K.4.1

Julia went to the beach and found 3 seashells. Her sister Megan found 2 seashells. Draw the seashells the girls found. How many did they find in all? Talk to your partner about how you know!

K.4.2

Application Problem (5 minutes)

Materials: (S) Set of 5 pennies per student

Margaret and Caleb discovered that if they put their money together, they would have the 5 pennies they needed to buy some gum. Yum!

Put 5 pennies in the middle of your desk. Now slide some to one side of your desk to show how much money Margaret might have had. Put the other coins on the other side of the desk to show how much money Caleb might have had.

Check with your friend to see how he showed Margaret and Caleb's coins. What do you notice?

Slide the coins together again to make sure you have enough for the gum. Now act out the story again. Could you divide the pennies in a different way?

K.4.3

Application Problem (5 minutes)

Materials: (S) Set of 5 linking cubes per student, number bond template in personal white boards

Chris had 3 baseball cards. Use your cubes to show his cards. Katharine had 2 baseball cards. Show her cards with your cubes. Now, with your cubes, show how many cards they have together.

Make a picture on your personal board to show the story. Can you make a number bond picture about your story? Talk about your work with your partner.

K.4.4

Materials: (S) Small piece of clay, paper, and pencil

Anthony had 5 bananas. Make the 5 bananas with your clay.

He wanted to share the bananas with one of his friends. Draw two plates on your paper. Put the bananas on the plates to show one way he could share the bananas with his friend. Draw a number bond to show how he shared his 5 bananas.

Turn and talk with your partner. Did she do it the same way? How many different ways can you find to share the bananas? What if there were only 4 bananas?

K.4.5

Application Problem (5 minutes)

Windsor the puppy had 5 juicy bones. He buried some of them in the yard and put some of them by his dish. Draw his bones. Compare your picture to your friend's. Did you make your pictures the same way? Talk to your friend about how your pictures are alike and how they are different. Make a number

bond about your problem!

K.4.6

Application Problem (5 minutes)

Materials: (S) 5-stick of linking cubes per student, pencil, paper.

Play a game called Snap with your friend! Show him your 5-stick. Now, put your linking cube stick behind your back. When he says, "Snap!" quickly break your linking stick into two parts. Show him one of the parts. Can he guess the other one? If not, show him. Draw a number bond to show what you did with your cubes. Then, it is his turn! If you have time, play it with a 4-stick, a 3-stick, and a 2-stick!

K.4.7

Application Problem (3 minutes)

Materials: (T) Bell or other gentle noisemaker or instrument

Close your eyes and count each time that I clap. (Clap 5 times; pause, and then clap 1 more time.) Open your eyes. How many claps did you hear? (Allow time for students to answer.) Let's do it 1 more time. (Repeat.) How many claps did you hear? What is 1 more than 5?

Repeat this exercise several times, using claps and instrument sound parts of 4 and 2, 3 and 3, 2 and 4, and 1 and 5.

Now, try the game with your partner! Take turns clapping different **number partners** for 6.

K.4.8

Materials: (S) Small ball of clay

Ming had 5 raisins. Represent her raisins with the clay.   Dan had 2 raisins.
Represent his raisins, too. How many raisins are there in all?

- Put Ming's raisins into a 5-group. Now, put Dan's raisins in a row
  underneath Ming's raisins like this. Do you still have 7 raisins?
- Hide the bottom two raisins. How many raisins do you see now?
- Talk about the raisins with your friend.
- (If time allows, include the following.) Draw a number bond to represent Ming and Dan's raisins.


K.4.9

Materials: (S) Two linking cube 5-sticks, 1 each of 2 colors

Take one of your 5-sticks. Add 1 more cube. How many cubes are in your
stick now? (6.) Add 1 more cube. How many are in your stick now? (7.)
Add another cube. Now how many cubes are in your stick? (8.) Take
your 8-stick apart. Work with your partner to make two rows of cubes
out of your stick. Make sure you have the same number of cubes in each
row. How many cubes are in each row? (4.) Yes, you took your 8 and
made 2 rows of 4!

