and pointy.
Advances: Speaking, Conversing

Access for Students with Disabilities

Representation: Internalize Comprehension. Synthesis: Provide more examples and non-examples to reinforce the defining attributes of triangles.
Supports accessibility for: Conceptual Understanding, Visual-Spatial Processing

Materials to Gather

Materials from a previous lesson

Required Preparation

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

Student-facing Task Statement

1. These are triangles.

   ![Triangle Images]

   What is the same about all these triangles?

2. These are not triangles.

Launch

- Groups of 2
- Display the first question.
- “Here are four triangles. What do all of these triangles have in common?” (They all have three sides and three corners. They are all pointy. They are all closed.)
- 30 seconds: quiet think time
- “Share your thinking with your partner.”
- 2 minutes: partner discussion
- Share responses.
- If a student shares that all the triangles are white, ask, “If I colored one of these shapes in red, would it still be a triangle?”

Activity

- Read the second question.
- “Work with your partner to think of what makes these ‘not triangles’ different from
What makes these shapes different from the triangles?

**Student Responses**

1. Sample responses:
   - They all have three sides and three corners.
   - They are all pointy.
   - They are all closed.

2. Sample responses:
   - The first shape has four sides, not three.
   - The sides of the second shape don’t touch.
   - The last one has a curved side.

the triangles in the first problem.”

**Synthesis**

- “What makes the triangles different than the ‘not triangles’?”
- Give each group a set of shape cards from previous lessons.
- “Work with your partner to sort your shape cards into the categories of ‘triangles’ and ‘not triangles.’”
- Share responses.

---

**Activity 2**

**Draw Triangles**

**Standards Alignments**

Addressing 1.G.A.1

The purpose of this activity is for students to draw triangles. Students use dot paper to draw triangles and then draw shapes that are not triangles. Students may use the shape cards to visualize and draw shapes.
Materials to Gather
Materials from a previous activity

Materials to Copy
Centimeter Dot Paper - Standard (groups of 1)

Required Preparation
- Each group needs a set of Flat Shape Cards from the previous activity.

Student-facing Task Statement
1. Draw 3 different triangles.
2. Draw 3 different shapes that are not triangles.

Student Responses
Students draw a variety of triangles and ‘not triangles.’

Launch
- Groups of 2
- Give each group a set of flat shape cards and two pieces of dot paper.
- “Choose three dots. Connect the dots.”
- 30 seconds: independent work time
- “Compare your drawing with your partner. What do you notice?” (We both drew triangles. The triangles are different sizes. They both have three sides.)
- 1 minute: partner share
- Share responses.

Activity
- “Use the dot paper in your book to draw three triangles and three shapes that are not triangles. You may use the shape cards to help you.”
- 6 minutes: independent work time
- Monitor for some triangles and ‘not triangles’ to share during the lesson synthesis.

Synthesis
- “Who thinks they drew a triangle that no one else drew?”
- Invite students to share their shapes and explain how they know they are triangles.
Activity 3

Centers: Choice Time

Standards Alignments

The purpose of this activity is for students to choose from activities that offer practice adding and subtracting or working with shapes. Students choose from any stage of previously introduced centers.

- Geoblocks
- How Are They the Same
- Compare
- How Close

Materials to Gather
Materials from previous centers

Required Preparation
Gather materials from previous centers:

- Geoblocks, Stage 3
- How Are They the Same, Stage 1
- Compare, Stage 1
- How Close, Stages 1-3

Student-facing Task Statement
Choose a center.

Geoblocks

How Are They the Same?

Launch
- Groups of 2
- “Now you 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.”
Grade 1, Unit 7

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 decide which centers to choose today?”

Lesson Synthesis  
10 min

“Today we looked at shapes that are triangles and shapes that are not triangles. Then we drew our own shapes.”

Display shapes drawn in a previous activity. “How can we tell if these shapes are triangles or not?” (If they are triangles they will have three sides, three corners, the sides will be straight and the shapes will be closed.)
Lesson 6: Rectangles and Squares

Standards Alignments
Addressing 1.G.A, 1.G.A.1, 1.NBT.C.4

Teacher-facing Learning Goals
- Draw squares and rectangles based on defining attributes.
- Identify defining and non-defining attributes of rectangles and squares.
- Recognize a square as a special rectangle.

Student-facing Learning Goals
- Let’s explore what makes a shape a rectangle or a square.

Lesson Purpose
The purpose of this lesson is for students to identify defining and non-defining attributes of squares and rectangles. Students draw rectangles and squares as well as non-examples of rectangles and squares.

Earlier in this section, students sorted shapes and described their attributes. In the previous lesson, students learned the defining attributes of triangles (all triangles are closed, have three straight sides, and three corners).

In this lesson, students continue that work, this time with squares and rectangles. Students learn that a square is a special rectangle because it has the defining attributes of a rectangle (four sides and four square corners), but also has four sides with equal lengths. Students should be able to identify squares as rectangles, but they do not need to articulate a formal definition of a rectangle or a square.

Access for:

- **Students with Disabilities**
  - Action and Expression (Activity 2)

- **English Learners**
  - MLR7 (Activity 2)

Instructional Routines
Number Talk (Warm-up)

Materials to Gather
- Chart paper: Activity 2

Materials to Copy
- Centimeter Dot Paper - Standard (groups of
• Materials from a previous activity: Activity 2
• Materials from a previous lesson: Activity 1

### Lesson Timeline

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<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
</tr>
<tr>
<td>Cool-down</td>
<td>5 min</td>
</tr>
</tbody>
</table>

### Teacher Reflection Question

What evidence have students given that they can distinguish between defining and non-defining attributes?

---

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

Color Shapes

**Standards Alignments**

Addressing 1.G.A

**Student-facing Task Statement**

1. Color the 3 rectangles.
2. Write 2 things that are true about all rectangles.

**Student Responses**

1. Student colors all rectangles (and squares).
2. Sample response: They all have four straight sides. They all have four square corners.

---

**Warm-up**

Number Talk: Some Sums

**Standards Alignments**

Addressing 1.NBT.C.4

The purpose of this Number Talk is to elicit strategies and understandings students have for adding 2 two-digit numbers within 100. Students continue to develop their understanding of place value and how it can be used when adding numbers. This warm-up encourages students to choose methods that they can use to add larger numbers mentally, such as adding by place value.

**Instructional Routines**

Number Talk

**Student-facing Task Statement**

Find the value of each expression mentally.

- $57 + 10$
- $57 + 11$
- $57 + 21$
- $57 + 42$

**Student Responses**

- 67: 5 tens and 1 more ten is 6 tens and the
ones stay the same.

- 68: It's 1 more than the last problem.
- 78: It's 10 more than the last problem.
- 99: $50 + 40 = 90, \ 7 + 2 = 9, \ 90 + 9 = 99$

- Repeat with each expression.

**Synthesis**

- “Did anyone approach the problem in a different way?”
- “How can you use the problem before to help you solve this one?”

---

### Activity 1

**Rectangles and Squares**

**Standards Alignments**

Addressing 1.G.A.1

---

The purpose of this activity is for students to identify defining and non-defining attributes of rectangles and squares. Students begin by noticing what is the same about four rectangles (one being a square). As they notice, they identify some defining attributes (four sides, four square corners, pairs of sides that are the same length). Then given non-examples of rectangles, students notice what makes the non-examples different from examples. Some, but not all, of the attributes students mention will be defining attributes. For example, students may notice that a rectangle has two long sides and two short sides, but this isn't a defining attribute.

In the synthesis, students identify squares and rectangles from their card set and the teacher supports students in developing statements about the defining attributes of these shapes. This gives students an opportunity to use language precisely to distinguish squares and rectangles (MP6).

**Materials to Gather**

Materials from a previous lesson

**Required Preparation**

- Each group of 2 needs a set of Flat Shape Cards from a previous lesson.
Student-facing Task Statement

1. These are rectangles.
   What is the same about all these rectangles?

2. These are not rectangles.
   What makes these shapes different from the rectangles?

3. These are squares.

Launch

- Groups of 2
- Display the first question.
- “These are rectangles. What do you notice about them?” (I notice a square. I notice that one is colored in. They all have four sides and four corners. Sometimes there are two pairs of sides with the same length.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- “Why do you think a square is with these rectangles?” (It has four straight sides, four square corners, and it's closed, so it is a rectangle.)
- Display the next question, keeping the first question visible.
- “These are ‘not rectangles.’ What makes the ‘not rectangles’ different from the rectangles?” (One has a flat corner instead of pointy. One has a line that sticks out. One doesn't have square corners.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.

Activity

- “We saw that a square is a type of rectangle. Now you are going think about ‘squares’ and ‘not squares.’ Write your thinking in your book. Think about each question on your own, then share your thinking with your partner.”
- 5 minutes: partner work time

Synthesis

- “What did you notice about the squares? What is the same about them?”
Grade 1, Unit 7

What is the same about all these squares?

4. These are not squares.

What makes these shapes different from the squares?

**Student Responses**

1. Sample responses:
   - They all have four sides.
   - I notice a square.
   - I notice that one is colored in.

2. Sample responses:
   - One has an extra side.
   - One has a line that sticks out.
   - One doesn't have square corners.

3. Sample responses:
   - I notice that they have four sides and four square corners.
   - I notice there are no rectangles.
   - I notice that all four sides are the same length.

4. Sample responses:
   - One of them isn't closed and squares have to be closed.
   - They don't have sides that are the same length.

- “What makes the ‘not squares’ different from squares?”
- Give each group a set of shape cards from previous lessons.
- “Work with your partner to sort your shape cards into the categories of ‘rectangles,’ and ‘not rectangles.’”
- Share responses.
One has slanted sides and squares are not slanted.

Activity 2

Draw Rectangles and Squares

Standards Alignments
Addressing 1.G.A.1

The purpose of this activity is for students to draw squares and rectangles. Students use dot paper to draw the shapes. As they draw, they attend to the attributes of squares and rectangles. Students also draw shapes that are not rectangles or squares. They may use the shape cards to visualize and draw shapes.

Access for English Learners

MLR7 Compare and Connect. Synthesis: After all the student-drawn shapes have been presented, lead a discussion comparing, contrasting, and connecting the different shapes. Ask, “What do the shapes have in common?” and “How are they different?”

Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Provide students with alternatives to writing on paper: students can share their learning orally or using pictures.

Materials to Gather
Chart paper, Materials from a previous activity

Materials to Copy
Centimeter Dot Paper - Standard (groups of 1)

Required Preparation
- Each group of 2 needs a set of Flat Shape Cards from the previous activity.
**Student-facing Task Statement**

1. Draw 5 rectangles.
   - How do you know these are rectangles?

2. Draw 3 shapes that are not rectangles.
   - How do you know these are not rectangles?

3. Draw 5 squares.
   - How do you know these are squares?

4. Draw 3 shapes that are not squares.

**Launch**

- Groups of 2
- Give each group a set of flat shape cards and two pieces of dot paper.
- “Now, we’ll practice drawing. You will draw examples and non-examples of rectangles then squares. As you draw the shapes, think about how you know they are examples or non-examples. You may use the shape cards to help you.”

**Activity**

- 8 minutes: independent work time
- 3 minutes: partner discussion
- Monitor for examples and non-examples of rectangles. Have students record shapes on a chart to display during the synthesis. Be sure to include a square.

**Synthesis**

- Display the chart of student-drawn shapes.
- “Which of these shapes are rectangles and which are not rectangles? How do you know?” (Rectangles have four sides and four square corners.)
- Circle each rectangle students identify.
- When students identify the square, ask:
  - “How many sides does it have?” (4)
  - “How many corners does it have?” (4)
  - “Is a square an example of a rectangle?” (Yes, because it has four straight sides and four square corners.)
How do you know these are not squares?

Student Responses

Sample responses:
1. Draws five different rectangles. They have four square corners and four straight sides.
2. Draws three not rectangles. Some don’t have square corners. Some don’t have straight sides. Some are not closed.
3. Draws five different squares. They have four square corners and four straight sides that are the same length.
4. Draws three not squares. Some have more than four sides. One has four sides but they aren’t the same length.

Lesson Synthesis

“Today we learned about squares and rectangles.”

“What is true about all rectangles?” (Rectangles have four straight sides, four square corners, all sides touch, and opposite sides are the same length.)

“What is true about some rectangles, but not all rectangles?” (They can be colored in. They can have two sides that are really long and two sides that are short. They can have sides that are all the same size, like squares.)
Response to Student Thinking

Students choose a shape that is not a rectangle.

Next Day Support

- Create a poster with a diagram that represents the cool-down from previous lessons.
Lesson 7: Put Together Flat Shapes

Standards Alignments
Building On 1.G.A.2

Teacher-facing Learning Goals
● Compose shapes in different ways.

Student-facing Learning Goals
● Let's build a new shape from smaller shapes.

Lesson Purpose
The purpose of this lesson is for students to compose larger shapes from pattern blocks and describe the shapes.

In previous lessons, students made composite shapes from three-dimensional shapes.
The purpose of this lesson is for students to compose shapes from smaller, two-dimensional shapes. They observe how the different pattern block shapes fit together to make larger shapes and how there are different ways to compose the pattern blocks to make the same shape (MP7). In the lesson synthesis, students reflect on what they have learned during their study of shapes in this section.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities
● Action and Expression (Activity 2)

English Learners
● MLR8 (Activity 1)

Instructional Routines
Notice and Wonder (Warm-up)

Materials to Gather
● Pattern blocks: Activity 1, Activity 2
● Picture books: Activity 3

Materials to Copy
● Flat Shapes Puzzles (groups of 1): Activity 1
● Picture Books Stage 3 Recording Sheet (groups of 1): Activity 3
Required Preparation
- Create a chart titled, “What We've Learned About Shapes” for the Lesson Synthesis.

Lesson Timeline

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Teacher Reflection Question
Reflect on how you can reinforce the work done in this section outside of math class. When can you ask students to identify, describe, or compose shapes?

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

Unit 7, Section A Checkpoint

Standards Alignments
Addressing 1.G.A.2

Student-facing Task Statement
Lesson observations

Student Responses
- Put two-dimensional or three-dimensional shapes together to form larger shapes or objects.
- Describe the composite shape and the shapes that make up the composite shape.

