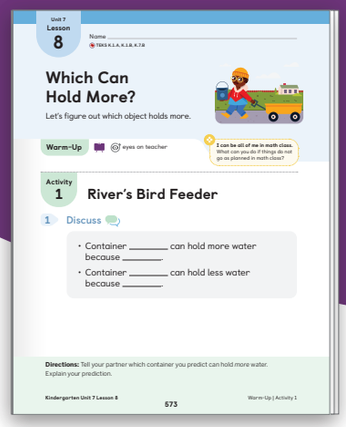
Unit 7
Lesson
8

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



Which Can Hold More?

Comparing the Capacities of Two Objects

Let's figure out which object holds more.

Key Concepts

Today's Goal

1. **Language Goal:** Compare and describe the capacities of 2 objects. **(Listening and Speaking)** **ELPS 1.E, 2.E, 2.F**

Connections and Coherence

Students compare and describe the capacities of containers, some of which resemble common three-dimensional shapes. Initially, they explore and make predictions about 2 containers in which the difference in capacity is visually apparent. Then students compare 2 containers in which the difference in capacity is not visually evident. While the word *capacity* is not introduced until Grade 3, students make sense of the concept of capacity as they make and test predictions about which container can hold more and which container can hold less. **(TEKS K.1.A, K.1.B)**

Prior Learning

In Lesson 7, students compared the weights of 2 objects to determine which object is heavier and which is lighter.

Future Learning

Understanding capacity builds the foundation for measuring and comparing volume in future grades.

Integrating Rigor in Student Thinking

- Students compare and describe the capacities of 2 containers to further their **conceptual understanding** of measurable attributes of objects.

Vocabulary

Review Vocabulary

less

more

TEKS

Addressing

K.7.B

Compare two objects with a common measurable attribute to see which object has more of/less of the attribute and describe the difference.

Also Addressing: **K.5.A**

Math Process Standards: K.1.A, K.1.B

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

Building Math Identity

I can be all of me in math class.
What can you do if things do not go as planned in math class?

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

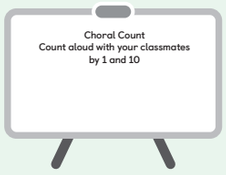
Lesson at a Glance 60 min

TEKS: K.1.A, K.1.B, K.5.A, K.7.B

Warm-Up Fluency

Whole Class | 10 min

Students use the **Choral Count** routine, in which they count as a class by 1, from 1 to 100, and then by 10, from 10 to 100. Although they see the written sequence of numbers to 100, students are not required to identify written numerals beyond 20 until Grade 1.



Activity 1

Pairs | 10 min

Students compare 2 containers and consider which can hold more. In the Connect, they brainstorm ways to compare the capacities of the 2 containers and interpret their findings.

Note: The Student Edition is not required for this activity.

Materials: containers, cups, Unit Story, *Everybody Needs Help Sometimes*, water

Additional Prep Assemble: 2 empty cups or containers with slightly different capacities and 1 large container of water

Activity 2

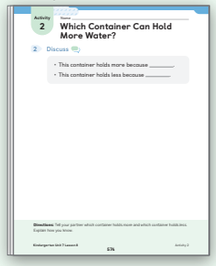
Pairs | 15 min

Students compare the capacities of 2 containers by filling each with water. They may pour water from 1 container to the other to notice the difference in capacity, or they may count and compare the quantity of small cups needed to fill each container.

Note: The Student Edition is not required for this activity.

Materials: containers, paper cups, water, trays

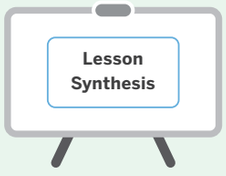
Additional Prep Assemble: 2 empty cups or containers and 1 container filled with water for each pair



Synthesis

Whole Class | 10 min

Students review and reflect on the difference between the amount that is in a container and the capacity of that container.



Show What You Know (optional)

Independent | 5 min

Students demonstrate their understanding by identifying which containers hold more and less water.

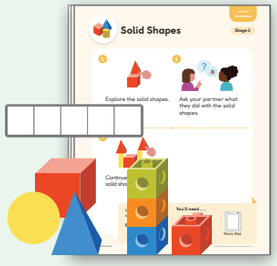
Materials: *Show What You Know* PDF

Center Choice Time

Pairs | 15 min

Students have an opportunity to revisit these Centers to build their understanding of quantity.

