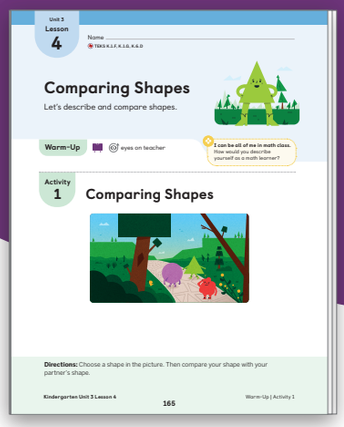
Unit 3
Lesson
4

Student Edition pages and Presentation Screens support learning in this lesson.



Comparing Shapes

Describing and Comparing Shapes

Let's describe and compare shapes.

Key Concepts

Today's Goal

1. **Language Goal:** Compare two-dimensional shapes by describing their sides and vertices. **(Listening and Speaking)** ELPS 1.B, 2.B, 2.E

Connections and Coherence

Students describe and compare shapes. They refine their geometric language as they notice and describe defining attributes, such as the number of **sides** and **vertices,** and non-defining attributes, such as size, color, and orientation, to better understand the structures of shapes. **(TEKS K.1.G)**

Prior Learning

In Lesson 3, students identified matching shapes shown in different sizes and orientations.

Future Learning

In Lesson 5, students will sort objects and shapes based on their attributes.

Integrating Rigor in Student Thinking

- Students further their **conceptual understanding** of shapes as they use developing geometric language to describe and compare the attributes of shapes, specifically their sides and vertices.

Vocabulary

New Vocabulary

- side
- vertex/vertices

TEKS

Addressing

K.6.D

Identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably.

Math Process Standards: K.1.F, K.1.G

ELPS: 1.A, 1.B, 1.C, 1.D, 1.E, 2.B, 2.C, 2.D, 2.E, 3.A, 3.E

Building Math Identity

I can be all of me in math class.
How would you describe yourself as a math learner?

Invite students to reflect on this question as they complete this lesson.

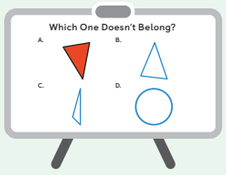
Lesson at a Glance 60 min

TEKS: K.1.F, K.1.G, K.6.D

Warm-Up

Whole Class | 10 min

Students use the **Which One Doesn't Belong?** routine to compare 4 shapes based on their attributes. Students should be encouraged to use developing geometric language as they give reasons for the 1 they chose. **(TEKS K.1.F, K.1.G)**

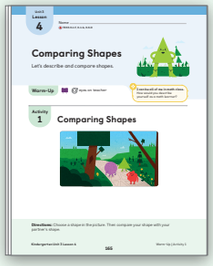


Activity 1

Pairs | 10 min

Students compare the attributes of shapes found in an illustration from the Unit Story. In the Connect, the terms **side** and **vertex** are introduced.

Materials: sticky notes, *Words to Describe Shapes* chart (from prior lessons)



Activity 2

Pairs | 15 min

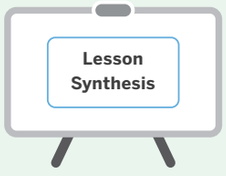
Students use the **Mix and Mingle** routine to describe and compare shapes represented on shape cards. Students notice that they can describe and compare shapes by naming the number of sides and vertices and by describing what the sides and vertices look like.

Note: The Student Edition is not required for this activity.
Materials: Lessons 4 & 5 PDF, sticky notes, *Words to Describe Shapes* chart (from prior lessons)
Additional Prep Cut out: Lessons 4 & 5 PDF

Synthesis

Whole Class | 10 min

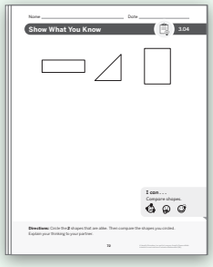
Students review and reflect on how to describe and compare the attributes of shapes as they compare a trapezoid and a square.