Now take your cubes and make a tiny row of 2. Make another tiny row of 2
underneath. Keep going until all of your cubes are used up. How many cubes are in
each row? (2) How many tiny rows do you have? (4). You made your 8 into 4 rows
of 2! You made your 8 into 2 columns. Talk to your partner about the ways you
made your 8 look.
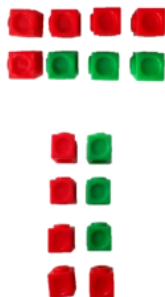
K.4.10

Materials: (S) 6-stick of linking cubes per pair of students,
                personal white boards

Time for a game of Snap! Hold your 6-stick behind your back.
When your partner says, "Snap!" break your 6-stick into two
parts. Show your friend one of the parts and see if she can guess
the other part. If she can't guess, show her the missing piece. On
your white board, draw the number bond about your game. Then

it will be your turn. Try it again with a 7-stick and then a 8-stick!

K.4.11

Application Problem (5 minutes)

Materials: (S) Personal white boards

Nesim had 5 toy cars. Draw Nesim's cars.

Awate had 3 toy cars. Draw a picture to show his cars, too. How many cars did they have together? Can you show the number bond to go with the story? Talk with your partner about your work.

K.4.12

Application Problem (5 minutes)

Materials: (S) Personal white boards

5 bees were buzzing around a tasty flower. Draw the flower and the bees. 2 more bees came to join them. Draw the new hungry bees.

We had 5 bees. Now we have 2 more bees! Use your picture to show how many bees are enjoying the flower together. Talk to your partner about the picture. Can you write a number bond to go with the story?

K.4.13

Application Problem (5 minutes)

Materials: (S) Personal white board, 6 linking cubes per student

Four silly seals were splashing in the water. Show the silly seals with your linking cubes. Two more silly seals came to splash. Show the new seals. How many silly seals are splashing in the water now?

Use your cubes and talk to your partner about the seals. Can you write about the silly seals in a number bond?

K.4.14

Application Problem (5 minutes)

Materials: (S) Personal white boards

Larry the train is pulling 7 cars. Three cars are full and 4 cars are empty.

Draw the train and make a number bond about your picture. Discuss your work with your partner. Extension: Can you make a number sentence to go with your picture?

K.4.15

Application Problem (5 minutes)

Materials: (S) Personal white boards

You are having a party! You get 8 presents. Two presents have stripes, and 6 presents have polka dots. Draw the presents, and write the number sentences two different ways on your personal board.

K.4.16

Application Problem (5 minutes)

Materials: (S) 10 linking cubes per student

Note: A set of 10 linking cubes for each student deliberately gives the students more cubes than necessary to model the story so that they can select those needed from the larger set.

Three airplanes were flying in the air. Use your cubes to show the planes. Three more airplanes came to join

the flying fun. Show the airplanes with your cubes.

Now, with your cubes, show how many airplanes were flying in the air. Talk to your partner about what the number sentence would look like.

K.4.17

Application Problem (5 minutes)

Materials: (S) Personal white boards

Marissa is creating designs with shapes. She has 5 triangles and 2 circles. Draw the shapes, and write a number sentence. Talk to your partner about your picture and number sentence.

K.4.18

Sam brought 8 pieces of fruit at the farmer's market. He loves apples and oranges, so he bought some of each. Draw a plate and show his fruit on the plate. Don't lose any!

Show your work to your friend. Does her plate look the same? Can you make a number bond and number sentence about your picture?

K.4.19

Materials: (S) Small ball of clay

The mice are hungry today! Make 5 little pieces of cheese out of your clay and put them on your desk. Pretend that a pair of little mice came to your desk (a pair means 2 mice!), and that each of them stole a piece of cheese. Take away their pieces to show that they ate them. How many pieces are left?

Now, start with 4 morsels of cheese and act out the story again. How many are left?

Talk about the mice and the cheese with your partner. Did she have the same number of pieces left each time? What do you think would happen if you had only 3 pieces of cheese before they came?

K.4.20

Materials: (S) Paper and pencil or personal white boards

Draw the 5 monkeys from yesterday's song on your paper. Decide how many monkeys were sensible and stayed on the bed, and cross off the monkeys who fell off and bumped their

heads.

With your math words, think about how you would tell the story. How many did you start with? How many did you take away? How many were left?

Share your picture with your partner and use your math words to tell your story. Did your partner do it the same way? How are your number stories different?

