

# RAFT IDEAS

**Topics:** 3-dimensional Shapes, Spatial Skills, Mathematical Reasoning

## Materials List

- ✓ Colored Cubes

This activity can be used to teach:

- Color, sorting, and basic patterning for Pre-K

Common Core Math Standards:

- Classify objects (Grade K, Measurement and Data, 3)
- Relative positions of objects (Grade K, Geometry, 1)
- Compare Measurable Attributes (Grade K, Measurement and Data, 2)
- Observing Patterns (Grade 1, Measurement and Data, 4.1)
- Problem Solving and Reasoning (Mathematical Practices Grades K-3)



# Follow the Leader<sup>3</sup>

Can You Make what I Make?

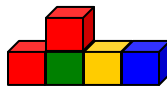
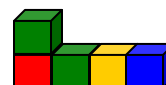
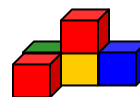


Colored cubes can be used for a variety of building and patterning activities. In this activity, one person makes a simple, 3-dimensional shape using colored cubes, then gives others the opportunity to recreate the shape.

## To Do and Notice

1. Using 3-5 cubes of various colors, build a shape. Keep it very simple at first.
2. Challenge students to recreate the shape.

## Sample shapes:



## The Content Behind the Activity

The brain develops pathways via repetition, just as doing a few push-ups every day develops biceps. This activity helps develop the inferior parietal lobes, regions of the brain responsible for visual spatial thinking, for three-dimensional representation of ideas, and for mathematical reasoning. By using specific areas of the brain on a regular basis, students can develop the greater potential for skills that use that part of the brain.

(Factoid: Albert Einstein's inferior parietal lobes were found to be 15% larger than those of persons of average intelligence.)

## Taking it Further

To make this activity more challenging:

- Build more complex shapes (i.e. – Use more cubes, a greater variety of colors, and/or more levels)
- Provide only a picture of the shape that students should build. This may require more than one view of the shape. Note: Going from a 2-D picture to a 3-D shape is a developmental leap. If young students just seem to “not get it,” it probably means that they are simply not ready. In this case, stick to the actual cubes for the model. (For a more detailed description of this extension, see the RAFT Idea Sheet *Building Blocks*)

**Web Resources** (Visit [www.raft.net/raft-idea?isid=65](http://www.raft.net/raft-idea?isid=65) for more resources!)