Show What You Know (optional)

Independent | 5 min

Students demonstrate their understanding by using developing geometric language to compare 2 shapes.



Center Choice Time

Small Groups | 15 min

Students have an opportunity to revisit these Centers to build counting fluency and practice describing shapes.

- Bingo
- Mystery Shape
- Pattern Blocks

Math Language Development

Emergent Bilinguals

Consider using the *Math Language Development Resources* with the **Activity 2, Monitor** to support math language acquisition.

✓ Visuals ✓ Sentence frames and word bank

ELPS 1.B, 1.E, 2.B, 2.C, 2.D, 2.E, 2.F

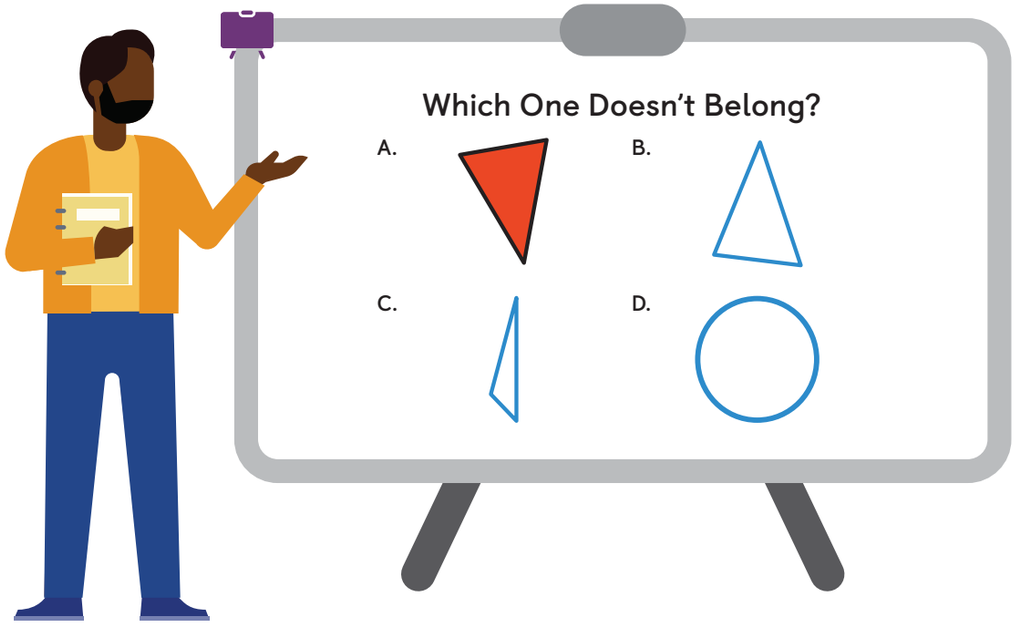
Pre-Production	Beginning	Intermediate	High Intermediate	Advanced
Students **listen** to spoken English and **respond** using their primary languages and gestures.	Students **listen** to spoken English and **speak** using their primary languages, gestures, and single words or short phrases.	Students **listen** to spoken English and **speak** using short phrases or simple sentences.	Students **listen** to spoken English and **speak** using a variety of sentence types.	Students **listen** to spoken English and **speak** using longer sentences. Exemplar responses are provided.

Whole Class | 10 min

Presentation Screen

Warm-Up Which One Doesn't Belong?

Purpose: Students analyze and compare shapes to develop geometric language for describing the attributes of shapes.



1 Launch

Display the 4 shapes.

Use the Which One Doesn't Belong? routine.

Say, "Choose 1 that doesn't belong. Be ready to share your reasoning."

2 Connect

Record students' responses as they share.

Display Shapes A and B.

Ask, "What is alike, or the same, about these shapes? What is different?"

Say, "You can use the words you know about shapes to help you describe what is alike and different about the way the shapes look."

