Student devices recommended

We recommend students use devices for this lesson. **Student Edition pages** are also available.

Forest Friends

Determining Which Group Has *More* or *Fewer* Images

Let's help animals find the group with more or fewer.



Key Concepts

Today's Goals

- 1. Goal: Compare groups of up to 10 images.
- 2. Language Goal: Explain and compare strategies for determining which group has more or fewer images. (Listening and Speaking) & ELPS 1.E, 2.E, 2.F

Connections and Coherence

Students compare groups of images shown in different arrangements and explain their strategies. Depending on the arrangement and the quantity shown, students may move flexibly between strategies, such as looking for and making use of structure, subitizing, or counting. As students discuss and compare strategies, they notice that, when images are not in a similar arrangement, they can look for common structures within the arrangement to help them compare. (TEKS K.1.G)

Prior Learning

In Lesson 9, students explored how to use the 5 + n structure of 5-frames and their fingers to compare groups.

Future Learning

In Lesson 11, students will draw a group that represents a given comparison. In Sub-Unit 3, students will explore how the count sequence can be used to identify all the quantities that are fewer or more than a given number.

Addressing

TEKS

Vocabulary

Review Vocabulary

K.2.G

fewer

more

same

Compare sets of objects up to at least 20 in each set using comparative language.

Also Addressing: K.2.C

Math Process Standard: K.1.G **ELPS:** 1.B, 1.C, 1.E, 1.F, 2.B, 2.E, 2.F

Building Toward

K.2.H

Integrating Rigor in Student Thinking

• Students apply their understanding of how to compare quantities of images.

Building Math Identity

O I am a doer of math.

What math strengths did you use today?

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

Lesson at a Glance • 60 min

Why digital?

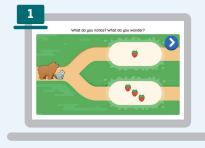
Students compare groups and receive interpretive feedback in real time.

(TEKS: K.1.G, K.2.C, K.2.G

Warm-Up

Whole Class | • 10 min

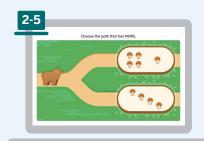
Students use the Notice and Wonder routine to share what they notice and wonder about the relationships between 2 groups, each with subitizable quantities.



Activity 1

♣ Pairs | ● 25 min

Students compare 2 groups to determine which group shows more or fewer and then explain their strategies. In the Connect, students discuss different strategies for comparing the groups.



Synthesis

Whole Class | • 10 min

Students review and reflect on comparing 2 groups and discuss how it is helpful to look for and make use of structure.



Show What You Know (optional)

👗 Independent | 😃 5 min

Students demonstrate their understanding by circling the groups that show more or fewer dots.

Materials: Show What You Know PDF





Center

Pairs | 9 15 min

Students are introduced to the Center Less, Same, More, Images, in which they sort cards that show groups with fewer than, the same number as, or more than a given group.









Math Language Development

EB Emergent Bilinguals

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



✓ Sentence frames and word bank

€ ELPS 1.E, 2.B, 2.C, 2.D, 2.E, 2.F

Pre-Production Beginning

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.

Intermediate High Intermediate Advanced

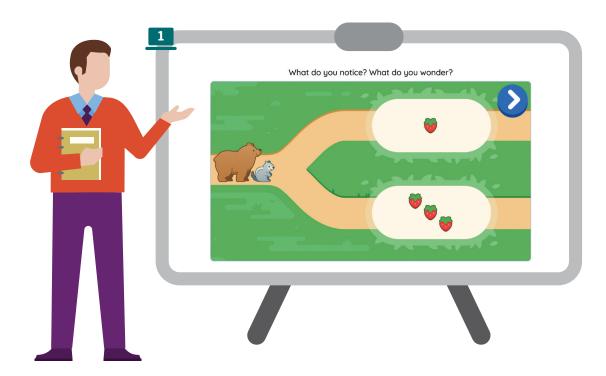
Students listen to spoken English and speak using a variety of sentence types.

Students listen to spoken English and speak using longer sentences.

Exemplar responses are provided.

Warm-Up Notice and Wonder

Purpose: Students notice and wonder about the groups of strawberries each animal eats to prepare to choose a group with more or fewer for the animals in Activity 1.