Warm-up  🕑 10 min
Notice and Wonder: Dogs
Standards Alignments
Building On 1.G.A.2

The purpose of this warm-up is to elicit student knowledge about composing and decomposing composite shapes, which will be useful when students build their own composite shapes later in this lesson. While students may notice and wonder many things about this image, the idea that shapes, such as hexagons, can be composed and decomposed into other shapes—such as multiple triangles, rhombuses, trapezoids, or a combination of triangles, rhombuses, or trapezoids—is the important discussion point. Students may refer to the pattern blocks by their colors when describing them or sharing different combinations that may form the same shape. Use this as an opportunity to ask the students if they know the names of the shapes and review shape vocabulary.

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
- “Some of you noticed that the image at the bottom looks like the one at the top, but they used different shapes to make up the hexagons.”
- “What other ways could you make a hexagon with the pattern blocks?” (2 trapezoids, 1 trapezoid and 3 triangles, 2 rhombuses and 2 triangles)
- “What other ways could you make a rhombus? a trapezoid?”

Student Responses
Students may notice:
- It’s a dog.
- It’s the same picture just made with different shapes.
- The first dog picture is made with fewer shapes than the second dog picture.
Six triangles make a hexagon.

Students may wonder:

- Can the second dog picture be broken into even more shapes?
- Can you use more than one type of shape to make a hexagon?

**Activity 1**

Build with Pattern Blocks

**Standards Alignments**

Addressing 1.G.A.2

The purpose of this activity is for students to compose two-dimensional shapes into larger shapes in different ways. As students work, consider asking them to identify the shapes they are using and their attributes. During this activity, the teacher may consider taking photos of the way students composed the large triangle (third problem) and the large rectangle (fourth problem) to share during the synthesis so that students do not need to move their pattern blocks to share with the class.

**Access for English Learners**

*MLR8 Discussion Supports.* Synthesis: When asking questions, invite students to take turns sharing their responses. Ask students to restate what they heard using precise mathematical language and their own words. Display the sentence frame: “I heard you say . . .” Original speakers can agree or clarify for their partner.

*Advances: Listening, Speaking*

**Materials to Gather**

- Pattern blocks

**Materials to Copy**

- Flat Shapes Puzzles (groups of 1)

**Required Preparation**

- Consider making the Flat Shapes Puzzles Instructional master into a packet for each student.
**Student Responses**

1. Sample response: one hexagon, two trapezoids, three rhombuses, six triangles, one trapezoid and three triangles, two rhombuses, and two triangles.

2. Sample response: seven hexagons and six rhombuses make a large hexagon.

3. Sample response: nine triangles make a large triangle.


**Launch**

- Give students pattern blocks and the flat shape puzzles.

**Activity**

- “Use the pattern blocks to fill the outline in different ways. Each time, record how you filled in the shape with pictures, numbers, or words.”
- 8 minutes: independent work time
- Monitor for different ways that students filled in the large triangle and large rectangle puzzles.

**Synthesis**

- Display work from two students for the large triangle.
- “How was the triangle created differently? Why do both ways work?” (One way used all triangles, the other used some triangles and a trapezoid. They both work because a trapezoid is the same shape as three triangles put together.)
- Display student work for the large rectangle.
- “Did anyone find a different way to build this shape? Why didn’t we find any other ways?” (The rectangle has square corners and the square is the only pattern block that also has square corners.)

---

**Activity 2**

Shape Pictures

> 10 min
The purpose of this activity is for students to compose two-dimensional shapes into composite shapes and find other smaller shapes that can make the same composite shape. Students use pattern blocks to compose a new shape, then recreate the new shape using smaller shapes.

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

Pattern blocks

Student-facing Task Statement

1. Build something using the pattern blocks.

   Trace what you made and record how many pattern blocks you used.

2. Make the same object you just made, using different pattern blocks.

   Record how many pattern blocks you used.

If you have time: Build the same object again, using the most pattern blocks you can. Record how many pattern blocks you used.

Student Responses

Sample responses.

1. I used thirteen shapes to make a cat.
2. I traded one hexagon for six triangles.

Launch

- Give students pattern blocks.
- “What kinds of shapes can you make from pattern blocks?” (triangles, rectangles, flowers)
- 30 seconds: quiet think time
- Share responses.

Activity

- “Use the pattern blocks to build something new. You can build whatever you want. After you build your new object, trace it and count the number of pattern blocks you used. Then build the same object using different pattern blocks, and record how many blocks you used.”
- 6 minutes: independent work time
- Monitor for 2–3 students to share their two shapes.
Synthesis

- Invite previously identified students to share.
- “What do you notice about the shapes they built?” (They made a rocket. They used six triangles to make a hexagon in their first shape but used hexagons in the second shape.)
- Repeat as time allows.

Activity 3

Introduce Picture Books, Find Shapes

Standards Alignments

Addressing 1.G.A

Materials to Gather

- Picture books

Materials to Copy

- Picture Books Stage 3 Recording Sheet (groups of 1)

Required Preparation

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

Launch

- Groups of 2
- Give each group two recording sheets and access to picture books.
“We are going to look for shapes in picture books. Talk to your partner about the shapes you see. Describe the shapes and name them if you can. Then record the shapes you see with a drawing or words.”

Activity

- 10 minutes: partner work time

Synthesis

- Display a page from a picture book with lots of recognizable shapes.
- “What shapes do you see on this page?” (The sun looks like a circle. The blanket is a rectangle. The ball is a sphere.)

Lesson Synthesis

Display a chart titled “What We've Learned About Shapes.”

“Let's reflect on the work we did in this section with shapes. First you will think on your own. Then you will share your ideas with a partner.”

Share and record responses.

Student Section Summary

We learned about solid shapes.
We learned about flat shapes.

We described and named shapes.

This shape is a triangle because it has 3 straight sides and 3 corners.

These shapes are all rectangles because they have 4 straight sides and 4 square corners.

We built larger shapes from smaller shapes.
Lesson 8: Center Day 1

Standards Alignments

Teacher-facing Learning Goals
- Add and subtract within 20.
- Compose objects using solid shapes and describe the objects.
- Find, describe, and compare shapes.

Student-facing Learning Goals
- Let's work with shapes and add or subtract numbers.

Lesson Purpose
The purpose of this lesson is for students to work with two-dimensional and three-dimensional shapes as well as practice addition and subtraction.

In the first activity, students learn stage 2 of the Match Mine center, which was first introduced in kindergarten. In this new stage, called Solid Shapes, students put shapes together to make larger objects. Students then describe their object to a partner who tries to make a matching shape. In the second activity, students choose from previously introduced centers focused on shapes or addition and subtraction.

Instructional Routines
Number Talk (Warm-up)

Materials to Gather
- Folders: Activity 1
- Geoblocks: Activity 1
- Materials from previous centers: Activity 2
- Solid shapes: Activity 1

Lesson Timeline
<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm-up</td>
<td>10 min</td>
</tr>
<tr>
<td>Activity 1</td>
<td>20 min</td>
</tr>
<tr>
<td>Activity 2</td>
<td>20 min</td>
</tr>
</tbody>
</table>

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?
Warm-up
Number Talk: Add 3 Numbers

Standards Alignments
Addressing 1.OA.C.6

The purpose of this Number Talk is to elicit strategies and understandings students have for adding three one-digit numbers within 20. When students look for ways to decompose addends to make a ten with another addend, and add the remaining addends to find the sum, they look for and make use of the structure of numbers and properties of operations (MP7).

Instructional Routines
Number Talk

Student-facing Task Statement
Find the value of each expression mentally.

- $6 + 4 + 8$
- $6 + 8 + 4$
- $6 + 8 + 5$
- $6 + 5 + 9$

Student Responses

- $18: 6 + 4 = 10$, $10 + 8 = 18$
- $18$: It's the same expression as above. $6 + 4 = 10$, $10 + 8 = 18$.

Launch

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

Activity

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

Synthesis

- "Who can restate _____'s reasoning in a
Activity 1

Introduce Match Mine, Solid Shapes

Standards Alignments
Addressing 1.G.A.2

The purpose of this activity is for students to learn stage 2 of the Match Mine center introduced in kindergarten. Students put solid shapes together to make a larger object. They hide their object behind a folder and describe it to a partner who tries to match it.

Materials to Gather
Folders, Geoblocks, Solid shapes

Launch
- Groups of 2
- Give each group solid shapes and a folder.
- “We are going to learn a new way to play Match Mine, which is a center that was introduced in kindergarten. Let’s play one round together. You can all be my partner.”
- Put shapes together to make an object. Hide the object behind a folder.
- “One person starts by putting shapes together to build something new. They hide their object behind the folder so their partner can’t see it. Then they describe their object to their partner, who tries to match it. I will describe my object and you can try to match
it.”

- Describe your object and allow students to try to match it with the shapes.
- Discuss what you said that helped students match the object, and what you said that might not have helped.

**Activity**

- “Now you will play with your partner.”
- 10 minutes: partner work time

**Synthesis**

- “What did your partner do or say to make it easier to match their object?” (My partner only used four blocks so it was easy to match his object. My partner told me when to put a block on top of another block or next to it.)

---

**Activity 2**

Centers: Choice Time

**Standards Alignments**

Addressing 1.G.A, 1.G.A.1, 1.OA.C.6

The purpose of this activity is for students to choose from activities that offer practice adding and subtracting or working with shapes. Students choose from any stage of previously introduced centers.

- Picture Books
- How Are They the Same
- Capture Squares
Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from previous centers:
  - Picture Books, Stage 2
  - How Are They the Same, Stage 1
  - Capture Squares, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Picture Books

How Are They the Same?

Capture Squares

Launch

- Groups of 2
- “Now you 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 the centers you worked on today help you practice?”

Lesson Synthesis

“How did you and your partner work together during centers? What went well? What can we continue to work on?”
Section B: Halves and Quarters

Lesson 9: Equal Pieces

Standards Alignments
Building On 1.G.A.3

Teacher-facing Learning Goals

- Determine whether shapes are partitioned into equal pieces.
- Partition circles and rectangles into halves and fourths.

Student-facing Learning Goals

- Let’s split shapes into equal-size pieces.

Lesson Purpose

The purpose of this lesson is for students to partition circles and rectangles into halves and fourths and determine whether a shape is partitioned into equal pieces.

In previous lessons, students created two- and three-dimensional shapes from smaller shapes.

Students begin this lesson by composing shapes and compare those made with equal pieces to those made with unequal pieces. Then, they partition shapes into two and four equal size pieces and learn the terms halves and fourths. Students do not have to create exactly equal pieces, but they should be able to explain that the pieces should be equal.

Access for:

Students with Disabilities
- Action and Expression (Activity 3)

English Learners
- MLR8 (Activity 1)

Instructional Routines

Which One Doesn’t Belong? (Warm-up)
**Materials to Gather**

- Scissors: Activity 2

**Materials to Copy**

- Pieces of Circles (groups of 8): Activity 1
- Circles and Squares (groups of 1): Activity 2

**Lesson Timeline**

<table>
<thead>
<tr>
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<tr>
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<td>Activity 2</td>
<td>15 min</td>
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<tr>
<td>Activity 3</td>
<td>10 min</td>
</tr>
<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
</tr>
<tr>
<td>Cool-down</td>
<td>5 min</td>
</tr>
</tbody>
</table>

**Teacher Reflection Question**

How does this work build the foundation for understanding fractions in later grades? How is this introductory work different from the work student will do beginning in Grade 3?

---

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

Split Shapes

**Standards Alignments**

Addressing 1.G.A.3

**Student-facing Task Statement**

1. Split the square into halves.
2. Split the circle into fourths.

Student Responses

1. Equally partitions square into two equal pieces.
2. Equally partitions circle into four equal pieces.

Warm-up

Which One Doesn’t Belong: Pieces of Shapes

Standards Alignments

Addressing 1.G.A

This warm-up prompts students to carefully analyze and compare images. 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 characteristics of shapes and pieces of shapes. To help all students distinguish the composite shapes from the smaller shapes they are made up of, invite students to clarify or show what they mean when they describe attributes of the shapes they see in each image.
**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 image.
- “Pick one that doesn't belong. Be ready to share why it doesn't belong.”
- 1 minute: quiet think time

**Activity**

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

**Synthesis**

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

**Student Responses**

- A is the only that is not made out of triangles.
- B is the only that doesn't have 4 sides.
- C is the only one not made of the same shape.
- D is the only one that doesn't have four pieces.

---

**Activity 1**

Build a Circle

© 10 min
The purpose of this activity is for students to recognize the difference between equal-size pieces and unequal-size pieces. Students work together to make circles from the pieces they are given. After some circles have been made, students discuss what they notice about each circle. Both circles have four pieces, however one has equal-size pieces and the other doesn’t.

**Access for English Learners**

MLR8 Discussion Supports. Synthesis. Display sentence frames to support whole-class discussion: “These pieces are/are not equal because...” and “These pieces do/do not make a circle because...”

Advances: Speaking, Representing

**Materials to Copy**

Pieces of Circles (groups of 8)

**Required Preparation**

- Cut out the pieces of the circles on the Instructional master. Each copy has enough pieces for 8 students.

**Student-facing Task Statement**

Synthesis:

**Launch**

- Give each student one piece of a circle.
- “Today we are going to make circles. Each circle will be made up of four pieces. You will walk around and find three other people who have pieces that fit with yours to make a circle.”
- “If you try to put your piece together with three other pieces and they don’t make a circle, find other people with different pieces and try again.”
- “When you have made a circle, leave it on the table, and sit down so we know you are done.”

**Activity**

- 5 minutes: whole-class work time
Which of these shows equal pieces that make a circle?

**Student Responses**

Students compose a circle from four pieces.

---

### Activity 2

*Fold into Equal Pieces*

**Standards Alignments**

Addressing 1.G.A.3

The purpose of this activity is for students to fold circles and squares into two or four equal pieces. To make equal pieces, some students may partition the shape by folding it down the middle (and folding again for fourths) and matching up the edges of the shapes. There are several ways students may fold their square into equal pieces—vertically, horizontally, or diagonally—although each way gives different shaped pieces, they all result in four equal pieces. There are many ways to fold the circle but the size and shape of the pieces when it is folded are all the same (MP8).