Students might say . . . ELPS 2.C, 2.D, 2.E

A: It is the only one that is shaded.

B: It is the only one that is a different color.

C: It is the only one that is skinny.

D: It is the only one that is curved.

Pairs | 10 min

Activity 1 Comparing Shapes

Purpose: Students describe and compare shapes in the Unit Story to further their understanding of the attributes of shapes.

Presentation Screens

Materials

Classroom materials:

- Display the *Words to Describe Shapes* chart (from prior lessons) during the activity. Use sticky notes to record the terms *sides* and *corners* on the chart during the Connect.

1 Launch

Read aloud page 7 of the Unit Story. ELPS 1.E

Say:

- "Today, you will look for shapes in a picture from the Unit Story. You and your partner will each choose and point to a shape. Then you will compare the shapes by describing how they are alike and different."
- "You will continue choosing shapes and comparing them."

A **Accessibility: Executive Functioning** Ask students to give their partners time between turns to brainstorm words they will use to describe the shape they picked.

2 Monitor

While students complete the activity, refer to the D Differentiation | Teacher Moves table on the following page.

If students need help getting started . . .

- Point to a shape and ask, "How can you describe this shape?"
- Point to the partner's shape and ask, "What parts of this shape can you describe the same way? What parts can you describe differently?"

3 Connect

Ask, "What do you notice about Trina and Skwee? How are their parts alike? How are they different?"

Say:

- Point to the triangle. "Trina and shapes that look like Trina have 3 **sides** and 3 **vertices**, or corners."
- Point to the rectangle. "Skwee and shapes that look like Skwee have 4 sides and 4 vertices"
- "The shapes are alike because they both have sides and vertices. The shapes are different because they have a different number of sides and vertices."

EB **Emergent Bilinguals:** Use gestures, such as tracing a finger along the sides of the shapes or using both arms to show how a vertex is formed, to help students connect the meaning of each term with the shapes' attributes. Invite students to mimic the gestures. ELPS 3.D, 3.F

Record the terms *sides* and *vertices* on the *Words to Describe Shapes* chart. Remind students to continue to refer to and use the chart during class discussions.

Key Takeaway: Say, "One way you can compare shapes is by figuring out how many sides and vertices each shape has."

Unit 3
Lesson 4

Name _____

TEKS K.1.F, K.1.G, K.6.D

Comparing Shapes

Let's describe and compare shapes.

Warm-Up eyes on teacher

I can be all of me in math class.
How would you describe yourself as a math learner?

Activity 1

Comparing Shapes

Directions: Choose a shape in the picture. Then compare your shape with your partner's shape.

Activity 1

Name _____

Comparing Shapes (continued)

1 Discuss

- Our shapes are alike because _____.
- Our shapes are different because _____.

Oral activity: No writing expected. Sample response shown.

Our shapes are alike because they have pointy parts.
Our shapes are different because one has 3 points and the other has 4 points.

Directions: Choose a shape in the picture. Then compare your shape with your partner's shape.

Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Compare objects in the picture.	Skwee and Trina both have feet.	S **Strengthen** Point to a shape in the picture and ask, "What do you notice about the parts of this shape?"
Compare non-defining attributes of the shapes, such as the sizes, colors, or orientations.	Our shapes are alike because they are both blue. or My shape is different because it is bigger.	
Compare defining attributes of the shapes, such as the sides or vertices.	Our shapes are alike because they both have straight parts. They are different because 1 shape has 3 parts and the other shape has 4 parts.	S **Stretch** Ask, "What other shapes in the picture have the same number of parts as your shape?"

Pairs | 15 min

Activity 2 Alike and Different

Purpose: Students further their understanding of shapes as they use developing geometric language to describe and compare the defining attributes of shapes.

Presentation Screens

Materials

Lesson Resources:

- Distribute one card from the Lessons 4 & 5 PDF to each student.

Classroom materials:

- Display the *Words to Describe Shapes* chart (from prior lessons) during the activity. Use sticky notes to record new language on the chart.

