

K.3.1

Materials: (T) Indicated photos, heavy book, piece of ribbon a meter long

Setup: Show students a set of photos, one of a skyscraper contrasted with a one-story building

T: With your partner, look at the photos of the buildings. Talk about how they are the same and how they are different. What do you notice?

Note: The purpose of the activity is to allow the teacher to observe students' initial conversations about comparison. Do they have an awareness of length and height, taller and shorter? Pay special attention to the language used by the children. Note whether or not students are able to articulate differences clearly or if they simply state that one is bigger or one is smaller.

T: When you compare and say it is bigger, let's think about what we mean. (After each question, allow students to have a lively, brief discussion.)

T: Do you mean that it is bigger like this book is heavier than this ribbon? (Dramatize the weight of the book and ribbon.)

T: Do you mean that it is longer like this ribbon is longer than this book? (Dramatize the length of the ribbon.)

T: Do you mean it takes up more space like this book takes up more space than the ribbon when it is all squished together? (Dramatize.)

T: Do you mean to compare the number of things like the number of books and ribbons? (Dramatize a count.)

T: So, we can compare things in different ways! Today, let's compare by thinking about how much longer or shorter one thing is than another thing. (Dramatize.)

K.3.2

Draw a picture of something that you have seen that is very tall. Compare your picture to your friend's. Is the item in his drawing taller than yours or shorter than yours? Are you sure? How can you find out?

K.3.3

Draw a monkey with a very long tail. Draw a monkey with a very short tail. Now, draw a yummy banana for the monkeys to share. Is the banana longer than or shorter than the tail of the first monkey? Is it longer than or shorter than the tail of the second monkey? Tell your partner what you notice.

K.3.4

Put the following sentence frame on the board, then read it to the students:

I am taller than _____. I am shorter than _____.

Draw two things on your paper that would make your sentence true. Tell your sentence to your partner. Does he agree that it is true?

K.3.5

Write your name so that one letter is in each box. Begin with the box above the star. Don't skip any boxes!

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You made a name train. Compare your train to that of your partner. What do you notice? Which train as more letter passengers?

K.3.6

Materials: (S) Crayon, paper, bag of linking cube stairs

Spread your hand out on the piece of paper and trace around it to make your handprint. Now, take your hand off the paper and look carefully at the fingers in your handprint drawing.

Think about which linking cube stick might be as long as your thumb. Take out that stick and check your guess. Were you right? Which one would be about as long as your little finger? Your middle finger? Test your guesses to see if you were close. Share your discoveries with your friend. Are his fingers and your fingers the same lengths?

K.3.7

Materials: (S) Small balls of clay

Make a little clay snake that is as long as your pointer finger. Now make a friend for him that is as long as your pinky finger. Which one is longer? Show your creations to your friend.

K.3.8

Draw three things you wouldn't mind carrying around in your backpack, even if you had to walk a long way. Now, draw one thing that you would not want to carry around in your backpack because it might make you very tired. Why wouldn't you want to carry it? How is it different from the first things you drew? Talk to your partner about your pictures.

K.3.9

Put the following sentence frame on the board, then read it to the students:

I am lighter than _____, but I am heavier than _____.

Draw two things on your paper that would make this sentence true for you. Show your pictures to your partner. Does she agree with you? How much do you think you weigh?

K.3.10

Imagine that you were on a seesaw with a little kitten on the other end. Draw a picture of yourself and the kitten on the seesaw. Which end of the seesaw would be closer to the ground? How do you know? Talk about your picture with your partner. Do your seesaws look the same?

K.3.11

Materials: (S) Small bag of about 10 Lego-type building blocks per student, balance scale for small group, 20 pennies. Use your blocks to make the heaviest building that you can. How many pennies are as heavy as your building? Turn to your friend. Talk about your different buildings and how much they weigh.

K.3.12

Find one small item in your backpack. Put it on the balance scale. How many pennies do you think it will take to balance your object? Use pennies to test your guess. Make a picture of the balance with your object and the pennies. Finish this sentence, "My item is as heavy as a set of pennies."
What do you think would happen if you put another penny on each side of the balance scale? Test your guess!

K.3.13

Materials: (S) Small ball of clay per student. With your clay, create a cup that could hold just enough milk for a little kitten to drink. Show your cup to your friend. Do you think your cups would hold the same amount?

K.3.14

Materials: (S) Small ball of clay per student. With your clay, make a bowl big enough to hold a yummy strawberry. Now make a little vase just the right size for a tiny flower. Which one do you think would have more capacity? Compare your containers to that of your friend. Do they look alike? Do you think hers would have more capacity?

K.3.15

Materials: (S) Small ball of clay and 10 small beans per student. Use your clay to make a container just large enough to hold your 10 beans. What would you call your container? Test to see if the beans fit! Show your work to your partner.