**Materials to Gather**

Scissors

**Materials to Copy**

Circles and Squares (groups of 1)
Required Preparation
- Consider having extra shapes cut from the Instructional masters for students who may need more than one of each shape.

Student-facing Task Statement
1. Cut out one circle and one square.
   Fold each shape so that there are 2 equal pieces.
   Be ready to explain how you know your shape has 2 equal pieces.
2. Cut out one circle and one square.
   Fold each shape so that there are 4 equal pieces.
   Be ready to explain how you know your shape has 4 equal pieces.

Launch
- Give each student a copy of the Instructional master and scissors.

Activity
- Read the task statement.
- 10 minutes: independent work time
- Monitor for students who line up the edges and fold the square horizontally, vertically, or diagonally, and a student who folds the circle.

Synthesis
- Invite previously identified students to share.
- “Is your paper folded so that each piece is the same size? How do you know?” (Yes, the pieces line up perfectly. No. when I fold it on the line, one piece is bigger.)
- Consider cutting out the pieces and laying them on top of one another to show whether or not they are the same size.

Student Responses
1. Student partitions shape into two equal pieces.
2. Student partitions shape into four equal pieces.

Activity 3
Halves or Fourths

Standards Alignments
Addressing 1.G.A.3
The purpose of this activity is for students to be introduced to the terms **halves** and **fourths**. In the launch, students explore examples and non-examples of shapes split into halves and fourths and develop a shared understanding of what these terms mean (MP6). Students then draw lines to partition shapes into halves or fourths. During the synthesis students learn that the term 'quarters' means the same as fourths. Fourth and quarters will be used interchangeably throughout this section.

### Access for Students with Disabilities

*Action and Expression: Develop Expression and Communication.* Give students access to a straight edge or ruler.

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

### Student-facing Task Statement

1. **Split each shape into halves.**

2. **Split each shape into fourths.**

### Launch

- Groups of 2
- Display the categories of shapes from the student workbook.
- “Here are some shapes split into pieces.”
- “What do you notice?” (One table shows shapes split into two pieces and the other table shows shapes split into four pieces. The pieces are equal in the first group.)
- 1 minute quiet think time
- 2 minutes: partner discussion
- Record responses.
- “Based on what you observed, what do you think split into halves means? What do you think split into fourths means?”
- 1 minute quiet think time
- Record responses.
- “**Halves** are the pieces created when a shape is split into two pieces that are the same size. **Fourths** are the pieces created when a shape is split into four pieces that are the same size.”
3. Split each shape into fourths.

4. Split each shape into halves.

5. Split each shape into halves.

6. Split each shape into fourths.

**Student Responses**

Student partitions each shape into halves or fourths.

**Activity**

- Read the task statement.
- 4 minutes: independent work time
- Monitor for students who accurately partition the shapes into fourths in different ways.

**Synthesis**

- Invite previously identified students to share.
- “Do all of these shapes show fourths? How do you know?” (Yes, each of the shapes have 4 equal pieces. Each of the pieces are the same size.)
- “When we split a shape into four equal-sized pieces, the shape is split into fourths. We can also say the shape is split into quarters.”
Advancing Student Thinking

Students may split the shapes into halves accurately by drawing a vertical or horizontal line down the middle of each shape. These students may attempt to create fourths, for the rectangles and circles, using the same technique by guessing-and-checking. Ask these students to explain their method and what they hope to achieve. Consider asking:

- “How many pieces are you trying to create?”
- “How can you make sure they are the same size?”
- “How would you fold this shape to make __ equal pieces?”
- “How can you use the table of shapes we looked at earlier to help plan how to make __ equal pieces?”

Lesson Synthesis

Display the two circles from activity 1.

“Tyler says both circles are split into fourths. Do you agree? Why or why not?” (Fourths are four equal pieces. The first circle is split into fourths because the four pieces are all the same size. The second circle has four pieces but they are not the same size, so it is not split into fourths.)

“What is another way to describe how the first circle is split?” (It is split into quarters.)

Response to Student Thinking

Students partition the shapes into pieces that are not the same size.

Next Day Support

- Launch Warm-up or Activity 1 by highlighting important ideas from previous lessons.
Lesson 10: One of the Pieces, All of the Pieces

Standards Alignments
Addressing 1.G.A.3

Teacher-facing Learning Goals
- Describe the whole as two of the halves or four of the fourths.
- Partition circles and rectangles into halves and fourths and describe one piece as “a half of”, “a fourth of” or “a quarter of” the whole shape.

Student-facing Learning Goals
- Let’s describe equal pieces of shapes.

Lesson Purpose
The purpose of this lesson is for students to partition circles and rectangles into halves and fourths, and use precise language to describe the pieces as a half of or a fourth of the whole shape.

In previous lessons, students partitioned circles and rectangles into two and four equal pieces. They learned the terms halves and fourths to describe how the shapes were partitioned. In this lesson, students describe one piece as a half of, a fourth of, or a quarter of a whole shape. Students also learn that they can describe the whole shape as “two of the halves” or “four of the fourths.”

Access for:

👩‍🏫 Students with Disabilities
- Representation (Activity 3)

🌐 English Learners
- MLR2 (Activity 2)

Instructional Routines
Which One Doesn’t Belong? (Warm-up)

Materials to Gather
- Colored pencils or crayons: Activity 1

Materials to Copy
- Shaded Parts Cards (groups of 1): Activity 2

Lesson Timeline

| Warm-up | 10 min |

Teacher Reflection Question
What part of the lesson went really well today in
Cool-down  (to be completed at the end of the lesson)  5 min

Split the Rectangle

Standards Alignments

Addressing  1.G.A.3

Student-facing Task Statement

1. Split the rectangle into fourths.

2. Color in 1 piece.

3. Circle all of the ways to describe the piece you colored.

   a fourth of the rectangle  a half of the rectangle  a quarter of the rectangle  the whole rectangle

Student Responses

1. Answers vary.

2. Answers vary.
Warm-up
Which One Doesn’t Belong: Split Shapes

Standards Alignments
Addressing 1.G.A.3

This warm-up prompts students to compare four shapes split into pieces. It gives the teacher an opportunity to hear how students use geometric vocabulary and talk about the characteristics of the shapes in comparison to one another (MP6).

Instructional Routines
Which One Doesn’t Belong?

Student-facing Task Statement
Which one doesn’t belong?

Launch
- Groups of 2
- Display image.
- “Pick one that doesn’t belong. Be ready to share why it doesn’t belong.”
- 1 minute: quiet think time

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

Synthesis
- “Let’s find at least one reason why each one
Student Responses

Sample responses:

- A doesn’t belong because it’s not split into equal pieces.
- B doesn’t belong because it’s the only one that is not split into four pieces.
- C doesn’t belong because it’s the only that doesn’t just have one shaded piece.
- D doesn’t belong because it’s the only one that’s not a rectangle.

Activity 1

Color a Piece

Standards Alignments

Addressing 1.G.A.3

The purpose of this activity is to introduce the language of a half of and a fourth of a shape. Students begin by applying the language of halves and fourths, or quarters, to partition each shape. Students are asked to describe “how much” of each shape is shaded to elicit a variety of responses that include half, fourth, or quarter, including the phrases “of the square” or “of the circle.” Monitor for a variety of words and phrases to share in the synthesis including:

- phrases that reference the pieces only (“one piece”).
- phrases that reference that some, but not all of the shape is shaded (“part of it,” “a little bit”)
Materials to Gather
Colored pencils or crayons

Student-facing Task Statement
1. Split the square into halves.
   Color in one of the halves.
   How much of the square is colored in?
2. Split the circle into fourths.
   Color in one of the fourths.

Launch
- Groups of 2
- Give students access to colored pencils or crayons.

Activity
- Read the task statement.
- 2 minutes: independent work time.
- 2 minutes: partner discussion
- Monitor for a range of ways to describe the amount shaded such as “some is shaded,” “one piece of the square is shaded,” “one out of two pieces is shaded,” or “a half is shaded.”

Synthesis
- Invite previously identified students to share for each problem. Sequence the students in the order described in the narrative.
- “One piece of a shape split into two pieces that are the same size is called a half. One piece of a shape split into four pieces that are the same size is called a fourth.”
- For each shape, invite students to describe how much is colored in. (A half of the square is colored in. A fourth of the circle is...
How much of the circle is colored in?

Student Responses
1. One piece, a half.
2. One of the pieces, a fourth, a quarter.

Activity 2
Card Sort: Shaded Pieces

Standards Alignments
Addressing 1.G.A.3

The purpose of this card sort is for students to connect words and phrases to visual representations of partitioned shapes. Students begin by sorting the cards in a way that makes sense to them, and then are invited to sort the shapes based on the language that can be used to describe them. In the activity synthesis, the phrases “two of the halves” and “four of the fourths” are introduced to describe shapes where all pieces are shaded in.

Keep cards D and N available to use during the lesson synthesis.

As students sort the shape cards they look for structure, namely the number of pieces making up each shape, whether or not the pieces are equal, and the number of those pieces that are shaded (MP7).

Access for English Learners

MLR2 Collect and Display. Circulate, listen for and collect the language students use as they describe the shapes. On a visible display, record words and phrases such as: “shaded,” “half,” “fourth,” “quarter,” “equal,” “not equal,” “whole,” “shape.” Invite students to borrow language from the display as needed, and update it throughout the lesson.

Advances: Conversing, Speaking

Materials to Copy

Shaded Parts Cards (groups of 1)
Required Preparation

- Create a set of Shaded Parts Cards for each group of 2.

Student-facing Task Statement

1. Sort the cards into categories in a way that makes sense to you. Explain how you sorted the cards.

2. Sort your cards into these categories. Write the letter of each card in the space for its category.
   - A fourth or quarter is shaded
   - A half is shaded

Launch

- Groups of 2
- Give each group a set of cards.
- “Sort your cards in a way that makes sense to you. Then explain how you sorted them.”
- 3 minutes: partner work time
- Share responses.

Activity

- “Now, sort the cards into the categories shown on your paper. Think about what words you can use to describe the shape on each card. Write the letter of each card in the space for its category.”
- 5 minutes: partner work time

Synthesis

- Display card J.
- “How can we describe this shape?” (It is a square. It is cut into halves. The whole shape is shaded.)
- “When a shape is split into halves and they are both shaded, we say the whole shape is shaded or two of the halves are shaded.”
- Repeat with card E.
- “When a shape is split into fourths and they are all shaded, we say the whole shape is shaded or four of the fourths are shaded.”
<table>
<thead>
<tr>
<th>The whole shape is shaded</th>
<th>Not equal pieces</th>
</tr>
</thead>
</table>

**Student Responses**

1. Sample responses:
   - Halves, fourths, or neither
   - All shaded, one piece shaded, or not shaded
   - Equal pieces or not equal pieces

2. A half is shaded-Cards A, D, F, I
   A fourth or a quarter is shaded-Cards B, C, G
   The whole shape is shaded-Cards E, H, J, L, N, P
   Not equal pieces- Cards K, M, O
Activity 3
Describe Equal Pieces

Standards Alignments
Addressing 1.G.A.3

The purpose of this activity is for students to match language to visual representations of rectangles and circles partitioned and shaded in different ways.

Access for Students with Disabilities

Representation: Access for Perception. Read each of the phrases aloud. Students who both listen to and read the information will benefit from extra processing time.
Supports accessibility for: Language, Conceptual Processing

Student-facing Task Statement
Here are some ways to describe the shapes.

- split into fourths
- split into halves
- split into quarters
- a half shaded
- a quarter shaded
- a fourth shaded
- two of the halves shaded
- four of the fourths shaded

Label each shape with at least one phrase from the lists.

1. 

2. 

Launch
- Groups of 2

Activity
- Read the task statement.
- “You may use the phrases more than once.”
- 6 minutes: partner work time

Synthesis
- Display the circle with four of the fourths shaded.
- “Let’s list all the ways we could describe this shape.” (It's split into fourths. It's split into quarters. Four of the fourths are shaded.)
- Repeat with other shapes as time permits.
3. A half shaded; split into halves

4. Four of the fourths shaded; split into quarters; split into fourths

5. Split into quarters; split into fourths

6. Split into quarters; split into fourths; a quarter shaded; a fourth shaded

7. Two of the halves shaded; split into halves

Student Responses

Sample responses:

1. A half shaded; split into halves
2. Four of the fourths shaded; split into quarters; split into fourths
3. Split into quarters; split into fourths
4. Split into quarters; split into fourths; a quarter shaded; a fourth shaded
5. Two of the halves shaded; split into halves
6. Split into fourths; split into quarters; a fourth shaded; a quarter shaded
7. Split into halves

Lesson Synthesis

Display cards D and N.

“How are the shapes the same? How are they different?” (They are both rectangles. They are both split into halves. They are split differently. One has a half shaded and one has two of the halves shaded.)

Response to Student Thinking

Students choose either “a fourth” or “a quarter” to describe the piece shaded, not both.

Next Day Support

- Launch warm-up or Activity 1 by highlighting key vocabulary from previous lessons.
Lesson 11: A Bigger Piece

Standards Alignments

Teacher-facing Learning Goals
- Compare the size of halves and fourths of the same shape.
- Understand that for halves and fourths, partitioning a shape into more equal pieces creates smaller pieces.

Student-facing Learning Goals
- Let’s compare the size of halves and fourths.

Lesson Purpose
The purpose of this lesson is for students to compare the size of halves and fourths of the same shape and understand that partitioning a shape into more equal pieces creates smaller pieces.

