

Overview:

In this lesson, students will explore the different features and attributes of the Green ROK Block. Students will get hands-on experience as they analyze the block, practice connecting and disconnecting, and working as a team to solve a fun challenge.

[Click here](#) to explore the entire Kid Spark Curriculum Library.

Unit Concepts & NGSS Alignment:

- Become familiar with how to use ROK Blocks to build models
- Compare/contrast number, shape, size, and color of basic blocks
- Identify and name 2 and 3 dimensional shapes that comprise the ROK Blocks
- Observe blocks closely, identifying details and functionality

Scientific/Engineering Practice - Asking questions and defining problems

Crosscutting Concept - Scale, proportion, and quantity

Lesson Introduction:

Instructor: "So far we have used 3 ROK Blocks. Today we are going to learn about a new block called: the Green ROK Block. The Green ROK Block is bigger than the Blue ROK Block and smaller than the Yellow ROK Block."

Core Learning Activity:

1. Give each student (1) Yellow ROK Block, (1) Green ROK Block, and (2) Blue ROK Blocks.
2. Ask students to hold up the SMALLEST ROK Block! (**Red ROK Block**) For each, hold up the correct block after the majority of children have responded.
3. Ask students how many pyramids the Red ROK Block has? (**2**) Have students show with their fingers how many pyramids are on the Red ROK Block.
4. Ask students to find and raise the BIGGEST ROK Block! (**Yellow ROK Block**) Ask them how many pyramids are on this block. (**8**)
5. Ask students to find and raise the MEDIUM-SIZED ROK Block! (**Green ROK Block**) Ask them how many pyramids are on this block. (**6**)
6. Demonstrate how to assemble a set of steps (pictured to the right) using the Yellow, Green, and Blue ROK Blocks.
7. Use the following prompt questions for student discussion:
 - a. How many more pyramids does the Yellow ROK Block have than the Green ROK Block? (**2**)
 - b. How many more pyramids does the Green ROK Block have than the Blue ROK Block? (**2**)
 - c. How many more pyramids does the Yellow ROK Block have than the Blue ROK Block? (**4**)

Note: You can have students connect the Yellow ROK Blocks and Blue ROK Blocks together to check their answers.

Activity Time:

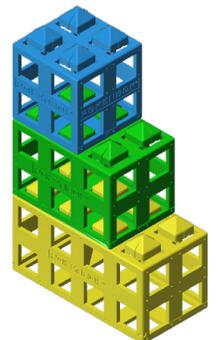
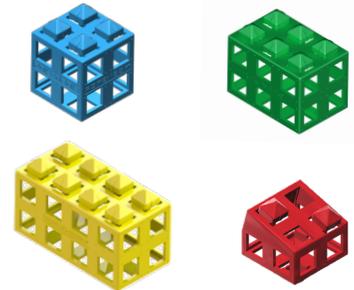
30 Minutes

Kid Spark Mobile STEM Lab:

ROK Blocks

Materials Per Student:

- 4 Blue ROK Blocks
- 4 Green ROK Blocks
- 4 Yellow ROK Blocks
- 4 Red ROK Blocks



Lesson Challenge: Free Build

Instructions: As an introduction to the concept of “free building”, tell students that they are free to build or create whatever they want using the ROK Blocks provided. After students are finished, have them present their designs to the class. Encourage students to identify different shapes in their designs (rectangle, rectangular-prism, square, cube, arch).