1 Launch

Say, "We will play a game to help us think about how shapes are alike and how they are different."

Say, "You and your partner will each have a card. With your partner, look carefully at the 2 shapes and then compare them. Think about the number of sides and vertices and what the sides and vertices look like."

Use the Mix and Mingle routine. After each round, have students trade cards and find a new partner. Repeat 2–3 times.

2 Monitor

While students complete the activity, refer to the D Differentiation | Teacher Moves table on the following page.

If students need help getting started . . .

- Ask, "What do you notice about the parts of your shape?"
- Point to the *Words to Describe Shapes* chart and ask, "Are there any words that we have collected that could help you describe how your shape is alike and different from your partner's shape?"

MLR **MLR8: Discussion Supports — Revoicing** ELPS 1.D, 1.E, 2.B, 2.E
As students compare shapes, revoice their ideas in the form of a question using mathematical language or geometric language to invite them to add more detail to their response. For example:

- If a student says, "The sides of your shape are different." . . .
- Revoice their ideas by asking, "The number of sides is the same, but the sides do not look exactly the same. What is different about the sides?"

3 Connect

Display Cards F and H.

Ask:

- "What is alike about these 2 shapes? What is different about them?"
- "How do the sides look different?"
- "How do the vertices, or corners, look different?"

A **Accessibility: Conceptual processing** Encourage students to use gestures or hand motions to help them describe the attributes of the shapes.

Say (if not yet mentioned during discussion):

- "On Shape H, 1 side goes straight up and down, 1 side goes straight across, and 1 side is slanted like a slide."
- "On Shape F, 1 side goes straight across and 2 sides are slanted like a slide."
- "On Shape H, 1 vertex looks like the capital letter L, but the vertices on Shape F look like the letter V."

Record any new language, such as "slanted like a slide" or "looks like a V" on the *Words to Describe Shapes* chart. Draw and annotate images to highlight students' thinking.

Key Takeaway: Say, "Two shapes can be alike if they have the same number of sides and vertices. They can be different if the sides and vertices look different."

Student Edition

Activity 2

Name _____

Alike and Different

Hands-On

2 Discuss

- Our shapes are alike because _____.
- Our shapes are different because _____.

Oral activity: No writing expected. Sample response shown.

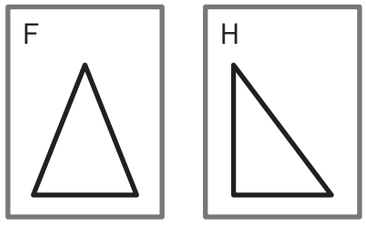
Our shapes are alike because they both have corners.
Our shapes are different because one has only straight sides.

Directions: Compare your shape with your partner's shape.

Kindergarten Unit 3 Lesson 4 167 Activity 2

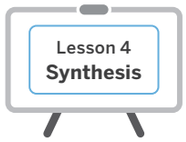
Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Compare shapes.	 *These shapes are alike.*	**Support** Ask, "Which parts of this shape are the same?"
Compare shapes by naming what is alike.	*These shapes are alike because they both have 3 corners.*	**Strengthen** Ask, "What is different about the shapes?"
Compare shapes by naming what is alike and what is different.	*These shapes are alike and different. They both have 3 vertices and 3 straight sides, but the shapes still don't look exactly alike. One looks like pizza and the other looks like a slide.*	**Stretch** Ask, "You compared the shapes by thinking about the number of sides and vertices each shape has and what they look like. How else could you compare shapes?"

Whole Class | 10 min

Presentation Screen



Synthesis

Lesson Takeaway: Two shapes can be compared by explaining the similarities and differences in their attributes.

Say, "Clare says these are the same shape because they both have 4 vertices, or corners, and 4 straight sides."

Use the Think-Pair-Share routine. Ask:

- "Do you agree or disagree with Clare? Why?"
- "What is different about these 2 shapes?"