K.3.16

Materials: (S) Playing card, bag of linking cubes

How many linking cubes would it take to cover up your card? Make a guess! Now work with your partner to test your guess. What did you discover? How many cubes did it take? Did your friends use the same number of cubes?

K.3.17

Materials: (T) Music player (S) 1 chair, carpet square, or piece of construction paper per student

It's time to have a math celebration! To begin, play a game of musical chairs (or carpet squares or papers) with the students. During the first round, make sure that there are several more chairs than students. When the children sit and notice the extra chairs, tell them, "There are not enough children to fill the chairs." Continue playing and remove a chair each round until there are just as many chairs as children. When they sit down, tell them, "There are just enough chairs!" Repeat as time permits.

K.3.18

Draw four little mice. Draw some pieces of cheese so that each mouse can have one. Use a ruler to draw a line between each mouse and its cheese. Are there just enough? Talk to your partner about how you knew how many pieces of cheese to draw.

K.3.19

Materials: (S) 1 small ball of clay each. Use your clay to make six little pretend pancakes. How many people could you serve with your pancakes if you were going to have a tiny pancake party? What if another person joined them? Put your clay back together into a ball and make newtiny pancakes so there would be just enough. Talk about your "cooking" with your friend.

K.3.20

Materials: (S) Square path with star for name writing

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- Write your first name in the top set of boxes, one letter in each box. Start at the box above the star.
- Write your last name in the bottom set of boxes, one letter in each box. Start at the box above the star.
- Which of your trains has more letter passengers? Which passenger train would be longer?
- Which of your trains has fewer passengers? Which passenger train would be shorter?
- Talk about your trains with your partner. Are his trains similar to yours?
- Did anyone's train not have enough room for all of the letter passengers?

K.3.21

Materials: (S) Linking cubes, dry erase markers. Use your dry erase markers to write the letters of your name on linking cubes. Make a train out of your cubes. Compare your train to at least one friend's train. Which train is longer? Count the cubes in your trains. Which number is more? Which number is less?

K.3.22

Materials: (S) 7 linking cubes, small piece of clay per student. Pretend your linking cubes are little baskets. Use your clay to make as many balls as there are baskets. Check your work by putting a ball in each basket. Do you have just enough? Score 1 point for every basket you made!

K.3.23

Draw 9 birds. Draw enough worms so that each bird gets one, but also draw an extra one for a snack for later. Use your ruler to match each bird to its worm. How many birds are there? Write the number. How many worms are there? Write the number. Show your picture to your friend.

K.3.24

The birds are back! Draw 9 birds. Each of them wants a worm for lunch today except for one—she has become a vegetarian. Draw just enough worms so that each bird who wants one can have one. How many birds did you draw? Write the number. How many worms did you draw? Write the number.

K.3.25

Materials: (S) Bag of 10 pennies, bag of 8 linking cubes. Put your pennies in a row. Now put one linking cube on top of each penny. Are there enough cubes to cover each penny? Talk to your friend about which has more, the set of cubes or the set of pennies.

K.3.26

In a row, quickly draw to show how many people are sitting at your table (or in your row or work group). Now, in another row, draw to show how many pencils are at your table (or in your row or your work group). Draw lines to match each person to one pencil. Remember, each one gets only one partner! Are there more pencils or people? Show your work to your partner.

K.3.27

Materials: (S) Pattern blocks. Work with a partner. Take one handful of pattern blocks out of the bucket. Let your partner do the same. Compare your handfuls of pattern blocks. Who has more? How did you know? Put the blocks back and try the game again.

K.3.28

Materials: (S) Paper, crayons, and small ball of clay per student. Draw four snowmen on your paper. With your clay, make little hats and put them on the snowmen. Now, make two more hats for the snowmen that melted yesterday. How many snowmen did you draw? How many hats did you make? Which number is greater? Which number is less?

K.3.29

Demoss had a very small carton of orange juice. His mom poured it into a very tall glass without spilling any. Close your eyes and think about what that might look like. Draw the little carton of juice. Now draw the juice after she poured it into the big glass. Does he have more or less juice, or does it just look different? Compare your drawings with your partner. Are both of your glasses full? Did the glass hold all of the juice?

K.3.30

Imagine a balance scale. Can you see it? Now, imagine putting one big ball of clay on one side, and four small balls of clay on the other. If the big ball is as heavy as the four small balls put together, then what would the balance scale look like? Draw it.



K.3.31

Materials: (S) Bag of pony beads, 1 foot of elastic string or yarn with a bead tied on one end to prevent the beads from falling off. Using your elastic or your yarn, make a string of beads that is as long as your hand. Turn to your partner to talk about how you decided how long to make your string. Compare your strings. Are they the same length? Tie the ends of your string together to make a bracelet!

K.3.32

No application problem