- Solid Shapes
- Towers



Math Language Development

Emergent Bilinguals

Consider using the *Math Language Development Resources* with the **Activity 1, Monitor** to support math language acquisition.

- ✓ Cognates
- ✓ Visuals
- ✓ Sentence frames and word bank

ELPS 1.B, 1.E, 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.

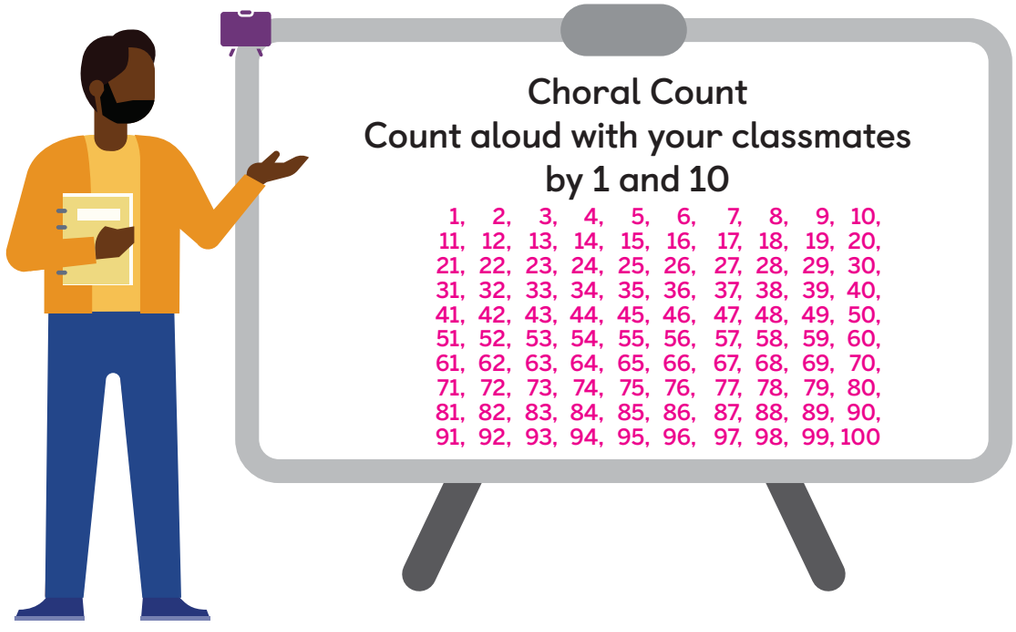
Whole Class | 10 min

Presentation Screen

Warm-Up Choral Count

Fluency

Purpose: Students count by 1 and 10 to 100 to develop fluency with counting to 100.



1 Launch

Use the Choral Count routine. ELPS 2.E

Say, "Let's count by 1, starting at 1 and ending at 100."

Display each number as students count.

2 Connect

Say:

- "Now let's count by 10, starting at 10 and ending at 100." Point to each number as students count.
- "We will continue to practice counting to 100 by 1 and by 10."

Pairs | 10 min

Activity 1 River's Bird Feeder

Purpose: Students make and test predictions about the capacities of 2 containers to further their understanding of the measurable attributes of objects.

Presentation Screens

Materials

- Read aloud page 9 of the Unit Story, *Everybody Needs Help Sometimes*.

Classroom materials:

- Prepare two different cups or containers that can be compared visually. Label the container with greater capacity as *Container A*, and label the container with less capacity as *Container B*. Display the two containers during the Launch.
- Prepare one large container with water to use in the Connect.

1 Launch

Read aloud page 9 of the Unit Story. ELPS 1.E

Say, "Mrs. Roy loves her new birdhouse because she gets to see different kinds of birds! She wants to get a container to hold water for the birds so they have something to drink."

EB **Emergent Bilinguals** Invite students to share what they know about the term *container* to increase access to the task. Consider sharing a picture of different types of containers to increase access to the task. ELPS 3.D, 3.E, 3.F

Display Container A and Container B.

Say, "Tell your partner which container you predict can hold more water for the birds. Then explain your prediction."

MLR **MLR8: Discussion Supports — Sentence Frames** ELPS 1.E, 2.C, 2.E

While students work, display and read aloud these sentence frames for them to use as they compare the containers.

- "Container __ can hold more water because . . ."
- "Container __ can hold less water because . . ."

A **Accessibility: Conceptual processing** Provide an everyday example of objects with different capacities, such as a bucket that can hold more water than a water bottle.