Launch

Display the bear, squirrel, and groups.

Say, "While they wait for a table at Bella Trattoria, Dez and Lizzy entertain themselves by playing their favorite game, Forest Friends."

Use the Notice and Wonder routine. Say, "Tell your partner what you notice and wonder."

Demonstrate clicking the arrow to advance the bear and squirrel.

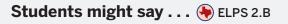
Use the Notice and Wonder routine. Say, "Tell your partner what you notice and wonder now." Continue clicking the arrow to advance the bear and squirrel.

Connect

Invite a few students to share what they notice and wonder with the whole class. Record students' responses.

Ask (if not yet mentioned during discussion), "What did you notice about the groups the bear chose? What did you notice about the groups the squirrel chose?"

Say, "The bear always ate the group that showed *more* and the squirrel always ate the group that showed fewer. Let's continue helping the bear find the group with more and helping the squirrel find the group with fewer."



I notice there are 4 strawberries in a group and 3 strawberries in another group.

I notice that the bear chose the group with more strawberries.

I wonder what group the squirrel will choose this time.

I wonder if the squirrel will always choose the group with fewer strawberries.



Activity 1 A Furry Feast

Purpose: Students apply their understanding of how to compare groups of images as they determine which group has more or fewer and then compare their strategies.

Students using print







Display the bear and groups.

Say. "The bear is preparing for winter and needs to eat as much as she can before hibernating. Help the bear by choosing the path that shows the group with more."

Students using print: Have students complete the first 4 problems.

3 Display the squirrel and groups.

Say, "The squirrel is also collecting food. He has to carry his food in his cheeks. Help the squirrel by choosing the path that shows the group with fewer."

Students using print: Have students complete the next 4 problems.

Pause: Screen 3.

Use the Think-Pair-Share routine. Say, "Explain to your partner how you figured out which groups showed more or fewer."

Display the squirrel and groups.

Say, "For the squirrel, choose the path that shows the group with fewer. For the bear, choose the path that shows the group with more."

Students using print: Have students complete the next 6 problems.



Emergent Bilinguals: Review the terms *more* and *fewer* before students begin.

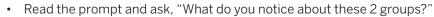
ELPS 1.B

Monitor



2 While students complete **Screen 2**, refer to the D Differentiation | Teacher Moves table on the following page.

If students need help getting started . . .



Ask, "How can you use what you noticed about the groups to help you compare them?"

Connect



Display the squirrel and groups.

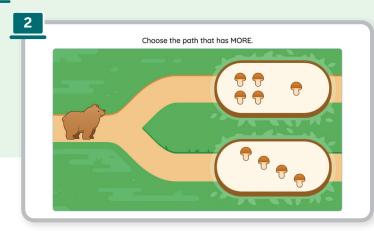
Ask, "How did you compare these groups?"

Invite students to share their strategies for comparing the groups. Select and sequence their strategies in the order shown in the Differentiation table.

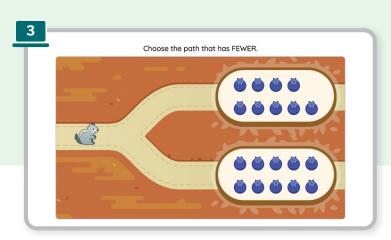
Use the Think-Pair-Share routine. Ask, "What was the same about how they compared the groups? What was different?"



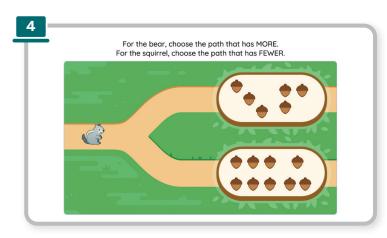
Key Takeaway: Say, "There are different ways to compare groups to figure out which group shows more or fewer."



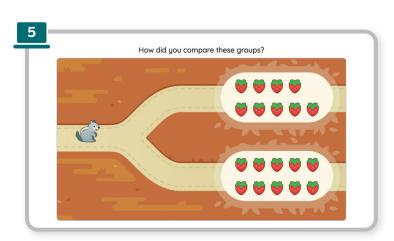
Students select the path with 5 mushrooms.



Students select the path with 9 blueberries.



Students select the path with 9 acorns for the bear and the path with 6 acorns for the squirrel.



Students share and compare strategies for determining which group shows more or fewer.