In previous lessons, students partitioned shapes into halves and fourths and identified “a half,” “a fourth,” and “a quarter,” of a shape. In this lesson, students build on this work by comparing the size of halves and fourths of same-size shapes. Students explain that for the same shape, a fourth is smaller than a half. In later grades, students will generalize that for any whole, splitting it into more pieces creates smaller size pieces. At this point, they only need to understand the relative size of halves and fourths of the same shape.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities
- Action and Expression (Activity 1)

English Learners
- MLR7 (Activity 1)

Instructional Routines
Choral Count (Warm-up), MLR8 Discussion Supports (Activity 2)
Materials to Gather

- Bags: Activity 3
- Colored pencils or crayons: Activity 2
- Geoblocks: Activity 3
- Scissors: Activity 1

Required Preparation

Lesson Timeline

<table>
<thead>
<tr>
<th>Activity</th>
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<tr>
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<tr>
<td>Activity 3</td>
<td>15 min</td>
</tr>
<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
</tr>
</tbody>
</table>

Teacher Reflection Question

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

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

0 min

Unit 7, Section B Checkpoint

Standards Alignments

Addressing 1.G.A.3

Student-facing Task Statement

Lesson observations

Student Responses

- Partition a circle or rectangle into halves or fourths.
- Understand that for halves and fourths, partitioning a shape into more equal pieces creates smaller pieces.
Warm-up

Choral Count: 10 More, 10 Less

Standards Alignments

Addressing 1.NBT.C.5

The purpose of this Choral Count is to invite students to practice counting on and counting back from two-digit numbers by 10 and notice patterns in the count. These understandings help students develop fluency with 10 more and 10 less.

Instructional Routines

Choral Count

Student Responses

Record the count in two columns, one for the forward count (6-116) and one for the backward count (116-6).

Sample responses:

- We said the same numbers counting on and counting back, but in a different order.
- Each number has a 6 in the ones place.
- When we count on, the numbers are 10 more and when we count back, the numbers are 10 less.

Launch

- “Count by 10, starting at 6.”
- Record as students count.
- Stop counting and recording at 116.
- “Count back by 10 starting at 116.”
- Record as students count.
- Stop counting and recording at 6.

Activity

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

Synthesis

- “Who can restate the pattern in different words?”
- “Does anyone want to add an observation on why that pattern is happening here?”
Activity 1

Which is Bigger?

Standards Alignments
Addressing 1.G.A.3

In previous lessons, students identified halves and fourths of rectangles and circles and have partitioned these shapes into halves and fourths. The purpose of this activity is for students to reason about the size of halves and fourths of the same shape. Because of their prior work with comparing quantities of objects, students may reason that because four pieces are more than two pieces, a fourth should be larger than a half. When students compare the sizes of a half and fourth of the same-size circle and repeat the comparison with a half and a fourth of the same sized square, they begin to generalize that when you partition the same-size shape into more parts, the size of each part gets smaller (MP8).

Access for English Learners

MLR7 Compare and Connect. Synthesis: Lead a discussion comparing, contrasting, and connecting the different observations. Ask, “What was shared about folding the squares?” “What was shared about folding the circles?” and “How were those observations the same and different?” Advances: Representing, Conversing

Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Provide students with alternatives to writing on paper: students can share their learning orally.
Supports accessibility for: Language, Conceptual Processing

Materials to Gather

Scissors

Student-facing Task Statement

1. Each partner cuts out their circle.
   Decide who will cut into halves and who will cut into fourths.
   Fold your circle into halves or fourths then cut it.

Launch

• Groups of 2
• Give each student a pair of scissors.

Activity

• Read the task statement.
1. Compare your pieces with your partner.
2. What do you notice?
3. Be ready to explain your thinking in a way that others will understand.

2. Repeat with your squares.
3. Compare your pieces with your partner.
4. What do you notice?
5. Be ready to explain your thinking in a way that others will understand.

3. Write 2 things you notice about your pieces.

**Student Responses**

Sample responses:
• When the square was cut into fourths there were more equal pieces.
• The partner who cut the square into halves had bigger pieces.
• Halves are bigger than fourths.

Activity 2
Priya and Han Share Roti

Standards Alignments
Addressing 1.G.A.3

The purpose of this activity is to help students generalize that partitioning the same-size shape into fourths creates smaller pieces than partitioning it into halves. This builds on work from a previous activity in which students compare halves and fourths of circles and squares. Students generalize that for halves and fourths of the same circle, a half is larger than a fourth (and a fourth is smaller than a half). As students explain how they know, some may show or color half of the circle and label it Priya, then show or color a fourth that is not shaded and label it Han. Some students may also shade in part of a half to show fourths. When students decide whether they agree with Priya’s or Han’s statement and justify their choice with diagrams and words, they construct viable arguments and critique the reasoning of others (MP3).

Instructional Routines
MLR8 Discussion Supports

Materials to Gather
Colored pencils or crayons

Student-facing Task Statement
Priya and Han are sharing roti.
• Priya says, “I want half of

Launch
• Groups of 2
• Give students access to colored pencils or crayons.
the roti because halves are bigger than fourths.”

- Han says, “I want a fourth of the roti because fourths are bigger than halves because 4 is bigger than 2.”

Who do you agree with?

Show your thinking using drawings, numbers or words.

Use the circle if it helps you.

Student Responses

Sample response: I agree with Priya because a half of a circle is bigger than a fourth of the circle. When a circle is cut into two pieces each piece is larger than if it is cut into four pieces.

- “What are some different types of food that you can share with another person?” (pizza, sandwich, papadum, quesadilla, tortilla)
- “This picture shows roti, a flatbread from India.”

Activity

- Read the task statement.
- 5 minutes: partner work time
- Monitor for a student who shows and can explain that a half is bigger than a fourth.

Synthesis

- Invite previously identified students to share.

MLR8 Discussion Supports

- “Who can restate what ____ shared in their own words?”
- Consider providing students time to restate what they heard to a partner before selecting one or two students to share with the class.
- Ask the original speaker if their peer was accurately able to restate their thinking.

Activity 3

Introduce Geoblocks, Feel and Guess

Standards Alignments

Addressing 1.G.A
The purpose of this activity is for students to learn stage 4 of the Geoblocks center. Students guess which geoblock is inside a bag, without looking at the block.

**Materials to Gather**

Bags, Geoblocks

**Required Preparation**

- Place 4–6 different geoblocks into a bag that is not see-through for each group of 2 students.

**Launch**

- Groups of 2
- Give each group of students a bag containing 4-6 solid shapes.
- “We are going to learn a new way to play Geoblocks, called Feel and Guess.”
- “One partner will reach into the bag and feel one shape without looking at it. Feel the shape until you can guess which shape it is. Once you guess, remove the shape and show it to your partner. If your partner agrees, put the shape back into the bag, and switch roles.”

**Activity**

- 10 minutes: partner work time

**Synthesis**

- “What did you feel that helped you guess the shape?” (I felt if the shape had points or not. I felt the shape of the sides on the shape.)

**Lesson Synthesis**

“In this section we learned about splitting shapes into equal pieces. What have you learned?” (I learned that a half is larger than a fourth. I learned that a quarter is another way to say a fourth. I learned that
when one piece is shaded it is a fourth or a half, but when the entire shape is shaded it's called 'two of the halves' or 'four of the fourths'.

**Student Section Summary**

We learned that circles and rectangles can be split into two equal pieces which are called halves and four equal pieces which are called fourths or quarters.

A half of the square is shaded.

![Diagram of a half of a square shaded](image)

A fourth or a quarter of the circle is shaded.

![Diagram of a quarter of a circle shaded](image)

Two of the halves are shaded.

![Diagram of two halves of a rectangle shaded](image)

Four of the fourths are shaded.

![Diagram of four fourths of a rectangle shaded](image)
Lesson 12: Center Day 2

Standards Alignments

Teacher-facing Learning Goals
- Add within 100.
- Compose objects using solid shapes and describe the objects.
- Recognize and describe shapes seen in picture books.
- Subtract within 10.

Student-facing Learning Goals
- Let’s work with shapes and numbers.

Lesson Purpose
The purpose of this lesson is for students to work with shapes and numbers.

In the first activity, students learn stage 1 of the Can You Draw It center. In this center, students choose a shape card and describe the shape to a partner. The partner tries to draw the shape based on the description given. In the second activity, students choose from previously introduced centers focused on shapes, addition, or subtraction.

Instructional Routines
How Many Do You See? (Warm-up)

Materials to Gather
- Materials from a previous lesson: Activity 1
- Materials from previous centers: Activity 2

Materials to Copy
- Centimeter Dot Paper - Standard (groups of 1): Activity 1

Lesson Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm-up</td>
<td>10 min</td>
</tr>
<tr>
<td>Activity 1</td>
<td>20 min</td>
</tr>
<tr>
<td>Activity 2</td>
<td>20 min</td>
</tr>
<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
</tr>
</tbody>
</table>

Teacher Reflection Question
Check-in with your norms and routines. Are they promoting engagement from all of your students? Are there any adjustments you might make so that all students do math tomorrow?
Warm-up

How Many Do You See: 2 or 3 Parts

Standards Alignments
Addressing 1.OA.C.6

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

Instructional Routines
How Many Do You See?

Student-facing Task Statement
How many do you see?
How do you see them?

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

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

Synthesis
- “Did anyone see the triangles the same way but would explain it differently?”
13: I see 5 on the top of both 10-frames so that is 10 and then there are 3 more.
15: 8 + 2 + 5
20: 5 + 5 + 5 = 15, 15 + 3 + 2 = 20

Activity 1
Introduce Can You Draw It, Grade 1 Shapes

Standards Alignments
Addressing 1.G.A.1

The purpose of this activity is for students to learn stage 1 of the Can You Draw It center. Students describe and draw two-dimensional shapes. One partner chooses a shape card and describes it. The other partner draws the shape based on the description. If the student draws the shape correctly, they get to keep the card.

Materials to Gather
Materials from a previous lesson

Materials to Copy
Centimeter Dot Paper - Standard (groups of 1)
**Required Preparation**

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

**Launch**

- Groups of 2
- Give each group a set of cards and access to dot paper.
- “We are going to learn a new center called Can You Draw It. One partner picks a card without showing it to their partner. They describe the shape on the card so their partner can draw it.”
- Display one of the cards.
- “How can we describe this shape?” (It has four sides. The top and the bottom are longer than the sides. It has square corners.)
- “After the shape is drawn, partners compare shapes. If the partner drew the correct shape, they keep the card. Take turns describing and drawing shapes.”

**Activity**

- 10 minutes: partner work time

**Synthesis**

- “How did your partner describe the shapes to make it easier for you to draw them correctly?”

---

**Activity 2**

Centers: Choice Time

**Standards Alignments**

The purpose of this activity is for students to choose from activities that offer practice adding and subtracting or working with shapes. Students choose from any stage of previously introduced centers.

- Picture Books
- Match Mine
- Capture Squares
- Target Numbers

**Materials to Gather**

Materials from previous centers

**Required Preparation**

- Gather materials from previous centers:
  - Picture Books, Stage 2
  - Match Mine, Stage 2
  - Capture Squares, Stages 1 and 2
  - Target Numbers, Stages 1-3

**Student-facing Task Statement**

Choose a center.

<table>
<thead>
<tr>
<th>Picture Books</th>
<th>Match Mine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capture Squares</th>
<th>Target Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 10</td>
<td>390</td>
</tr>
</tbody>
</table>

**Launch**

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

**Activity**

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

- “What is something you like about the centers you chose?”

Lesson Synthesis

“Describe a time during centers today when you learned something by listening carefully to your partner or someone in your class.”
Section C: Tell Time in Hours and Half Hours

Lesson 13: It’s Time to Learn About Clocks

Standards Alignments
Addressing 1.MD.B.3

Teacher-facing Learning Goals
- Tell and write time in hours.
- Understand time as a unit of measurement.

Student-facing Learning Goals
- Let’s tell and write times from a clock.

Lesson Purpose
The purpose of this lesson is for students to tell and write time in hours.

In previous sections, students learned about linear measurement. In this lesson, they formally learn about measuring time. It is likely that students will have experiences working with time outside of school, but they may have limited familiarity with clock faces.

In this lesson, students learn about time as a unit of measurement and show time in hours. Students begin by considering clocks that only have hour hands to help them attend to the short hand representing the hour. Students learn that when times are read as “__ o’clock” or shown as __:00 the minute hand points to the 12. Students write times in the digital format (__:__), show times on analog clocks, and relate times to activities they do during the school day.

Access for:

Students with Disabilities
- Action and Expression (Activity 3)

English Learners
- MLR8 (Activity 1)

Instructional Routines
Notice and Wonder (Warm-up)

Materials to Gather
- Materials from a previous activity: Activity 2

Materials to Copy
- Clock Cards Hour (groups of 1): Activity 1
Scissors: Activity 1

Lesson Timeline

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Activity 3</td>
<td>10 min</td>
</tr>
<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
</tr>
<tr>
<td>Cool-down</td>
<td>5 min</td>
</tr>
</tbody>
</table>

Teacher Reflection Question

How does the measure of time relate to measuring length? How can you help students visualize the abstract concept of time?

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

Show the Time

Standards Alignments

Addressing 1.MD.B.3

Student-facing Task Statement

1. Circle the 3 clocks that show 5 o'clock.
2. Show 6 o'clock on both clocks.

Student Responses

1. Students circle the 3 clocks showing 5:00.
2. 6:00, the hour hand points to the 6 and the minute hand points to the 12.

Warm-up

Notice and Wonder: Clocks

Standards Alignments

Addressing 1.MD.B.3
The purpose of this warm-up is to elicit the idea that time is a measurement, which will be useful when students read clocks in hours in a later activity. While students may notice and wonder many things about these images, the ideas that these numbers represent time and student experiences with digital clocks are the important discussion points.

**Instructional Routines**

**Notice and Wonder**

**Student-facing Task Statement**

What do you notice?
What do you wonder?

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00</td>
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<tr>
<td>2:00</td>
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<td>3:00</td>
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<td>10:00</td>
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<tr>
<td>11:00</td>
</tr>
<tr>
<td>12:00</td>
</tr>
</tbody>
</table>

**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**

- “This list shows different times. Where have you seen times shown like this?” (I've seen it on clocks, iPhone, iPad, computer, and watches.)
- “We can tell the time using hours. We read the first time as “1 o’clock.” Let’s read all the times together.”

**Student Responses**

Students may notice:
- I notice the numbers go up by one on the left.
- All of them have 00 on the right.