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, "In your own words, what are you trying to figure out?"
- Ask, "What do you notice about the containers? How could that help you predict which container can hold more?"

3 Connect

Invite students to share which container they predict can hold more water.

Use the Think-Pair-Share routine. Ask, "How could we figure out which container can hold more water?"

Demonstrate filling Container A with water and then slowly pour that water into Container B.

Ask, "Which container can hold more water? How do you know?"

Say, "I filled Container A and poured the same water into Container B, but Container B overflowed. Container B did not have space to fit all the water from Container A, so we know Container A can hold more."

Key Takeaway: Say, "You can compare 2 objects, such as these containers, by saying which one holds more and which one holds less."

Student Edition

Unit 7
Lesson 8

Name _____

TEKS K.1.A, K.1.B, K.7.B

Which Can Hold More?

Let's figure out which object holds more.

Warm-Up eyes on teacher

I can be all of me in math class.
What can you do if things do not go as planned in math class?

Activity 1

River's Bird Feeder

1 Discuss

- Container _____ can hold more water because _____.
- Container _____ can hold less water because _____.

Oral activity: No writing expected.

Directions: Tell your partner which container you predict can hold *more* water. Explain your prediction.

Kindergarten Unit 7 Lesson 8 573 Warm-Up | Activity 1

Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Make a guess about the container with the greater capacity.	*Maybe Container B can hold more.*	**Support** Ask, "What about the container makes you think it can hold more water?"
Predict and reason that Container B has the greater capacity.	*Container B can hold more because it looks heavier.*	**Strengthen** "What do you notice about the size or shape of Container A? How is it different from Container B?"
Predict and reason that Container A has the greater capacity.	*Container A can hold more because it is taller and wider than Container B.*	**Stretch** Ask, "Which object from our classroom could hold more water than this container? Why do you think that?"

Pairs | 15 min

Activity 2 Which Container Can Hold More Water?

Purpose: Students compare the capacities of 2 containers to determine which can hold more and which can hold less.

Presentation Screens

Materials

Classroom materials:

- Display two different cups or containers on one tray during the Launch.
- Distribute one small paper cup, one tray, and two different cups or containers that are not easy to compare visually to each pair.
- Provide students with access to one container filled with water (optional).

1 Launch

Say, "River likes to drink lots of water after a day of building and helping others. He is trying to figure out which container will help him drink more water."

Display 2 containers on a tray.

Ask, "Which container do you think will hold more water? Why?"

Say:

- "Work with your partner to figure out which of your containers holds more water. Keep your containers over the tray, and use the small paper cup if it helps you."
- "Tell your partner which container holds more and which container holds less, and explain how you know."

Provide access to containers filled with water.

A **Accessibility: Executive functioning** Invite students to verbalize their strategy for comparing the capacities of their containers. Students can speak quietly to themselves or share with their partner.

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, "How can you use what we did in Activity 1 to help you figure out which container holds *more* water?"
- Point to the materials and ask, "How could you use these tools to figure out which container holds *more* and which container holds *less*?"

3 Connect

MLR This Connect is structured using the *MLR7: Compare and Connect* routine. ELPS 1.B, 1.E, 2.B, 2.D, 2.E

Invite pairs to share how they compared the capacities of the containers using Rows 2 and 3 in the *Differentiation* table.