K.4.21

Materials: (S) Personal white boards or pencil and paper

Five little green frogs were sitting on the side of the pond. Draw the frogs.

It was so hot that two of the froggies decided to go for a swim! Cross out the frogs in your picture to show the ones who hopped into the pond. How many frogs were still by the side of the pond?

K.4.22

Application Problem (5 minutes)

Materials: (S) Linking cube 6-stick per pair, personal white boards

> T: Let's play a game of Snap! Count the cubes in your stick. How many are you starting with?

T: Put the stick behind your back. When your partner says, "Snap!" break your stick. Show him how many cubes you have left.

T: Can he figure out how many are still behind your back? If not, show him.

T: Make a number bond about your snap on your personal board.

T: Can you and your partner think of a take away number sentence to tell about the snap?

K.4.23

Application Problem (3 minutes)

Materials: (S) Personal white boards

Noah had 7 red balloons. Two balloons popped as he and his kitties played with them.

Draw Noah's balloons. How would you show that 2 of them popped in the picture? Can you make a number sentence about your story? Try to draw a number bond to go with it!

K.4.24

Application Problem (4 minutes)

Robin had 8 cats in her house. Three of the cats went outside to play in the sunshine. Draw her cats. Use your picture to help you draw a number bond about the cats. How many cats were still in the house? Can you make a number sentence to tell how many cats were still inside?

Share your work with your partner. Did he do it the same way?

K.4.25

Application Problem (4 minutes)

There were 9 flowers in Casey's beautiful garden. She had 2 vases. Draw one way she could have put all of the flowers into the vases. Show your picture to your partner. Did he draw the flowers in the vases the same way? Are both ways right? Are there other ways you could have shown the flowers?

K.4.26

Application Problem (5 minutes)

Materials: (S) Paper, green and blue crayons

It is laundry day. We have 9 extra socks! Some are green and the rest are blue. Draw the set of green socks and the set of blue socks. Make a number bond to help tell about your picture.

Turn and talk to your partner about your drawings and number bonds. Do they look alike? Are your sets of socks different?

Turn your paper and show the story a different way.

K.4.27

Application Problem (5 minutes)

Materials: (S) Paper, crayons

You are having a birthday party! You need to have 10 party hats for your friends. Draw 10 simple hats. Color some hats red and some blue. Make a number bond about your picture.

Turn and talk with your partner. Do your pictures look the same? Explain to your partner how you decided which way to color your hats. Talk about how your number bonds are the same or different.

K.4.28

Application Problem (5 minutes)

Materials: (S) Small ball of clay, personal white board

Use your clay to make 10 tiny grapes. With your marker, draw a pretty plate on your board. Now, put some of the grapes on the plate.

How many grapes do you have in all? How many grapes are on the plate? How many are not on the plate?

Draw a number bond about your work and talk about it with your partner. Did she do it in the same way?

Take the grapes off and try it again!

K.4.29

Application Problem (4 minutes)

Materials: (S) 9 pennies, pencil, paper

Emma had 9 pennies. Show her pennies in the middle of the desk.

She wanted to use 4 of her pennies to buy some gum and 5 pennies to buy a balloon. Count and slide apart the pennies she needs to buy the gum and for the balloon. On your paper, show the number bond that tells about her pennies now.

Now slide your groups of pennies together again. How many pennies in all? Would you need to create a new number bond about what you just did? Turn and talk to your partner about your work.

K.4.30

Application Problem (5 minutes)

Materials: (S) Tree template, 10 linking cubes, paper and pencil or personal white board

Pretend your linking cubes are pears from the pear tree! How many pears do you have in all? Using your linking cubes, put 5 pears in the tree and 5 pears on the ground. Make a number bond about the pears in your picture. Use your math words to tell your partner about the pears. Can you think of a number sentence?

Now, show another pear falling out of the tree. How many cubes are in the tree now? Would your number bond change? Is there a different number sentence you would use to tell about what you just did? Talk about your ideas with your partner. (If students focus on the pears in the tree, e.g., 5 – 1 = 4, confirm that work and ask them to show a number bond or number sentence that includes all of the pears on the page.)

K.4.31

Application Problem (5 minutes)

Materials: (S) Paper, crayons, pencil

Five children were playing soccer in the park. Draw the children. Four more children came to play. Draw the new players. How many children were playing soccer? How did you know? Turn and talk to your partner about your answer. Do you agree?