Students may wonder:
- How many hours are in a day?
- What if there are minutes too?
Activity 1
Card Sort: Clocks

Standards Alignments
Addressing 1.MD.B.3

The purpose of this activity is for students to understand how to tell time using an analog clock, with only the hour hand. Students work with a set of cards that show clocks with just the hour hand. When they sort the cards, students focus on the structure of the clock faces, mainly the numbers and where the arrow points (MP7). In the activity synthesis, students are introduced to the language, hour hand, and that time to the hour is read as “___ o’clock.”

The cards that the students create will be used in the next activity and future lessons. MLR8 Discussion Supports. Synthesis: To support the transfer of new vocabulary to long term memory, invite students to chorally repeat these phrases in unison 1-2 times: hour hand, 3 o’clock.

Access for English Learners
Advances: Speaking, Listening

Materials to Gather
Scissors

Student-facing Task Statement
What do you notice about this clock?
What do you wonder?

Materials to Copy
Clock Cards Hour (groups of 1)

Launch
- Groups of 2
- Give each student a copy of the Instructional master and a pair of scissors.
- Display image in student workbook.
- “What do you notice about this clock? What do you wonder?” (This clock is a circle, it shows numbers from 1 to 12 going around. It has little lines on the outside.)
- 1 minute: partner discussion
- Share responses.
Student Responses

Sample responses:

- I put them in order by what number the arrow points to.
- One pile has arrows pointing to the right side of the clock and the other pile has arrows pointing to the left side of the clock.

Activity

- “Cut out the cards and organize them in a way that makes sense to you.”
- 6 minutes: independent work time
- “Explain how you organized your cards with your partner.”
- 3 minute: partner discussion
- Monitor for students who organized their clocks in different ways.

Synthesis

- Invite previously identified students to share.
- “How did ____ organize their clocks?”
- Display the card with the hour hand pointing to the 3.

- “We call this arrow the hour hand and when it points to 3 we say, 3 o’clock.”
- “Let’s say this time together.”
- Repeat with more cards as time permits.

Activity 2

Connect Clocks to Written Times

(minutes: 10)
Standards Alignments
Addressing 1.MD.B.3

The purpose of this activity is to connect the time shown on a digital clock with an analog clock with only the hour hand displayed. Students use the cards created in the first activity to write times in the digital format to represent each clock.

Materials to Gather
Materials from a previous activity

Required Preparation
- Each student needs the clock cards they created in the previous activity.

Student-facing Task Statement
These clocks both show the same time.
What time do they show?
How do you know?

Launch
- Display image in student workbook.
- “These clocks both show the same time. What time do they show? How do you know?” (They show 1 o’clock. The arrow is pointing to the 1. There is a 1 on the left of the written time.)
- 30 seconds: quiet think time
- Share responses.

Activity
- “On the cards you made in the first activity, write the times under each clock.”
- 5 minutes: independent work time

Synthesis
- Display the card that shows 5 o’clock.
- “Find your card that matches this card. What time did you write under this clock? How did you know that it shows 5:00?”
- “Find the card that shows 4 o’clock. How did you know that it shows 4:00? How did

Student Responses
Students write the correct time under each clock.
Activity 3

Our School Day

Standards Alignments

Addressing 1.MD.B.3

The purpose of this activity is to represent time to the hour on analog clocks and write time to the hour digitally, using the context of a daily school schedule. Students look at a schedule with the time and activity given and represent the same time on a clock. Students begin to explore the minute hand.

Teachers can create their own schedule to use for this activity or can use the one provided.

When students connect the times of different activities to the times shown on the clocks, they reason abstractly and quantitatively (MP2).

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

Student-facing Task Statement

Launch

Groups of 2

Display the image of two clocks from the workbook.

“Both of these clocks show the same time. What do you notice?” (They both have an hour hand that points to 8, but the first clock has another longer arrow that points...
Fill in the clocks to show what time each activity starts.

- **8:00**
  - Arrival
  ![Clock image](image1)

- **:**
  - Reading
  ![Clock image](image2)

- **10:00**
  - Snack
  ![Clock image](image3)

  - Math
  ![Clock image](image4)

  **Activity**
  - “This list shows a schedule, but not all of the clocks are filled in. With your partner, make each clock show the time each activity happens.”
  - 4 minutes: partner work time
  - Monitor for students who
    - Include the minute hand.
    - Do not include the minute hand.

  **Synthesis**
  - Invite previously identified students to share what they drew for 4:00.
  - “How are these two clocks the same and how are they different?” (One has two arrows and the other has one. Both show 4 o'clock because they have the hour hand pointing to the 4.)
Students complete either the digital or analog clock to show the correct time.
Lesson Synthesis

Display the blank clock from the first activity.

Draw the hour hand so that it points to 6.

“What time does this show?” (6 o’clock)

“How should I draw the minute hand?” (It should point to the 12.)

Draw a big arrow pointed to the 12.

“How can we write the time?” (6:00)

“Draw the minute hand on your clock cards.”

Response to Student Thinking

Students circle clocks that show times other than 5:00.

Next Day Support

- Create a poster with a diagram of an analog and digital clock showing __ o’clock. Highlight the position of the hands on the clock.
Lesson 14: Half of the Clock

Standards Alignments
Addressing 1.MD.B.3, 1.NBT.C.4

Teacher-facing Learning Goals
• Relate halves of circles to half hours.
• Tell time in hours and half hours.

Student-facing Learning Goals
• Let's learn more about time to the half hour.

Lesson Purpose
The purpose of this lesson is for students to learn about the position of the hands on an analog clock at half past the hour.

In a previous lesson, students learned how to tell and write time in hours. In a previous section, students partitioned shapes into two equal pieces and identified each piece as “a half of” the shape.

The purpose of this lesson is for students to learn about the position of the hands on an analog clock at half past the hour. They analyze how the hands on the clock move as time goes from one hour to the next. They see that half past the hour is when the hour hand is halfway between two numbers and the minute hand is halfway around the clock. They create new clock cards that show half past and add the minute hand to the clocks.

Access for:

Students with Disabilities
• Representation (Activity 2)

English Learners
• MLR2 (Activity 2)

Instructional Routines
Number Talk (Warm-up)

Materials to Gather
• Colored pencils, crayons, or markers: Activity 2
• Materials from a previous activity: Activity 3
• Materials from a previous lesson: Activity 1

Materials to Copy
• Clock Cards Half Past (groups of 1): Activity 1
• Scissors: Activity 1

Required Preparation

Lesson Timeline

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</tr>
<tr>
<td>Cool-down</td>
<td>5 min</td>
</tr>
</tbody>
</table>

Teacher Reflection Question

With which math ideas from today’s lesson did students grapple most? Did this surprise you or was this what you expected?

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

Find 2:30

Standards Alignments

Addressing 1.MD.B.3

Student-facing Task Statement

Circle the clock that shows 2:30.
Warm-up

Number Talk: Work with 30

Standards Alignments
Addressing 1.NBT.C.4

The purpose of this Number Talk is to elicit strategies and understandings students have for adding within 100.

Instructional Routines
Number Talk

Student-facing Task Statement
Find the value of each expression mentally.

- 30 + 10
- 30 + 15
- 30 + 30
- 30 + 35

Student Responses
- 40: 3 tens plus 1 ten is 4 tens.
- 45: Since 15 is 5 more than 10, it is 5 more than the last one.
- 60: 3 tens and 3 tens is 6 tens or 60.
- 65: 30 plus 30 is 60, plus 5 more is 65.

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

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

Synthesis
- “Who can restate _____ ‘s reasoning in a different way?”
“Did anyone have the same strategy but would explain it differently?”

Activity 1
Put Times in Order

Standards Alignments
Addressing 1.MD.B.3

The purpose of this activity is for students to see that the hour hand doesn’t always point directly at a number on the clock. Students see that the hour hand can be between two hours. The end of the activity synthesis provides an opportunity for formative assessment of students’ understanding of the language of “half past” which they will continue developing in the next activities.

Materials to Gather
Materials from a previous lesson, Scissors

Materials to Copy
Clock Cards Half Past (groups of 1)

Required Preparation
• Each student needs their clock cards from the previous lesson.

Student-facing Task Statement
What do you notice?
What do you wonder?

Launch
• Groups of 2
• Give each student their clock cards from the previous lesson, a copy of the Instructional master, and scissors.
• Display the image from the student book.
• “What do you notice? What do you wonder?”
• 1 minute: quiet think time
• 1 minute: partner discussion
• Share and record responses.
Activity

- “Cut out your new cards and put them with your other clock cards. Then organize all the cards in a way that makes sense to you. Be ready to explain how you organized the cards.”
- 5 minutes: independent work time

Synthesis

- Display cards showing 7:00, 7:30, 8:00
- “____ put their clocks in this order. Why do you think they did that?” (The hour hand is moving from the 7 to the 8 and on the middle clock, it’s in between.)
- “On the second clock, the hour hand is halfway between the 7 and the 8, so we can name the time as ‘half past 7.’”
- “Hold up the card that shows half past 3. Hold up the card that shows half past 12.”

Student Responses

Students organize their cards in any way that makes sense to them.

Activity 2

Half Past What?

Standards Alignments

Addressing 1.MD.B.3

The purpose of this activity is for students to identify whether a clock is showing a time that's half past or o'clock. Students use the position of the hour hand to determine the time.
Access for English Learners

MLR2 Collect and Display. Circulate, listen for and collect the language students use as they talk about the clocks. On a visible display, record words and phrases such as: half past, hour hand, minute hand, o’clock. Invite students to borrow language from the display as needed, and update it throughout the lesson.

Advances: Conversing, Speaking

Access for Students with Disabilities

Representation: Access for Perception. To ensure access for students with color blindness, label the colors on visual displays and student tasks. Provide colored pencils, crayons, or markers that have labels to indicate color.

Supports accessibility for: Visual-Spatial Processing

Materials to Gather

Colored pencils, crayons, or markers

Required Preparation

- Each student needs red and blue colored pencils, crayons, or markers.

Student-facing Task Statement

What time is shown on each clock?
If the time is half past, color the clock red.
If the time is o’clock, color the clock blue.
Write the time in words using half past or o’clock.

Launch

- Groups of 2
- Give each student a red and a blue colored pencil, crayon, or marker.
- Display clock cards for 9:00 and half past 9.
- “Which card shows 9 o’clock and which card shows half past 9?”
- 1 minute: partner discussion
- Share responses.

Activity

- Read the task statement.
- 5 minutes: partner work time

Synthesis

- Display clock showing half past 2.
2. “Mai says it’s half past 2, and Tyler says it’s half past 3. Who do you agree with? Why do you agree with them?” (I agree with Mai because when you start at the top of the clock and go around, you start at 1, then 2. The hour hand is putting past 2. It looks like its pointing in between 2 and 3).
Student Responses

1. blue, 3 o’clock
2. red, half past 2
3. blue, 8 o’clock
4. red, half past 7
5. red, half past 10
6. blue, 4 o’clock

Advancing Student Thinking

Students may say that a time is half past the greater number of the two numbers the hour hand is between because the arrow is pointing at a position lower (or past) the greater number when looking at the numbers from top to bottom. Ask students to explain their method for telling the time. Consider asking:

- “Can you show me how the arrow hand moves around the clock? Start at the 12.”
- “Which number do you say first when you count from 1 to 12? Which number does the hour hand pass by first on its way around the clock?”
Activity 3

Notice and Wonder: The Hands on the Clock Go Round and Round

Standards Alignments
Addressing 1.MD.B.3

The purpose of this activity is for students to connect their understanding of half of a circle to the minute hand moving halfway around the face of a clock (MP7). Students watch a display clock to see that as the minute hand goes around the clock, the hour hand goes from one hour to the next. In the activity synthesis, students add the minute hand to their half-past clock cards. In the next lesson, students will connect half past to 30 minutes to write times in hours and half hours.

Use a display clock set to 10:00 and show the minute hand moving around until the clock shows 11:00. If a display clock is not available, this video can be used.

Materials to Gather
Materials from a previous activity

Required Preparation
- Each student needs their Half Past Clock Cards from a previous activity.

Student-facing Task Statement

Launch
- Groups of 2
- Display the clocks in the student book.
- “What do you notice about these clocks?” (One shows 4 o’clock and the other shows half past 4. One is shaded. Half of the clock is shaded.)
- “Now we will watch the hands on the clock move as time goes by.”

Activity
- Display demonstration clock or video.
- “What do you notice? What do you
Students may notice:
- The hour hand went from 10 to 11.
- The minute hand went all the way around the clock.

Students may wonder:
- How do the hands move differently?
- If the minute hand goes around again will the hour hand go to 12?

**Lesson Synthesis**

“We've looked at clocks that show times in hours and half-hours.” Display clock cards showing 2 o'clock and half past 2.

“What is the same about these clocks? What is different?” (They both have two hands. On the 2:00 clock the minute hand points to the 12, but on the half past clock the minute hand points to the 6. On the 2:00 clock the hour hand points right at the 2, but on the half past clock it points between 2 and 3.)

---

**Complete Cool-Down**
Response to Student Thinking

Students circle a clock that doesn't show 2:30.

Next Day Support

- Add to the poster created earlier to include times to the half hour. Highlight the position of both hands on the clock at half past an hour.
Lesson 15: Write Times

Standards Alignments
Addressing 1.MD.B.3, 1.NBT.A.1, 1.OA.D.7

Teacher-facing Learning Goals
• Tell and write time in hours and half hours.

Student-facing Learning Goals
• Let’s write times in hours and half hours.

Lesson Purpose
The purpose of this lesson is for students to understand that times called half past are represented as ___:30. Students write time in hours and half hours to match analog clocks.

In the previous lesson, students connected “half past” the hour to half of an analog clock face. They told time in hours and half hours on clocks that only had an hour hand. At the end of the lesson, they learned that when it is half past the hour, the minute hand points to the 6.

In this lesson, students connect half of an hour to the digital form ___:30. Students write time in hours and half hours based on analog clocks. They add the digital form to the half past clock cards.