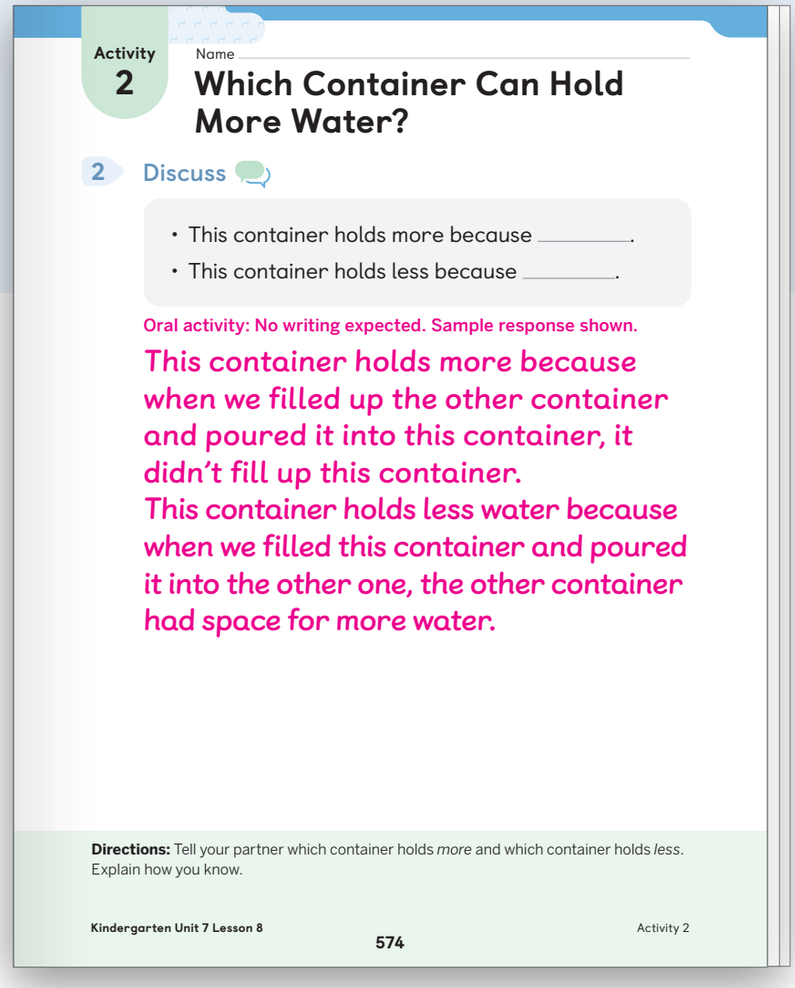
EB **Emergent Bilinguals** Invite partners to revoice each strategy after it is shared using their own words. This will support students' active listening and give students an additional opportunity to process language. ELPS 1.E, 2.D, 2.F

Use the Think-Pair-Share routine. Ask:

- "What was the same about how they compared the containers?"
- "What was different about how they compared the containers?"

Key Takeaway: Say, "There are different ways to compare how much a container holds. Sometimes, you can see which container holds more. Sometimes, you have to fill the containers to know which holds more."

Student Edition



Activity 2

Name _____

Which Container Can Hold More Water?

2 Discuss

- This container holds more because _____.
- This container holds less because _____.

Oral activity: No writing expected. Sample response shown.

This container holds more because when we filled up the other container and poured it into this container, it didn't fill up this container.
This container holds less water because when we filled this container and poured it into the other one, the other container had space for more water.

Directions: Tell your partner which container holds *more* and which container holds *less*. Explain how you know.

Kindergarten Unit 7 Lesson 8 574 Activity 2

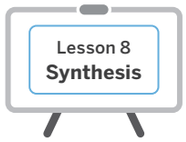
Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Fill both containers with water.	We poured water in both containers.	**Support** Ask, "Both containers can hold water. How could you figure out which container holds more water?"
Directly compare the capacities by pouring water from 1 container to the other.	We filled the first container and then poured the water into the second container.	**Strengthen** Ask, "What did you notice when you put water in the containers? How did that help you compare the containers?"
Indirectly compare the capacities by counting the number of small cups needed to fill each container.	We filled this container with 5 cups of water, and we filled this container with 3 cups of water.	

Whole Class | 10 min

Presentation Screen



Synthesis

Lesson Takeaway: We can compare the capacities of three-dimensional shapes.

Ask, "What do you notice about these 2 jars?"

Play the animation. ELPS 1.F

Say, "Jada says that Jar B can hold more cherries than Jar A because it has more cherries inside."

Use the Think-Pair-Share routine. Ask, "Do you agree with Jada? Why or why not?"

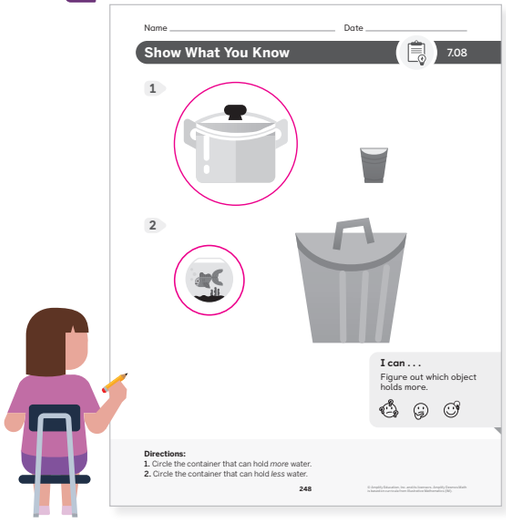
Say, "Right now, Jar B has more cherries inside than Jar A, but these 2 jars are the same size and shape, so they can hold the same amount. When thinking about which container can hold more and which can hold less, we are comparing how much the container can hold when it is filled all the way to the top."