Students using print will arrive at similar answers.

D Differentiation | Teacher Moves

Look for students who . . .

For example . . .

Provide support . . .

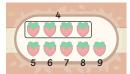
Count all to compare the groups.

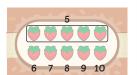




Strengthen Ask, "How could you figure out how many are in each group without counting each image?"

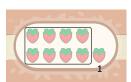
Subitize and count on to compare the groups.

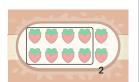




Stretch Ask, "What do you notice about the way the groups are arranged? How could that help you compare the groups without counting?"

Use the structure of the arrangements to compare the groups.





I saw the part that is the same. The first group has 1 left over and the second group has 2 left over. **Stretch** Ask, "How could you explain your thinking to your partner?"

Synthesis

Lesson Takeaway: There are many strategies for comparing 2 groups of images. Some strategies involve looking for and making use of structure rather than counting each image.

Students using print





6 Display the students and groups.

Say, "Let's look at how Shawn and Priya compared the 2 groups in Forest Friends."

Play the first animation. • ELPS 1.F

Ask, "What do you notice about how Shawn compared the 2 groups?"

Play the second animation.

Ask, "What do you notice about how Priya compared the 2 groups?"

Play each animation again.

Ask, "What is different about how Shawn and Priya each saw the groups?"

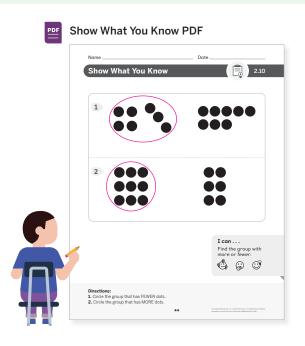
Say:

- "Shawn figured out how many were in each group. Priya noticed that part of each group looked the same and then compared the parts of the groups that did not look the same."
- "When groups are arranged differently, you can notice what is the same about the groups to make the groups clearer to compare."

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

Show What You Know & Independent

(Optional)



Today's Goals

- 1. Goal: Compare groups of up to 10 images.
 - In the Show What You Know, students circled the groups that show more or fewer dots.
- 2. Language Goal: Explain and compare strategies for determining which group has more or fewer images. (Listening and Speaking) (ELPS 1.E, 2.E, 2.F

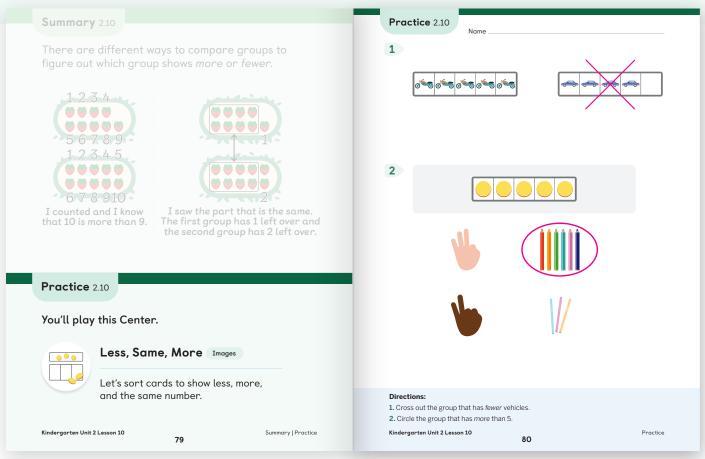


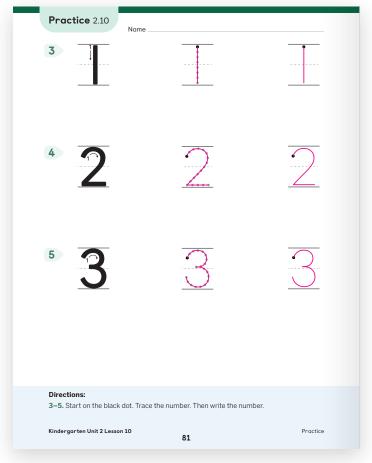
See the last page of the lesson for differentiation and Math Language Development support.

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









Let's Play Less, Same, More, Images

Purpose: Students apply their understanding of comparing quantities to sort cards that show groups with fewer, the same number of, or more objects than a given group and then justify the comparisons.