Access for:

Students with Disabilities
• Engagement (Activity 2)

English Learners
• MLR8 (Activity 2)

Instructional Routines
True or False (Warm-up)

Materials to Gather
• Materials from a previous lesson: Activity 2

Lesson Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm-up</td>
<td>10 min</td>
</tr>
<tr>
<td>Activity 1</td>
<td>10 min</td>
</tr>
<tr>
<td>Activity 2</td>
<td>25 min</td>
</tr>
</tbody>
</table>

Teacher Reflection Question
If you were to teach this lesson over again, what activity would you redo? How would your proposed changes support student learning?
Cool-down (to be completed at the end of the lesson)

Time in Half-Hours and Hours

Standards Alignments
Addressing 1.MD.B.3

Student-facing Task Statement
What time is shown on each clock?
Student Responses
11:00 and 6:30

Warm-up

True or False: Close To 30

Standards Alignments
Addressing 1.OA.D.7

The purpose of this True or False is to elicit understandings students have for the meaning of the equal sign. Students may reason about whether the expressions on either side of the equal sign are the same without finding their values by using the properties of operations or their understanding of place value (MP7).

Instructional Routines

True or False

Student-facing Task Statement

Decide if each statement is true or false.
Be prepared to explain your reasoning.

- 30 = 30
- 10 + 15 = 15 + 10
- 10 + 10 + 10 = 3

Launch

- Display one statement.
- “Give me a signal when you know whether the statement is true and can explain how you know.”
- 1 minute: quiet think time

Activity

- Share and record answers and strategies.
- Repeat with each statement.

Synthesis

- “How can you explain your answer without

Grade 1, Unit 7
Student Responses

- True: 30 and 30 are the same amount.
- True: The order of the addends is switched.
- False: 3 tens is more than 3.

Activity 1

Count the Minutes

Standards Alignments

Addressing 1.MD.B.3, 1.NBT.A.1

Launch

- Groups of 2
- Display the clock in the student book.
- “Each of the little lines around the clock represents a minute.”

Activity

- “Start at the top mark, at the 12, and count half of the clock. How many minutes is that?”
- “Circle where you stop, then check with your partner to see if you agree.”
- 2 minutes: independent work time
- 1 minute: partner discussion
- Monitor for students to circle the mark.
“How did you keep track of your count?” (I counted by ones. I marked each time I got to ten, and did that 3 times.)

Display clock showing 2:30.

“What time does this clock show?” (Half past 2)

“We just learned that if we count the number of minutes halfway around the clock, we count 30 minutes. When the minute hand has gone half way around the clock, the time is half past. We can write the time as 2:30. The 2 represents the hour and the 30 represent the minutes.”

Display clock showing 4:30.

“How would we write the time?” (4:30)
Student Responses

It’s 30 minutes.

Sample responses:

The students’ diagram may show a 10 written near the 2 and a 20 written near the 4. Students may circle the mark under the 6 and label it 30.

Activity 2  25 min

All the Time in the World

Standards Alignments

Addressing  1.MD.B.3

The purpose of this activity is for students to write time to the hour and half hour based on clocks with one or both hands.

Access for English Learners

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

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Chunk this task into more manageable parts. Check in with students to provide feedback and encouragement after each chunk.
Supports accessibility for: Attention, Social-Emotional Functioning

Materials to Gather

Materials from a previous lesson

Required Preparation

- Each student needs their Half Past Clock Cards from a previous lesson.
Student-facing Task Statement

1. For each clock, write the time.
   a. 
   ![Image of a clock]
   b. 
   ![Image of a clock]
   c. 
   ![Image of a clock]
   d. 
   ![](Image of a clock)

Launch

- Groups of 2
- Give students their Half Past Clock Cards.
- “Write the times on the new clock cards that show half past.”
- 2 minutes: independent work time

Activity

- “What time is shown on each clock? Work on the questions by yourself and then compare your work with your partner’s.”
- 7 minutes: independent work time
- 3 minutes: partner discussion

Synthesis

- Display the clock with the hour hand pointing between the 4 and the 5.
- “How can the hour hand help you know if the minute hand should point to the 12 or the 6?” (If the hour hand points to a number, then the minute hand points to 12. If the hour hand points halfway between two hours then the minute hand points to the 6.)
- “How did you know to put :30 in the written time?” (When the minute hand is on the 6, 30 minutes have gone by so it is :00.)
- Display the problem where students draw in the hour hand and write the time.
- “How did you know where to put the hour hand?” (The hour hand has to point between 2 numbers because it is ‘half past’.)
2. For each clock, draw the minute hand and write the time.

   a. 

   b. 

   c. 

   e.
c. 

Grade 1, Unit 7

Unit 7 Lesson 15

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3. This clock only has a minute hand. What time could it be?
Draw an hour hand and write the time.

If you have time: What other times can you show on the clock?

Student Responses

1. a. 2:00
   b. 4:30
   c. 6:30
2. a. 7:00, minute hand at 12
   b. 12:30, minute hand at 6
   c. 9:30, minute hand at 6
   d. 9:00, minute hand at 12
   e. 4:30, minute hand at 6

3. Sample responses: 12:30, 1:30, 2:30, 3:30, ...

If you have time

Sample responses:
10:30, 3:30, 8:30

Lesson Synthesis

Display a clock showing 3:30 and a clock where the hands are reversed (the hour hand points to 6 and the minute hand points to 3):

![Clocks showing 3:30 and reversed hands]

“Today we saw clocks showing time to the hour and half past the hour. Which clock shows 3:30? How do you know?” (The second clock. The small hour hand points halfway between the 3 and the 4.)
Response to Student Thinking

Students write times other than 11:00 and 6:30.

Next Day Support

- During the launch of the first activity, have students practice telling time to the hour and half hour and explaining how they know the time based on the position of the hands on the clock.
Lesson 16: Hard Times

Standards Alignments
Addressing 1.MD.B.3, 1.NBT.C.4

Teacher-facing Learning Goals
- Relate time to a daily schedule.
- Tell and write time in hours and half hours.

Student-facing Learning Goals
- Let’s show time in hours and half-hours.

Lesson Purpose
The purpose of this lesson is for students to show and write times in hours and half hours.

In previous lessons, students wrote times based on analog clocks showing time in hours and half hours.

In this lesson, they continue working with telling time from clocks, with special attention to times where students may mix-up the minute and hour hands (for example, 6:30, 12:30, 12:00, 6:00). Students also practice writing times and drawing the hands on the clock as they create their ideal Sunday schedule.

This lesson has a Student Section Summary.

Access for:

🔗 Students with Disabilities
- Action and Expression (Activity 3)

🌐 English Learners
- MLR8 (Activity 1)

Instructional Routines
Number Talk (Warm-up)

Materials to Gather
- Materials from a previous lesson: Activity 1

Lesson Timeline

<table>
<thead>
<tr>
<th>Warm-up</th>
<th>10 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1</td>
<td>15 min</td>
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</table>

Teacher Reflection Question
Think about a recent time from class when your students were confused. What did you do to support them in reasoning about their
<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
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<tbody>
<tr>
<td>Activity 2</td>
<td>10 min</td>
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<tr>
<td>Activity 3</td>
<td>10 min</td>
</tr>
<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
</tr>
<tr>
<td>Cool-down</td>
<td>5 min</td>
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</tbody>
</table>

Confusion together as a community of learners?

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

Draw the Clock

**Standards Alignments**

Addressing 1.MD.B.3

**Student-facing Task Statement**

1. Show the time on each clock.

![Clocks with times 6:00 and 12:30](image)

2. Write the time.

![Time blanks](image)
Student Responses

1. 6:00, hour hand points to the 6 and minute hand points to the 12.
2. 12:30, hour hand points between the 12 and the 1 and the minute hand points to the 6.
3. 6:30

Warm-up

Number Talk: Tens and Ones

Standards Alignments

Addressing 1.NBT.C.4

The purpose of this Number Talk is to elicit strategies and understandings students have for adding a one-digit number and a two-digit number. Students may show their understanding of properties of operations and place value as they look for ways to find the sums (MP7, MP8).

Instructional Routines

Number Talk
Student-facing Task Statement

Find the value of each expression mentally.

- $8 + 32$
- $8 + 33$
- $8 + 38$
- $8 + 48$

Student Responses

- 40: 2 ones and 8 ones make 10. 3 tens and another ten makes 4 tens.
- 41: It is one more than the first one.
- 46: $38 + 2 + 6 = 46$
- 56: I know $8 + 38 = 46$, and I added 10 more.

Launch

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

Activity

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

Synthesis

- “Who can restate _____ ’s reasoning in a different way?”

Activity 1

What's the Time?

Standards Alignments

Addressing 1.MD.B.3

The purpose of this activity is for students to analyze times that can be challenging due to the orientation of the hour and minute hands, such as 12:00 and 6:30. Students attend to precision when they explain how they use the meaning of each hand and it's position to tell the time (MP6).

Access for English Learners

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

Advances: Speaking

Materials to Gather

Materials from a previous lesson
Required Preparation

- Each student needs both the Hour Clock Cards and Half Hour Clock Cards from previous lessons.

Launch

- Groups of 2
- Give each student their clock cards from previous lessons.
- “From your pile of cards, take out 12:00, 12:30, 6:00, 6:30.”
- Display these clocks.
- “How are these clocks the same and different?” (They have hour and minute hands. They have arrows pointing to 12 or 6.)
- “What time does each clock show? How do you know?” (12:00, 12:30, 6:00, 6:30. I look at where the hour hand points and then see if it’s ‘o’clock’ or ‘half-past’ based on the minute hand.)
- “You are going to play a game with your partner using all your cards. Hold up a clock card for your partner and cover up the written time. Your partner reads the time and you check what they say with the time on the card. Then switch roles.”

Activity

- 10 minutes: partner work time

Synthesis

- “What makes some of the times harder to read?”

Activity 2

What’s the Time, Again?

Grade 1, Unit 7
Standards Alignments
Addressing 1.MD.B.3

The purpose of this activity is to analyze a clock showing a time when it can be difficult to tell the difference between the hour and the minute hand. This activity allows students to discuss how they know where the hands are placed when the time is to the hour.

Student-facing Task Statement

1.

Diego says this clock shows 6:00.

Priya says the clock shows 12:30.

Who do you agree with? Why?

Launch

- Groups of 2
- Display the clock in the first problem.
- “Diego and Priya read the clock and got two different times.”
- “Who is correct? How do you know?”

Activity

- 2 minutes: partner discussion
- 5 minutes: independent work time
- Monitor for a student who says the hour hand is pointing to 6 and one who says that for 12:30 the hour hand should be between 12 and 1.

Synthesis

- Invite previously identified students to share.
- “Why do you think Priya got mixed up? What could you say to help her revise her thinking?” (Priya mixed up the minute and hour hands. I could remind her that the short hand is the hour and the long hand is the minute. I could remind her that if it was 12:30 the hour hand would have to be between two numbers.)
- “On the blank clock, draw hands to show 12:30.”
Student Responses

Sample response: The hour hand is pointing at the 6, so it's 6 o'clock. It can't be 12:30 because the hour hand would be between 12 and 1.

Activity 3

Sunday Schedule

Standards Alignments
Addressing 1.MD.B.3

The purpose of this activity is for students to write time to the hour and half-hour in order to fill in a Sunday schedule. Students fill in all blanks in a schedule, the time, the activity and the clock, to create their ideal Sunday schedule. The task gives an opportunity for students to relate time and telling time to their Sunday schedule (MP2).

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to verbalize their ideal Sunday activities in chronological order before they begin. Students can speak quietly to themselves, or share with a partner.

Supports accessibility for: Organization, Conceptual Processing

Student-facing Task Statement

Fill in the blanks to show your ideal Sunday schedule.

Launch

- Groups of 2
- “What are your favorite things to do on a
Sunday?" (I like to go to the park, eat lunch, take a nap, and read a book.)

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

**Activity**

- “Fill in the blanks for your ideal Sunday schedule. Then share with your partner.”
- 4 minutes: independent work time
- 2 minutes: partner discussion
- Monitor for a student who has an activity at 12:30.

**Synthesis**

- Invite previously identified students to share.
- Display students' schedules, covering up the digital clocks and asking the class to tell the times.
In this unit, we studied shapes, split shapes into equal parts, and learned to tell time. What did you like best in this unit? Why?

We learned how to tell time to the hour and half hour.

We learned when the minute hand points to the 12, the hour hand points to a number. We say “___ o’clock.”
It is 2 o’clock.

We learned when the minute hand has gone half way around the clock and points to the 6, the hour hand points halfway between 2 numbers. We say “half past ___.”

It is half past 3.

We learned how to write time.

It is 2:00.

It is 8 o’clock.

It is half past 6.

It is 4:30.
Response to Student Thinking
Students draw hands on the clock that show times other than 6:00 and 12:30.

Next Day Support
- Before the launch of the next day's activities, have students work with a partner to represent the times in the cool-down.
Lesson 17: Center Day 3

Standards Alignments

Teacher-facing Learning Goals
• Add within 100.
• Describe two-dimensional and three-dimensional shapes.
• Subtract within 10.

Student-facing Learning Goals
• Let’s work with shapes and numbers.

Lesson Purpose
The purpose of this lesson is for students to work with shapes and addition and subtraction.

In the first activity, students learn stage 2 of the Which One center, which was first introduced in kindergarten. In this new stage, students ask yes or no questions about shapes in order to identify the shape their partner chose. In the second activity, students choose from previously introduced centers focused on shapes or addition and subtraction.

Instructional Routines
Which One Doesn’t Belong? (Warm-up)

Materials to Gather
• Materials from previous centers: Activity 2
• Two-color counters: Activity 1

Materials to Copy
• Which One Stage 2 Gameboard (groups of 2): Activity 1

Lesson Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm-up</td>
<td>10 min</td>
</tr>
<tr>
<td>Activity 1</td>
<td>20 min</td>
</tr>
<tr>
<td>Activity 2</td>
<td>20 min</td>
</tr>
<tr>
<td>Lesson Synthesis</td>
<td>10 min</td>
</tr>
</tbody>
</table>

Teacher Reflection Question
As students worked together today, where did you see evidence of the mathematical community established over the course of the school year?
Warm-up
Which One Doesn't Belong: Clocks

Standards Alignments
Addressing 1.MD.B.3

This warm-up prompts students to compare four images of clocks. It gives the teacher an opportunity to hear how students use terminology and talk about characteristics of the clocks and the times they show in comparison to one another. Listen for the way students use “hands,” “hour,” and “half hour” and ask them to clarify what they mean in the synthesis.

