

Lesson 2: Counting the Staircase, Making Yellows



Materials: Cuisenaire rods, paper and pencil

Part 1.

Challenge students to make the staircase of every color from last time. Once they have built it, **ask how many white cubes it would take to cover/build a duplicate copy of the red rod.** What about the light green rod? The purple rod? No matter their answers, **ask them to defend their answers.** Give them time to work on their own to figure out how many white cubes it would take to build a duplicate of any rod.

Part 2.

Discuss with students what numbers they got for different rods, and what their strategies were to determine the number of cubes. Did they need to build every rod using all white cubes? Or did they use what they had found about smaller rods to build the larger ones? (I.e., the dark green is a yellow plus a white, and the yellow is 5 white, so the dark green is $5 + 1 = 6$ whites.) Demonstrate how a way of **building Cuisenaire rods corresponds to an equation**, and let students try saying and writing an equation that they found.

Part 3

(NOTE: Writing equations is only for students who are conceptually ready. For students who haven't grasped one to one correspondence, just give them the building challenge without worrying about recording.) **Challenge students to build yellow rod in as many different ways they can.** They can record how they did it by coloring in the outlines on the worksheet and writing down equations. Students can also try to build and find equations for the larger rods.

NOTE: These equations may have more than two addends.

Part 4

Students can play Grab Bags or have free play time when they're done with building yellow rods.

Use with "Making Colored Rods" recording sheet