Say:

- "Even though these shapes have the same number of sides and vertices, they are not exactly the same because the sides and vertices look different."
- "When comparing shapes, we can say what is alike and different about them by counting the number of sides and vertices and thinking about if the sides and vertices look different."

Formalize vocabulary: side, vertex

(optional) **Consider using the Total Physical Response routine** by inviting students to hold up 1 arm to represent a **side** of a shape and then holding up another arm perpendicular to the arm to show where a **vertex** is formed. Invite students to perform this physical action as you say the terms aloud. ELPS 1.A, 1.B, 1.C, 1.E

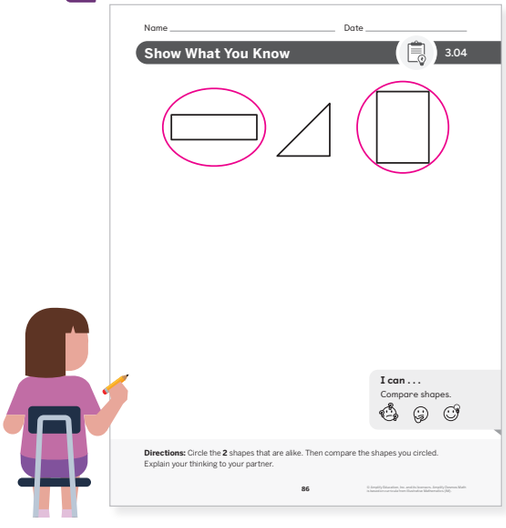
Refer to the *Math Language Development Resources* for a description of this routine and for more vocabulary support.

Invite students to refer to the **Summary** during Practice or anytime during the year.

Show What You Know (Optional)

Independent | 5 min

PDF Show What You Know PDF


Name _____ Date _____

Show What You Know 3.04

I can . . .
Compare shapes.

Directions: Circle the **2** shapes that are alike. Then compare the shapes you circled. Explain your thinking to your partner.

86

Today's Goal

1. **Language Goal:** Compare two-dimensional shapes by describing their sides and vertices. **(Listening and Speaking)** ELPS 1.B, 2.B, 2.E
   - In the *Show What You Know*, students chose 2 shapes that are alike and then compared the shapes by describing their sides and vertices.

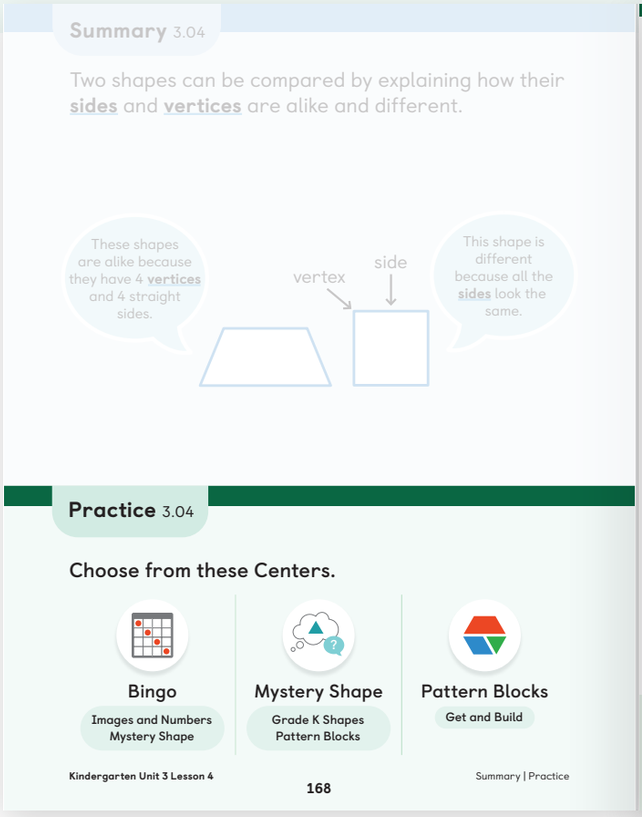
D **Differentiation** See the last page of the lesson for differentiation and Math Language Development support.