Instructional Routines
Which One Doesn't Belong?

Student-facing Task Statement
Which one doesn't belong?

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

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

Synthesis
- “Let's find at least one reason why each one doesn't belong.”
Student Responses

Sample responses:

- A is the only clock that doesn't show any numbers.
- B is the only one that doesn't have any hands. It's not on a clock with hands.
- C is the only clock that doesn't show 4:30.
- D is the only clock that doesn't show the minutes.

Activity 1

Introduce Which One, Grade 1 Shapes

Standards Alignments

Addressing 1.G.A

The purpose of this activity is for students to learn stage 2 of the Which One center, which was first introduced in kindergarten. One partner chooses a shape on the game board. The other partner asks yes or no questions to figure out what shape they chose. Students may use counters to cover up shapes that have been eliminated. Students work with triangles and quadrilaterals.

Materials to Gather

Two-color counters

Materials to Copy

Which One Stage 2 Gameboard (groups of 2)

Launch

- Groups of 2
- Give each group a gameboard and access to two-color counters.
- “We are going to learn a new way to play Which One. One partner picks a shape that is on the board. Their partner asks them yes or no questions to help them guess which shape their partner choose. Let's play one round.
together. I will pick a shape and you can ask me questions.”

- Choose a shape from the gameboard.
- Help students rephrase any questions they ask that are not yes or no questions.
- “Once your partner has guessed the shape you chose, switch roles and play again.”

**Activity**

- 10 minutes: partner work time

**Synthesis**

- “What questions did you ask that were most helpful?” (Does your shape have three sides? Are two sides the same length?)

---

**Activity 2**

Centers: Choice Time

**Standards Alignments**


The purpose of this activity is for students to choose from activities that offer practice adding and subtracting or working with shapes. Students choose from any stage of previously introduced centers.

- Can You Draw It?
- Match Mine
- Capture Squares
- Target Numbers
Materials to Gather

Materials from previous centers

Required Preparation

Gather materials from previous centers:

- Can You Draw It, Stage 1
- Match Mine, Stage 2
- Capture Squares, Stages 1 and 2
- Target Numbers, Stages 1-3

Student-facing Task Statement

Choose a center.

Can You Draw It?  Match Mine

Capture Squares  Target Numbers

Launch

- Groups of 2
- “Now you 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 decide to work with shapes or numbers?”

Lesson Synthesis

“How did you and your partner work together during centers? What went well? What can we continue
to work on?”
Family Support Materials

Geometry and Time

In this unit, students reason with shapes and their attributes and split shapes into equal pieces. Students also tell time to the hour and half hour.

Section A: Flat and Solid Shapes

In this section, students explore and reason about attributes of two- and three-dimensional shapes. Students name shapes, including cone, sphere, cylinder, cube, square, rectangle, triangle, rhombus, and hexagon. Students identify defining attributes (number of straight sides and corners) of triangles, rectangles, and squares, and distinguish them from non-defining attributes (color, orientation, size). They describe why a shape belongs in a certain category using their own language. For example, “These are all triangles because they have three straight sides and three corners. This is not a triangle because the sides don’t touch.”
Section B: Halves and Quarters

In this section, students explore the idea of halves and fourths or quarters as equal pieces of a whole. Students hear and use the term halves to describe a shape split into two equal pieces and the terms fourths and quarters to describe a shape split into four equal pieces. They consider the size of a fourth and a half in relation to the same whole. They use the language whole, halves, quarters, fourths, a half of, a fourth of, and a quarter of to describe the pieces and relationship of the pieces to the whole.

Section C: Telling Time in Hours and Half Hours

In this section, students learn to tell time in hours and half hours on analog and digital clocks by relating the numbers 1–12 to a clock face and a written time.

They identify the minute and hour hands. Students learn that the hour hand points to a number or between two numbers, and tells us what hour it is. They also learn that when the minute hand points directly to the 12 it
In this section, students explore the idea of halves and fourths or quarters as equal pieces of a whole. Students hear and use the term halves to describe a shape split into two equal pieces and the terms fourths and quarters to describe a shape split into four equal pieces. They consider the size of a fourth and a half in relation to the same whole. They use the language whole, halves, quarters, fourths, a half of, a fourth of, and a quarter of to describe the pieces and relationship of the pieces to the whole.

Try it at home!

Play “I spy” with your child to help your student identify shapes in the real-world.

Say:

• I spy a solid shape that rolls. What could my shape be?

• I spy a cylinder (cube, cone, sphere). What object is a cylinder?

Connect your student’s schedule with time on digital and analog clocks to the hour and half hour.

Ask:

• What time do you go to bed (get up for school, eat breakfast)?

• What time does the clock say?

• What would the clock read when it is time for bed?

• What would the clock look like if it were 3:00?
Unit Assessments

Check Your Readiness A, B and C
End-of-Unit Assessment
<table>
<thead>
<tr>
<th>Recognize attributes of shapes.</th>
<th>Draw shapes using informal vocabulary (corners, points, square, etc.).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the composite shape.</td>
<td>Describe the sides and angles of the composite shape.</td>
</tr>
<tr>
<td>Make up the larger shape from the smaller shapes.</td>
<td>Describe the composite shape of two-dimensional shapes.</td>
</tr>
</tbody>
</table>

**Checkpoint**

**Section A**

**Grade 1, Unit 7**
Create smaller pieces. Shape into more equal pieces and fractions. Partitions and fractions. Understanding that for halves and identity, find how much of a shape into halves or fourths. Partition a circle or rectangle. Identify when a shape is split into equal pieces. Partition circles and rectangles into two and four equal pieces. Describe the shares with words (halves and fourths).
<table>
<thead>
<tr>
<th><strong>Checkpoint</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section C</strong></td>
</tr>
<tr>
<td><strong>Grade 1, Unit 7</strong></td>
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</tbody>
</table>

**Tell and Write Time in Hours and Half-Hours.**

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<table>
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</tbody>
</table>

- Write the time.
- Draw hands on a clock to show a given time.
- Draw hands on a clock to show a given time in half-hours.
- Tell time from an analog and digital clock.
- Identify the hour.
- Identify the hour and half.
- Identify the hour and half when the minute hand points to the 12.
- Identify the hour and half when the minute hand points to the 6.
- Identify the hour and half when the minute hand points to the 30.
- Identify the hour and half when the minute hand points to the 15.
- Identify the hour and half when the minute hand points to the 0.
Geometry and Time: End-of-Unit Assessment

1. Circle the 3 shapes that are triangles.

A  
B  
C  
D  
E
2. 

- Draw a square. Label it with an S.
- Draw a rectangle. Label it with an R.
- Draw a triangle. Label it with a T.

3. 

- Shade a half of the circle.
- Shade a quarter of the square.
4. Diego says that the same amount of each square is shaded because one piece of each square is shaded.

Do you agree with Diego? Show your thinking using drawings, numbers, or words.
5. Circle the 2 clocks that show 5 o’clock.
6.  
   a. What time is shown on the clock?

   ![Clock Image]

   b. Draw the clock hands to show the time.

   8:00
Assessment Answer Keys

Check Your Readiness A, B and C
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.

- Describe attributes of two-dimensional and three-dimensional shapes.
  - Describe attributes of two-dimensional and three-dimensional shapes using informal vocabulary (smooth, pointy, like a box).
  - Describe the sides and corners of two-dimensional and three-dimensional shapes using informal vocabulary (corners, points, square corners, sides, long sides, short sides).
- Compose two-dimensional or three-dimensional shapes to create a composite shape.
  - Put two-dimensional or three-dimensional shapes together to form larger shapes or objects.
  - Describe the composite shape and the shapes that make up the composite shape.
- Build and draw shapes to possess defining attributes.
  - Recognize defining attributes of shapes.
  - Draw shapes with given attributes.
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.

- Partition circles and rectangles into two and four equal pieces, describe the pieces with words (halves and fourths).
  - Identify when a shape is split into equal pieces.
  - Partition a circle or rectangle into halves or fourths.
  - Identify how much of a shape is shaded using the language “a half of,” “a fourth of,” “a quarter of,” “two of the halves,” and “four of the fourths.”
  - Understand that for halves and fourths, partitioning a shape into more equal pieces creates smaller pieces.
Assessment: Section C Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- Tell and write time in hours and half-hours.
  - Identify the hour hand and minute hand on a clock.
  - Identify that when the minute hand points to the 12 it is “o’clock” and __:00.
  - Identify that when the minute hand points to the 6 it is “half past” and __:30.
  - Tell time from analog and digital clocks.
  - Draw hands on a clock to show a given time in hours or half hours.
  - Write the time using digits (__:__ ) to match an analog clock to the hour and half hour.
Assessment: End-of-Unit Assessment

Problem 1

Standards Alignments
Addressing 1.G.A.1

Narrative
Students identify triangles. Students may select B if they see three “sides” but do not identify that there are rounded corners. Students may not select A because of the obtuse angle. Students may not select D if they are expecting the triangle to be oriented so that one of the sides is horizontal.

Circle the 3 shapes that are triangles.

A  

B

C

D

E

Solution

["A", "D", "E"]

Problem 2

Standards Alignments
Addressing 1.G.A.1
Narrative

Students draw different shapes using dot paper. They may draw one shape and label it both a square and a rectangle but are more likely to draw two different shapes. Students may draw these shapes without using the dots as vertices. This is also acceptable though for the rectangle and square it will make it more difficult to sketch accurately.

a. Draw a square. Label it with an S.
b. Draw a rectangle. Label it with an R.
c. Draw a triangle. Label it with a T.

Solution

Sample response:
Problem 3

**Standards Alignments**
Addressing 1.G.A.3

**Narrative**
Students shade half of a circle and a quarter of a square. They may divide the square horizontally and vertically or along both diagonals. The parts may not be exactly the same size, but they should be approximately equal.

a. Shade a half of the circle.

![Circle](image)

b. Shade a quarter of the square.

![Square](image)

**Solution**

a. Sample response:

![Sample Circle](image)

b. Sample response:

![Sample Square](image)
Problem 4

Standards Alignments
Addressing  1.G.A.3

Narrative
Students identify whether or not the same amount of a square is shaded. They are given two images of the same size square with half of one square shaded and a quarter of the other square shaded. Students should note that the size of the pieces is smaller when the (same) whole is divided into more pieces.

Diego says that the same amount of each square is shaded because one piece of each square is shaded.

A

B

Do you agree with Diego?
Show your thinking using drawings, numbers, or words.

Solution

No. Sample response: They both have one piece shaded, but the pieces in A are bigger than in B because A only has 2 pieces and B has 4 pieces.

Problem 5

Standards Alignments
Addressing  1.MD.B.3

Narrative
Students read time from clocks. Students may select the distractor A because it has the digit 5. The distractor D has the hour and minute hands reversed so students may select this inadvertently or may not understand that the minute hand is longer than the hour hand on clocks.
Circle the 2 clocks that show 5 o’clock.

A

B

C

D

Solution

"B" and "C"

Problem 6

**Standards Alignments**

Addressing 1.MD.B.3

**Narrative**

Students tell time from an analog clock and write the digital time to match. They also draw hands on an analog clock to represent a given time. For the second problem it is important that students draw the minute and hour hands of different lengths in order to assess their understanding. If they have drawn the hands to be roughly the same length, then a discussion is needed to check their understanding and indicate the importance of drawing the hands with different lengths.
a. What time is shown on the clock?

![Clock Image]

b. Draw the clock hands to show the time.

![Clock Image]

Solution

a. 4:30

b. Students draw the hour hand point to the 8 and the minute hand pointing to the 12. The minute hand is longer than the hour hand.
Lesson
Cool Downs
Lesson 1: Shapes That Are Solid

Cool Down: What Did You Learn?

List at least two things you learned about solid shapes.
Lesson 3: Shapes That Are Flat

Cool Down: Sort the Shapes

Han sorted some shapes.

Draw each shape in the group it belongs.
Lesson 6: Rectangles and Squares

Cool Down: Color Shapes

1. Color the 3 rectangles.

2. Write 2 things that are true about all rectangles.
Lesson 9: Equal Pieces

Cool Down: Split Shapes

1. Split the square into halves.

2. Split the circle into fourths.
Lesson 10: One of the Pieces, All of the Pieces

Cool Down: Split the Rectangle

1. Split the rectangle into fourths.

2. Color in 1 piece.

3. Circle all of the ways to describe the piece you colored.

   a fourth of the rectangle  a half of the rectangle  a quarter of the rectangle  the whole rectangle
Lesson 13: It’s Time to Learn About Clocks

Cool Down: Show the Time

1. Circle the 3 clocks that show 5 o’clock.

2. Show 6 o’clock on both clocks.
Lesson 14: Half of the Clock

Cool Down: Find 2:30

Circle the clock that shows 2:30.
Lesson 15: Write Times

Cool Down: Time in Half-Hours and Hours

What time is shown on each clock?

1. 

2. 

3. 