Launch



Display the Directions, Image Cards, and Work Mat.

Demonstrate how to play the Center, Less, Same, More, Images. While demonstrating: 🗣 ELPS 1.C

- Say, "You will play a new version of Less, Same, More."
- Say, "First, I choose a card and place it in the box at the top of the Work Mat."
- Say, "Then I choose another card. I need to figure out if it shows fewer than, the same number as, or more than the card on the Work Mat. Next, I place the card in the box that shows how I compared." Select another card.

Presentation Screen 7

Additional Print Materials

(Grade K), and Work Mat.

Distribute one Work Mat to

Display the Directions, Image Cards

Distribute one set of pre-cut Image

Centers Resources:

Cards to each pair.

each pair.

Lesson 10 Center

- Use the Think-Pair-Share routine. Ask, "Where should I place this card?" Place the card in the corresponding box.
- Say, "Then I explain to my partner how I know the card has more, fewer, or the same number of objects."
- Use the Think-Pair-Share routine. Ask, "How do you know where the card belongs?"
- Say, "Take turns playing with your partner. After placing all the cards, clear the Work Mat and play again with a new card."



Accessibility: Conceptual processing Guide processing by inviting students to rephrase the Directions in their own words. Clarify the Directions as needed.

Monitor



Observe how students determine the quantities of dots shown on the cards as they compare the groups.

Connect



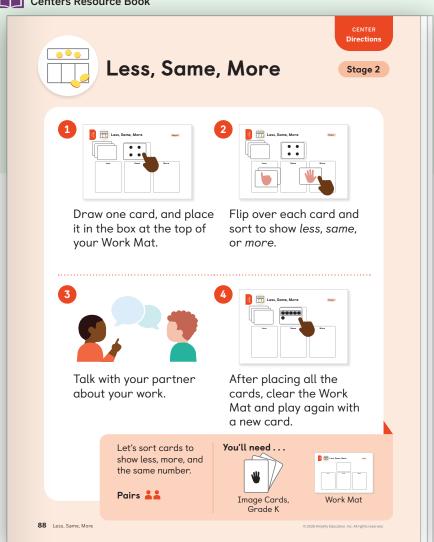
7 Display the Work Mat, a card with 7 fingers in the box at the top, cards with 5 fingers and 9 dots in the more box, cards with 2 dots and 8 dots in the fewer box, and a card with 7 dots in the same box.

Say, "Han sorted the cards. Some cards are not where they belong."

Use the Think-Pair-Share routine. Ask, "How can Han revise his work so that his sort makes sense? How do you know?"



Key Takeaway: Say, "We will continue to use what we know about numbers to compare more than 1 group to a given group."







Look for students who . . . For example . . . Provide support . . .

Compare by counting to determine the quantity.

4 More 00000

Strengthen Ask, "What do you notice is the same about these 2 cards?"

1, 2, 3, 4, 5, 6, 7, 8, 9 dots. 9 is more than 7.

Compare by using the 5 + n structure.

The hands at the top show 5 and 2 more. The dots on the 5-frame show 5 and 4 more. There are more dots than fingers.

Compare a quantity by relating it to a previously compared quantity.

I noticed that the card with 8 dots was more than 7, so I knew the card with 9 dots was more because 9 is more than 8.

Stretch Say, "Draw groups to show fewer than, the same number as, and more than the group at the top of the mat."

Lesson Goal: Compare groups of up to 10 images.



Support

Provide targeted intervention for students by using these resources.

If students Count all to compare the groups:

Respond:

- Assign the *Identifying Groups That* Show More, Fewer, or the Same Mini-Lesson. | 4 15 min
- Revisit Lesson 9.



Strengthen

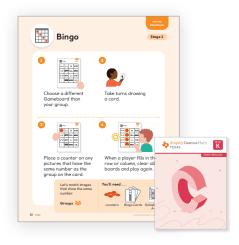
Reinforce students' understanding of the concepts assessed by using these resources.

If students Subitize and count on to compare the groups:

Respond:

 Invite students to play these Centers. | 4 15 min Bingo: Images Less, Same, More: Images Math Stories: How Many?

- Have students complete **Lesson 10** Practice. | • 15 min
- Item Bank



Stretch

Challenge students and extend their learning with these resources.

If students Use the structure of the arrangements to compare the groups:

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

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