Practice

Independent

Provide students with sufficient practice to build and reinforce their conceptual understanding, fluency, and application of mathematical topics, assessment practice, and ongoing spiral review.

Students using print



Summary 3.04

Two shapes can be compared by explaining how their **sides** and **vertices** are alike and different.

These shapes are alike because they have 4 **vertices** and 4 straight sides.

vertex

side

This shape is different because all the **sides** look the same.

Practice 3.04

Choose from these Centers.

Bingo

Images and Numbers
Mystery Shape

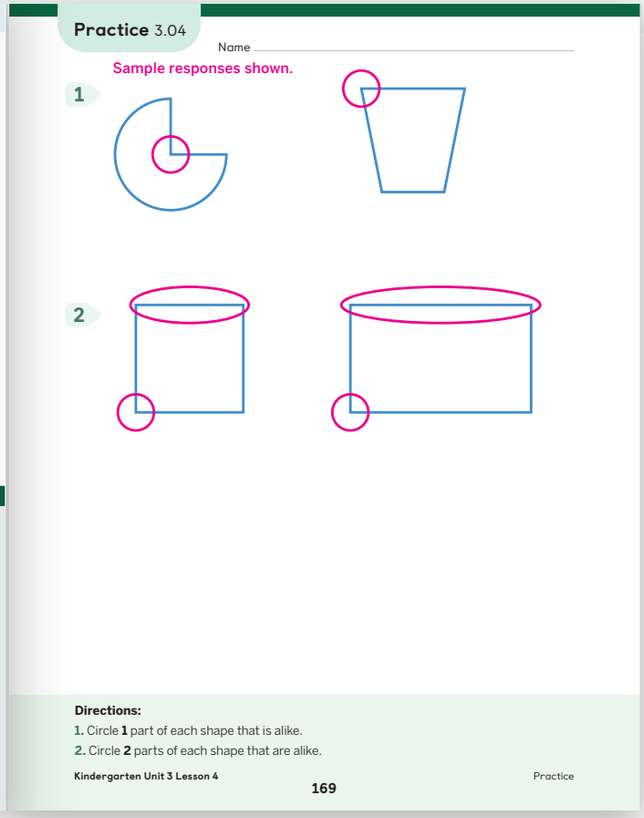
Mystery Shape

Grade K Shapes
Pattern Blocks

Pattern Blocks

Get and Build

Kindergarten Unit 3 Lesson 4 168 Summary | Practice



Practice 3.04

Name

Sample responses shown.

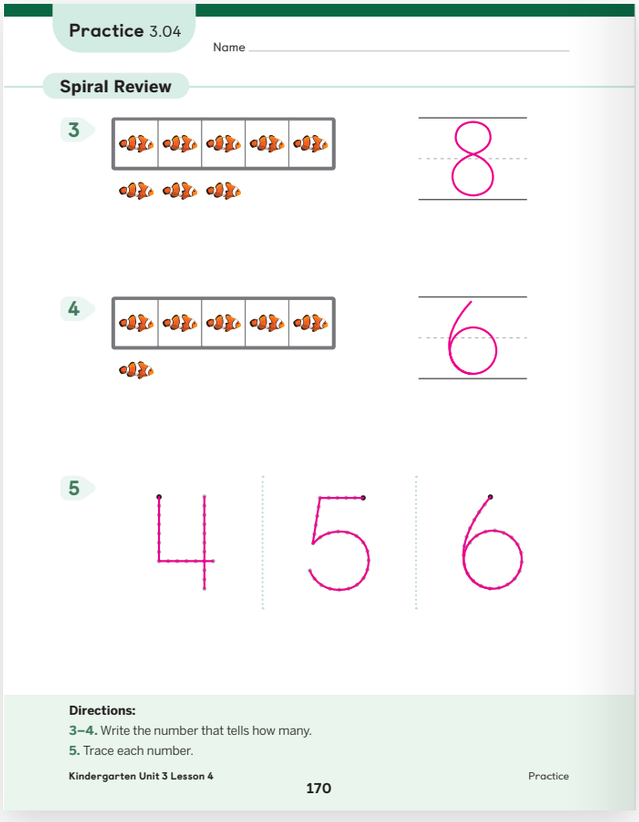
1

2

Directions:

1. Circle **1** part of each shape that is alike.
2. Circle **2** parts of each shape that are alike.

Kindergarten Unit 3 Lesson 4 169 Practice



Practice 3.04

Name

Spiral Review

3

8

4

6

5

4 5 6

Directions:

3–4. Write the number that tells how many.

5. Trace each number.

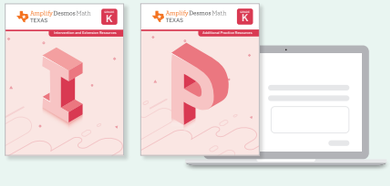
Kindergarten Unit 3 Lesson 4 170 Practice

Practice Problem Item Analysis

	Problem(s)	DOK	TEKS
On-Lesson			
	1, 2	2	K.6.D*
Spiral Review			
Fluency	3, 4	1	K.2.B, K.2.C
	5	1	K.2.B*

*These problems build toward the standards shown.

Need more Practice?



Additional practice can be found in the **Practice Resources, Intervention and Extension Resources,** and online resources (item banks, Boost Personalized Learning, and Fluency Practice).

Center Choice Time

Purpose: Use this time to support students working in Centers, gather formative assessment data, or work with a small group of students on targeted skills.

Presentation Screen

Short on time? Consider omitting the Center Choice Time.

Bingo

Images and Numbers

Small Groups | 15 min | K.2.B, K.2.C, K.2.D

Students choose a number card and cover the appropriate space on the board with a counter.

Materials

- counters, number cards (1–10) **(Manipulative Kit)**
- Directions, Gameboards (A–D) **(Centers Resources)**

Corresponds with the checklist from Unit 2, Sub-Unit 3.

Mystery Shape

Grade K Shapes

Pairs | 15 min | K.6.D

Students take turns choosing a mystery shape and asking *yes* or *no* questions to figure out the mystery shape.

Materials

- counters **(Manipulative Kit)**
- Directions, Gameboard **(Centers Resources)**

Corresponds with the checklist from Unit 3, Sub-Unit 1.

Use Centers as games to offer fun and engaging ways for students to practice math skills.

GAMES

Pattern Blocks

Get and Build

Independent | 15 min | K.2.B, K.2.E

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

Materials

- pattern blocks **(Manipulative Kit)**
- Directions, Cards (A–J), Work Mat **(Centers Resources)**

Corresponds with the checklist from Unit 1, Sub-Unit 3.

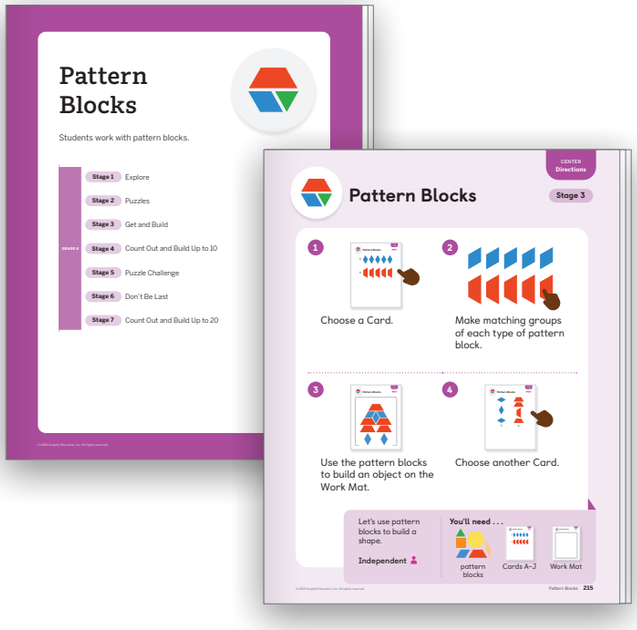
D Differentiation | Teacher Moves

Work with students in their Centers by:

- Reinforcing Center routines and positive interactions.
- Asking probing questions to propel student thinking forward.
- Recording observations using the checklist provided.

Consider pulling a small group of students for:

- Reviewing the lesson's learning goal by using the *Mini-Lesson* or the supports provided in the lesson.
- Reviewing essential skills from prior lessons or units.



Differentiation Use after Lesson 4

Lesson Goal: Compare two-dimensional shapes by describing their sides and vertices.

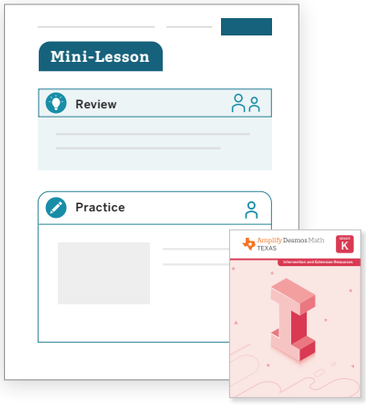
Support

Provide targeted intervention for students by using these resources.

If students compare non-defining attributes of the shapes, such as the sizes, colors, or orientations:

Respond:

- Assign the *Comparing Shapes* Mini-Lesson. | 15 min
- Students will also have more opportunities to develop this concept in future lessons, so intervention is not necessary at this time.



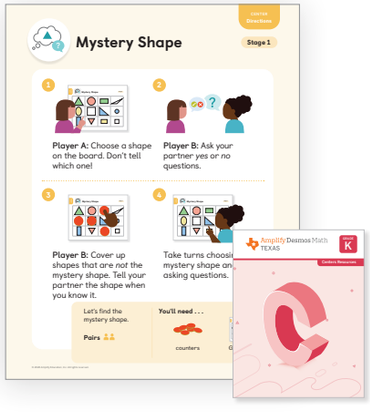
Strengthen

Reinforce students' understanding of the concepts assessed by using these resources.

If students compare shapes by naming defining attributes that are alike:

Respond:

- Invite students to play the **Center. |** 15 min
  Mystery Shape: Grade K Shapes
- Have students complete **Lesson 4 Practice. |** 15 min
- **Item Bank**



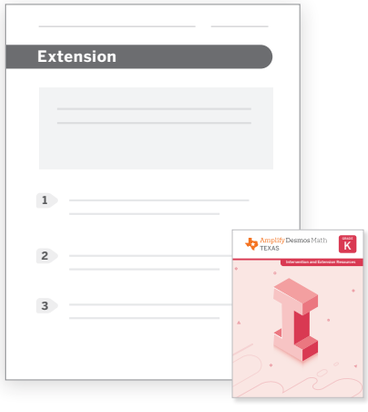
Stretch

Challenge students and extend their learning with these resources.

If students compare shapes by naming defining attributes that are different:

Respond:

- Invite students to explore the **Sub-Unit 1 Extension Activities. |** 15 min
- Revisit Activity 1 and invite students to respond to the **Stretch** question from the *Differentiation: Teacher Moves* table. | 5 min



Support, *Strengthen*, and *Stretch* learning by assigning these digital resources that adjust to each student's current level of skill and understanding.
• **Boost Personalized Learning** • **Fluency Practice** • **Math Adventures**

Math Language Development

EB Use the ***Math Language Development Resources*** for further language support with all your students, including those building English proficiency.

- English/Spanish cognates, e.g., **vertex/vértice**
- Vocabulary routines

Professional Learning

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