Grade 1 Unit 7
Lesson 15
Lesson 16: Hard Times

Cool Down: Draw the Clock

1. Show the time on each clock.

6:00

8:00

12:30

2. Write the time.

: : 

6:00
Instructional Masters
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<thead>
<tr>
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<th>Students written on?</th>
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Circles and Squares
Flat Shape Cards Grade 1
Flat Shape Cards Grade 1

A

B

C

D

E

F

G

H
Flat Shape Cards Grade 1

M

N

O

P

I

J

K

L
Flat Shape Cards Grade 1

Flat Shape Cards Grade 1

Flat Shape Cards Grade 1

Flat Shape Cards Grade 1

Flat Shape Cards Grade 1

Flat Shape Cards Grade 1

Flat Shape Cards Grade 1

Flat Shape Cards Grade 1
A
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C
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F
G
H
Flat Shape Cards Grade 1

M

N

O

P

I

J

K

L
Flat Shape Cards Grade 1
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<tr>
<th>Define attributes of shapes</th>
<th>Draw and draw composite shape</th>
<th>Describe two-dimensional shapes to create a three-dimensional shapes.</th>
<th>Describe attributes of two-dimensional shapes.</th>
<th>Describe two-dimensional shapes using formal vocabulary.</th>
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<tr>
<td>Recognize composite shape.</td>
<td>Shapes' attributes of shapes.</td>
<td>Describe the shapes that make up the composite shape.</td>
<td>Put two-dimensional shapes together to form larger shapes.</td>
<td>vocabulary</td>
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</table>
1. Fill in the hexagon in different ways using the pattern blocks.
   Record how you filled in the shape using drawings, numbers, or words.
Flat Shapes Puzzles
2. Fill in the hexagon in different ways using the pattern blocks.
   Record how you filled in the shape using drawings, numbers, or words.
Flat Shapes Puzzles
3. Fill in the triangle in different ways using the pattern blocks.
   Record how you filled in the shape using drawings, numbers, or words.
Flat Shapes Puzzles
4. Fill in the rectangle in different ways using the pattern blocks.
   Record how you filled in the shape using drawings, numbers, or words.
| Partition circle into halves.
| Partition a rectangle into halves.
| Identify how much of a shape is shaded when a shape is split into equal pieces.
| Partition circle and rectangles into two and four equal pieces. Describe the shares with words (halves, fourths) creates smaller pieces.
| We can name, describe, compare, and construct fractions using objects and pictures.
Pieces of Circles
<table>
<thead>
<tr>
<th>Hour</th>
<th>Hour and half</th>
<th>Analog clock to the hour and half</th>
<th>Draw hands on analog and digital clocks</th>
<th>Tell time from given time in the hour and half hours</th>
<th>Identify the hour and the minute hand when the minute hand is 6:00</th>
<th>Identify the hour and the minute hand when the minute hand is 30:00</th>
<th>Tell and write time in hours and half-hours</th>
<th>Tell and write time in hours and half-hours.</th>
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</thead>
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</table>
Clock Cards Half Past
Clock Cards Half Past
Clock Cards Half Past
<p>| | | |</p>
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<td><img src="image11.png" alt="Image" /></td>
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<td>Which One Stage 2 Gameboard</td>
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<tr>
<td>![Shape 1]</td>
<td>![Shape 2]</td>
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<td>![Shape 10]</td>
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<tr>
<td>![Shape 13]</td>
<td>![Shape 14]</td>
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Which One Stage 2 Gameboard
<table>
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<tr>
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<th>Shaded Parts Cards</th>
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<tr>
<td>A</td>
<td><img src="image" alt="Shaded Parts Card A" /></td>
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<td>B</td>
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<tr>
<td>H</td>
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Look for shapes in your book.

<table>
<thead>
<tr>
<th>Sketch what you see.</th>
<th>Describe what you see.</th>
<th>What shape is it?</th>
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</table>
Look for shapes in your book.

<table>
<thead>
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<th>Sketch what you see.</th>
<th>Describe what you see.</th>
<th>What shape is it?</th>
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</tbody>
</table>
Centimeter Dot Paper - Standard
Clock Cards Hour
Clock Cards Hour

Clock Cards - Hour

Clock Cards - Hour

Clock Cards - Hour

Clock Cards - Hour
Clock Cards Hour
Capture Squares Stage 1 Gameboard

Directions:
- On your turn:
  - Roll 2 number cubes. Find the sum.
  - Choose a square on the gameboard that shows that number. Draw one line connecting any 2 dots around the number.
  - If you can’t draw a line, roll again.
  - If you draw a line that finishes a square around a number, shade in that box with your color.
- Take turns with your partner. The first player to shade in 3 boxes wins.
Capture Squares Stage 2 Gameboard

Directions:
- On your turn:
  - Choose 2 number cards. Find the difference.
  - Choose a square on the gameboard that shows that number. Draw one line connecting any 2 dots around the number.
  - If you can’t draw a line, choose 2 new cards.
  - If you draw a line that finishes a square around a number, shade in that box with your color.
- Take turns with your partner. The first player to shade in 3 boxes wins.
<table>
<thead>
<tr>
<th>Compare Stage 1</th>
<th>Compare Stage 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1 + 0$</td>
<td>$0 + 7$</td>
</tr>
<tr>
<td>$5 + 0$</td>
<td>$0 + 3$</td>
</tr>
<tr>
<td>$10 + 0$</td>
<td>$0 + 9$</td>
</tr>
<tr>
<td>$1 + 1$</td>
<td>$1 + 2$</td>
</tr>
</tbody>
</table>
Compare Stage 1 Addition Cards to 10

Compare Stage 1

2 + 1

1 + 3

Compare Stage 1

3 + 1

1 + 4

Compare Stage 1

4 + 1

1 + 5

Compare Stage 1

5 + 1

1 + 6
Compare Stage 1 Addition Cards to 10

- 6 + 1
- 7 + 1
- 8 + 1
- 9 + 1
- 1 + 7
- 1 + 8
- 1 + 9
- 2 + 2
<table>
<thead>
<tr>
<th>Compare Stage 1</th>
<th>Compare Stage 1</th>
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</thead>
<tbody>
<tr>
<td>2 + 3</td>
<td>3 + 2</td>
</tr>
<tr>
<td>2 + 4</td>
<td>4 + 2</td>
</tr>
<tr>
<td>2 + 3</td>
<td>3 + 2</td>
</tr>
<tr>
<td>2 + 5</td>
<td>5 + 2</td>
</tr>
</tbody>
</table>

Compare Stage 1 Addition Cards to 10
Compare Stage 1 Addition Cards to 10

2 + 6

6 + 2

2 + 7

7 + 2

2 + 8

8 + 2

3 + 3

3 + 4
Compare Stage 1 Addition Cards to 10

<table>
<thead>
<tr>
<th>4 + 3</th>
<th>3 + 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 + 3</td>
<td>3 + 6</td>
</tr>
<tr>
<td>6 + 3</td>
<td>3 + 7</td>
</tr>
<tr>
<td>7 + 3</td>
<td>4 + 4</td>
</tr>
<tr>
<td>Compare Stage 1</td>
<td>Compare Stage 1</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>[4 + 5]</td>
<td>[5 + 4]</td>
</tr>
<tr>
<td>[4 + 6]</td>
<td>[6 + 4]</td>
</tr>
<tr>
<td>[5 + 5]</td>
<td></td>
</tr>
</tbody>
</table>
Compare Stage 1 Subtraction Cards to 10

Compare Stage 1

\[ 8 - 6 \]

\[ 8 - 5 \]

Compare Stage 1

\[ 8 - 4 \]

\[ 8 - 3 \]

Compare Stage 1

\[ 8 - 2 \]

\[ 8 - 1 \]

Compare Stage 1

\[ 8 - 7 \]

\[ 8 - 8 \]
<table>
<thead>
<tr>
<th>Compare Stage 1</th>
<th>Compare Stage 1</th>
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<tbody>
<tr>
<td>( 9 - 9 )</td>
<td>( 9 - 8 )</td>
</tr>
<tr>
<td>( 9 - 7 )</td>
<td>( 7 - 7 )</td>
</tr>
<tr>
<td>( 9 - 6 )</td>
<td>( 7 - 6 )</td>
</tr>
<tr>
<td>( 9 - 5 )</td>
<td>( 7 - 5 )</td>
</tr>
</tbody>
</table>
Compare Stage 1 Subtraction Cards to 10

<table>
<thead>
<tr>
<th>Compare Stage 1</th>
<th>Compare Stage 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$9 - 4$</td>
<td>$7 - 4$</td>
</tr>
<tr>
<td>$9 - 3$</td>
<td>$7 - 3$</td>
</tr>
<tr>
<td>$9 - 2$</td>
<td>$7 - 2$</td>
</tr>
<tr>
<td>$9 - 1$</td>
<td>$7 - 1$</td>
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<tr>
<td>Stage 1 Subtraction Cards to 10</td>
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<tr>
<td>--------------------------------</td>
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<td>$6 - 6$</td>
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<td>$5 - 5$</td>
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<td>$6 - 5$</td>
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<td>$5 - 4$</td>
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<td>$6 - 4$</td>
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<tr>
<td>$5 - 3$</td>
<td></td>
</tr>
<tr>
<td>$6 - 3$</td>
<td></td>
</tr>
<tr>
<td>$5 - 2$</td>
<td></td>
</tr>
</tbody>
</table>
Compare Stage 1 Subtraction Cards to 10

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 − 2</td>
<td>5 − 1</td>
</tr>
<tr>
<td>6 − 1</td>
<td>4 − 4</td>
</tr>
<tr>
<td>3 − 3</td>
<td>4 − 3</td>
</tr>
<tr>
<td>3 − 2</td>
<td>4 − 2</td>
</tr>
<tr>
<td>Compare Stage 1</td>
<td>Compare Stage 1</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>$3 - 1$</td>
<td>$4 - 1$</td>
</tr>
<tr>
<td>$2 - 2$</td>
<td>$1 - 1$</td>
</tr>
<tr>
<td>$2 - 1$</td>
<td>$10 - 1$</td>
</tr>
<tr>
<td>$10 - 9$</td>
<td>$10 - 8$</td>
</tr>
</tbody>
</table>
## Compare Stage 1 Subtraction Cards to 10

<table>
<thead>
<tr>
<th>Compare Stage 1</th>
<th>Compare Stage 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 − 7</td>
<td>10 − 1</td>
</tr>
<tr>
<td>10 − 6</td>
<td>10 − 3</td>
</tr>
<tr>
<td>10 − 5</td>
<td>10 − 2</td>
</tr>
<tr>
<td>10 − 4</td>
<td></td>
</tr>
</tbody>
</table>
How Close? Stage 1 Recording Sheet

Directions:

- Each partner:
  - Take 5 cards.
  - Choose 3 numbers.
  - Write an equation to show the sum of the 3 numbers.
  - Compare sums with your partner, whoever is closer to 20 wins a point.

- Take 3 new cards and start the next round.
Directions:

- Each partner:
  - Take 4 cards.
  - Choose 2 or 3 numbers to subtract from 20.
  - Write an equation to show the difference when you subtract the numbers from 20.
  - Compare differences with your partner, whoever is closer to 0 wins a point.
- Take 2 or 3 new cards and start the next round.

\[
\begin{align*}
20 - & \phantom{1} - \phantom{1} - \phantom{1} = \\
20 - & \phantom{1} - \phantom{1} - \phantom{1} = \\
20 - & \phantom{1} - \phantom{1} - \phantom{1} = \\
20 - & \phantom{1} - \phantom{1} - \phantom{1} = \\
20 - & \phantom{1} - \phantom{1} - \phantom{1} = 
\end{align*}
\]
Directions:

● Each partner:
  ○ Take 7 cards.
  ○ Choose 4 cards to make 2 two-digit numbers.
  ○ Write an equation to show the sum of the numbers you made.
  ○ Compare sums with your partner, whoever is closer to 100 wins a point.

● Take 4 new cards and start the next round.
How Close? Stage 3 Recording Sheet

\[
\begin{align*}
&\phantom{=} \quad + \quad \phantom{=} \\
&\phantom{=} \quad + \quad \phantom{=} \\
&\phantom{=} \quad + \quad \phantom{=} \\
&\phantom{=} \quad + \quad \phantom{=} \\
&\phantom{=} \quad + \quad \phantom{=}
\end{align*}
\]
Picture Books Stage 2 Recording Sheet

2
Picture Books Stage 2 Recording Sheet

3
Picture Books Stage 2 Recording Sheet

4

••••
**Target Numbers Stage 1 Recording Sheet**

**Directions:**
- **On your turn:**
  - Start at 55. Roll the number cube.
  - Add that number to your starting number and write an equation to represent the sum.
- Take turns until you’ve played 6 rounds.
- Each round, the sum from the previous equations is the starting number in the new equation.
- The partner to get a sum closest to 95 without going over wins.

<table>
<thead>
<tr>
<th>roll</th>
<th>equation</th>
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</thead>
<tbody>
<tr>
<td>55</td>
<td>+ ______ = ______</td>
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<tr>
<td></td>
<td>+ ______ = ______</td>
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<tr>
<td></td>
<td>+ ______ = ______</td>
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<td>+ ______ = ______</td>
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<td></td>
<td>+ ______ = ______</td>
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<tr>
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<td>+ ______ = ______</td>
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</tbody>
</table>
Directions:

- On your turn:
  - Start at 25. Roll the number cube. Choose whether to add that number of tens or ones to your starting number.
  - Write an equation to represent the sum.
- Take turns until you’ve played 6 rounds.
- Each round, the sum from the previous equations becomes the starting number in the new equation.
- The partner to get a sum closest to 95 without going over wins.

<table>
<thead>
<tr>
<th>roll</th>
<th>choose</th>
<th>equation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tens or ones</td>
<td>25 + _____ = _____</td>
</tr>
<tr>
<td></td>
<td>tens or ones</td>
<td>_____ + ____ = _____</td>
</tr>
<tr>
<td></td>
<td>tens or ones</td>
<td>_____ + ____ = _____</td>
</tr>
<tr>
<td></td>
<td>tens or ones</td>
<td>_____ + ____ = _____</td>
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<td></td>
<td>tens or ones</td>
<td>_____ + ____ = _____</td>
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<tr>
<td></td>
<td>tens or ones</td>
<td>_____ + ____ = _____</td>
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</tbody>
</table>
Direction:

- On your turn:
  - Roll 2 cubes to get your starting number
  - Roll 3 cubes. Choose one number to represent the tens and one number to represent the ones you will add.
  - Write an equation to represent the sum.
- Take turns until you’ve played 6 rounds.
- Each round, the sum from the previous equation is the starting number in the new equation.
- The partner who gets a sum closest to 95 without going over wins.

<table>
<thead>
<tr>
<th>roll and choose</th>
<th>equation</th>
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<tbody>
<tr>
<td>____ tens</td>
<td>+</td>
</tr>
<tr>
<td>____ ones</td>
<td>=</td>
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<tr>
<td></td>
<td>______</td>
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<td>____ tens</td>
<td>+</td>
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<td>____ ones</td>
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