K.4.32

Application Problem (5 minutes)

Materials: (S) Paper, crayons

Chen had 9 pencils. Some of his pencils were red and some were blue. Draw Chen's pencils.

Make a number bond about your pencils. Now, turn and talk to your partner about your pictures and your number bond. Do your pictures look the same? Are your number bonds the same? Are they both correct?

K.4.33

Application Problem (5 minutes)

Materials: (S) 9 linking cubes and 1 construction paper "picnic blanket" per pair, paper and marker

You are going to play a game with your partner. Partner A, pretend your linking cubes are ants and your paper is a picnic blanket. Count your ants and put them all on the picnic blanket.

Now, pretend some of the ants crawled off the blanket. Slide some of your ants off the blanket to show the ones that crawled away.

Partner B, your job is to make a number bond showing the nine ants that were on the blanket, the ones that stayed, and the ones that crawled away. Partner A, check the number bond to see if you agree. Now, it is Partner B's turn to show some ants leaving the blanket!

K.4.34

Application Problem (5 minutes)

Materials: Personal white boards

Tony had 8 checkers. His friend took 3 away. How many checkers did Tony have left?

Draw a picture of the story. (Draw.) Make a number bond and a number sentence about the story.

Show your work to your friend. Did you both do it the same way?

K.4.35

Application Problem (5 minutes)

Materials: 9 pennies, personal white board

Steve had 9 pennies. He wanted to put some pennies into each of his two pockets. Use your pennies to show one way he could have divided them. Make a number bond about your idea. Show your number bond to your partner. Did she do it the same way? How many different ways can you divide the pennies?

K.4.36

Application Problem (5 minutes)

Materials: (S) 10 linking cubes, personal white board

Martin had 10 building blocks. Pretend your linking cubes are his blocks. Count to make sure there are 10!

He shared 4 blocks with his sister. Move 4 blocks to show the ones he shared. How many blocks did he still have? Make a number bond about the story. Now, make a number sentence. Show your work to your partner. Did she do it the same way?

Put your blocks back together. Act out the story again, sharing a different number of blocks this time. How does your number sentence change?

K.4.37

Application Problem (5 minutes)

Materials: (S) Small ball of clay per student

Chico the puppy had 8 tennis balls. His owner threw two of them, but Chico brought them right back!

Make 8 balls with your clay. Show the story with the clay balls you created. (But don't throw them! Remember, he brought them right back!) Did Chico lose any of his tennis balls? Did he find any more balls? How many balls does Chico have at the end of the story?

Turn to your partner and talk about how you might be able to create number sentences about Chico's adventures. Then, act out the story with different numbers of balls.

K.4.38

Application Problem (5 minutes)

Materials: 10 linking cubes per student, small square of blue
paper to represent a watering hole (optional)

Pretend your cubes are dinosaurs. One dinosaur was thirsty
and went to the watering hole. Move one of your cubes to the
watering hole to show the thirsty dinosaur going to get his
drink.

One more dinosaur got thirsty, too. Add another cube to the one by the watering hole. How many thirsty
dinosaurs are there now? Turn to your partner and talk about an addition sentence that would tell what you
just did.

Another dinosaur got thirsty! Take her to the watering hole too! Now how many dinosaurs are at the
watering hole? Talk to your partner about the new addition sentence.

Keep acting out the story until all the dinosaurs are drinking water. Do you notice any patterns?

K.4.39

Application Problem (5 minutes)

Tim had 10 friends. Draw his friends.

Tim had 7 oranges. He wanted to give an orange to each of his
friends. Does he have enough? Draw his 7 oranges. Now, draw
more oranges so there are enough for all of his friends. Circle
the new oranges. How many more oranges did he need?

Check your work by drawing a line to match each friend with an
orange. Now, show your work to your friend. Did she do it the
same way? Talk about what would have happened if Tim had
started with 8 oranges.

K.4.40

Application Problem (5 minutes)

Materials: (S) Personal white boards

Ming has 3 baseball caps, but there are 10 girls on her team.
Use your personal board and a 5-group drawing to find out how
many more caps her team will need. Make a number bond
about your picture.

Share your work with your partner. Do your pictures and
number bonds look the same?