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

Show What You Know (Optional)

Independent | 5 min

Show What You Know PDF


Name _____ Date _____

Show What You Know 7.08

1

2

I can . . .
Figure out which object holds more.

Directions:
1. Circle the container that can hold *more* water.
2. Circle the container that can hold less water.

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Today's Goal

1. **Language Goal:** Compare and describe the capacities of 2 objects. **(Listening and Speaking)** ELPS 1.E, 2.E, 2.F
   - In the *Show What You Know*, students compared the capacities of containers by circling which containers hold more and less water.

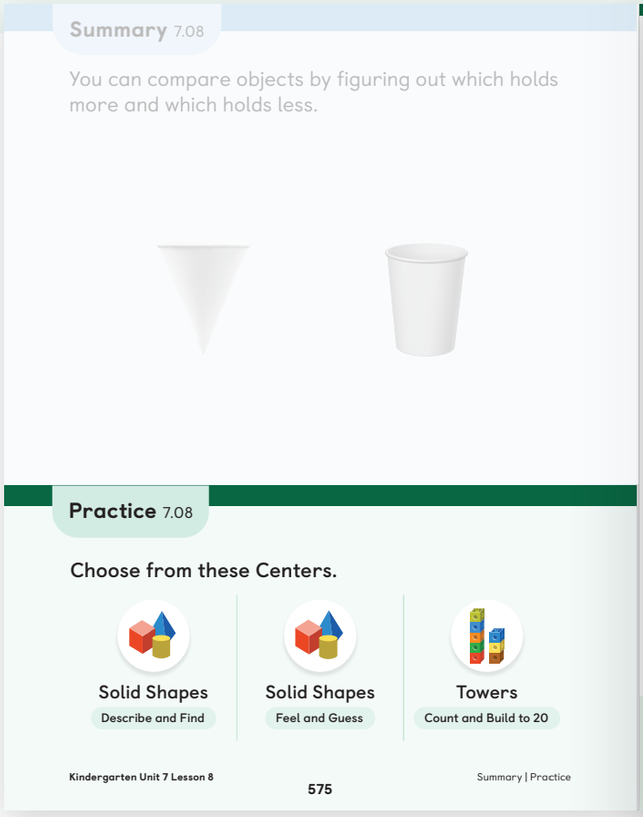
Differentiation See the last page of the lesson for differentiation and Math Language Development support.

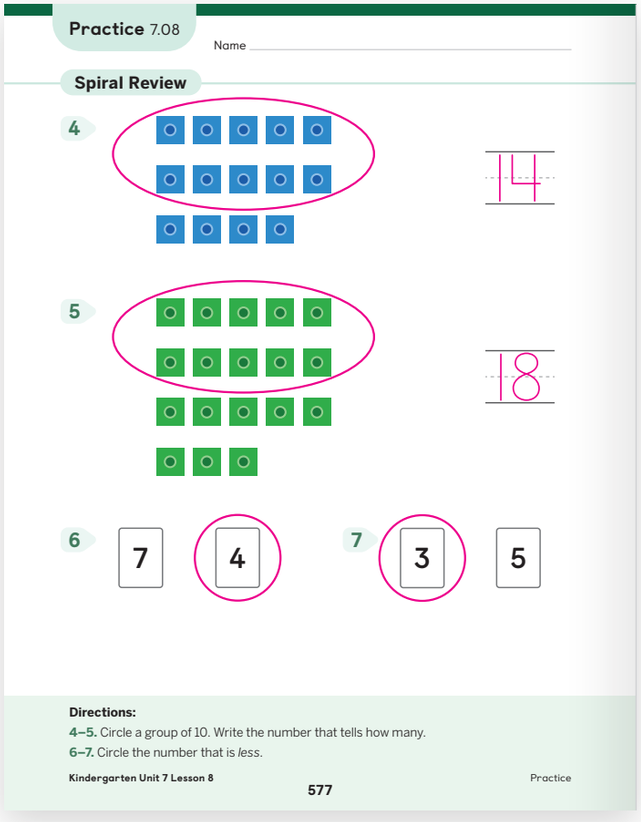
Practice

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



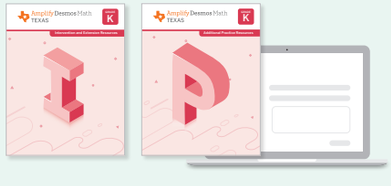


Practice Problem Item Analysis

	Problem(s)	DOK	TEKS
On-Lesson			
	1, 2	1	K.7.B
	3	2	K.7.B
Spiral Review			
Fluency	**4, 5**	1	K.2.B, K.2.C
	6, 7	1	K.2.H*

*These problems build toward the standard shown.

