

1-digit Number Recognition and Decomposition

Linking Cubes Activities

- Standard:** Kindergarten Number Sense 1.2 Count, recognize, represent, name, and order a number of objects up to 30.
- Objective:** Students build numbers 1-3 using linking cubes.
Students decompose and recompose the numbers 1-3 using linking cubes.
Students record their understanding of numbers.
- Materials:** 2 different colored sets of 10 linking cubes (towers) per student (20 linking cubes per student or group students so they share a set of 20).
Number Cards
- Introduction:** Today we are going to use linking cubes to represent numbers.
(Go over classroom norms for using manipulatives. Pass out linking cubes.)

I will take 1 linking cube from my tower, put it in front of me then push it away as I count, one. This linking cube represents 1.

Now take one of your linking cubes from your tower. Put it in front of you. Take your finger and push it away from you as you count, one. Your linking cube represents the number 1. Place it on the side of your desk.

I will take 2 linking cubes from my tower, one and two. I will put them in front of me then push them away one at a time as I count, one - two. These linking cubes represent 2.

Now take two of your linking cubes from your tower, one - two. Put them in front of you. Take your finger and push them away from you one at a time as you count, one - two. Your linking cubes represent the number 2. Link the cubes together. Place this small tower of two on the side of your desk next to the one linking cube.

We can make 2 in a different way. Take one linking cube from one color tower and one linking cube from another color tower. Place them in front of you then push them away one at a time as you count, one-two. Your linking cubes represent the number 2. Link the cubes together. Place this small tower of two on the side of your desk next to the other group of two linking cubes. They are the same size because they both represent the number 2.

Continue this process with the number 3 making all variations of the number. Other numbers can be explored using more linking cubes.

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Now you will do this activity with your partner. Partner 1 will pick a number card and partner 2 will build a number using linking cubes. (Start with numbers 1-3, then increase as students are ready.)

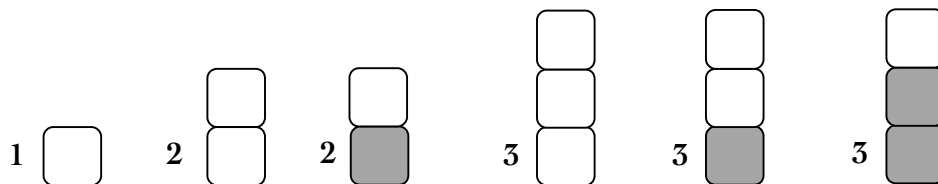
Formative Assessment – As you walk the room note students who are succeeding and those who are struggling. Make note of which linking cube configurations are easiest for students and those that are more difficult. Ask thinking questions like, “You made 3 with 3 red linking cubes, what’s another way you can make three with 2 different colored linking cubes?”

Closing:

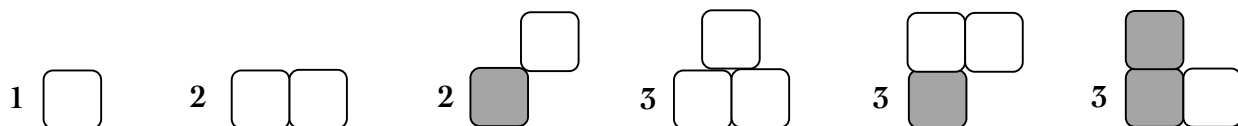
What did you and your partner notice when you were doing this activity together?

What helped you to know how many linking cubes to use and how many of each color to use?

After you have built all the numbers for that lesson, students can draw their numbers using squares to represent the linking cubes. They should also write the numeral next to their drawing.



Students should have many opportunities to do this activity with different kinds of manipulatives, e.g., wooden blocks, teddy bear counters, two sided-counters, pattern blocks. Students may choose to organize the manipulatives in different ways.



Students may work independently as they build, draw, and write the single digit numbers.