Need more Practice?

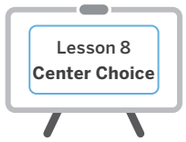


Additional practice can be found in the **Practice Resources, Intervention and Extension Resources,** and online resources (item banks, Boost Personalized Learning, and Fluency Practice).

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.

Solid Shapes

Describe and Find

Pairs | 15 min | K.6.B

Students take turns describing a three-dimensional shape to their partner and guessing which shape their partner is describing.

Materials

- geosolids (two sets per pair) **(Manipulative Kit)**
- Directions, Work Mat **(Centers Resources)**

Corresponds with the checklist from Unit 7, Sub-Unit 1.

Solid Shapes

Feel and Guess

Pairs | 15 min | K.6.B

Students take turns hiding a three-dimensional shape in a bag and feeling the shape to guess which shape their partner hid.

Materials

- geosolids (two sets per pair: one for display, one to place in the bag) **(Manipulative Kit)**
- paper bags (one per pair) **(Classroom materials)**
- Directions **(Centers Resources)**

Corresponds with the checklist from Unit 7, Sub-Unit 1.

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

GAMES

Towers

Count and Build to 20

Pairs **15 min** | **K.2.C, K.3.A**

Students recognize written numerals, count out cubes to add to a tower, and determine the total.

Materials

- connecting cubes **(Manipulative Kit)**
- Directions, Number Mat (1–10) **(Centers Resources)**

Corresponds with the checklist from Unit 6, Sub-Unit 2.

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 8

Lesson Goal: Compare and describe the capacities of 2 objects.

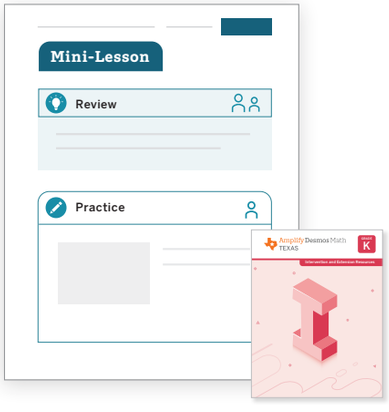
Support

Provide targeted intervention for students by using these resources.

If students circle the small cup and the large trashcan:

Respond:

- Assign the *Comparing Objects Using More or Less* 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.



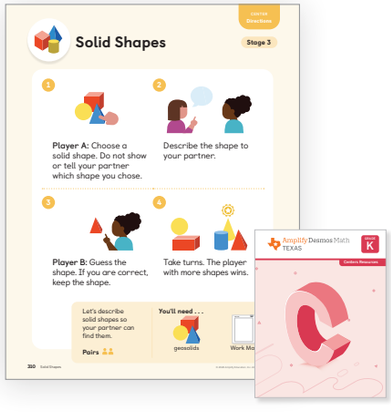
Strengthen

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

If students circle the large pot or the small fish bowl:

Respond:

- Invite students to play the **Centers.** | 15 min
  Solid Shapes:
  - *Describe and Find*
  - ***Feel and Guess***
- Have students complete **Lesson 8 Practice.** | 15 min
- **Item Bank**



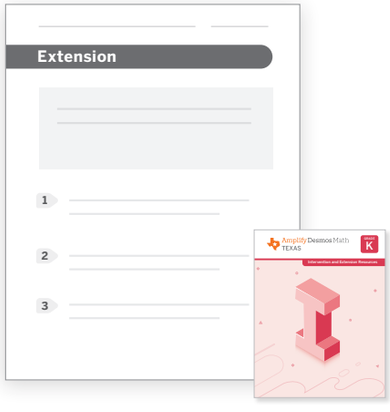
Stretch

Challenge students and extend their learning with these resources.

If students circle the large pot and the small fish bowl:

Respond:

- Invite students to explore the **Sub-Unit 2 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
- Vocabulary routines

Professional Learning

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