youcubed at Stanford University

Activity	Time	Description/Prompt	Materials
Video: Our Brains Think About Math Visually	5 minutes	Video: https://vimeo.com/178104908	• Projector • Video
Video Discussion	2 minutes	Questions for the Discussion is from BCPS 1. How does using your fingers help you learn math? 2. Why does your brain want to think about math visually?	
Journal Prompt	5 minutes	Journal Prompt is from BCPS • Why is it important to see math visually? What ways can you represent math in order to help your brain understand math?	• Journal • Pencil
Painted Cube	20 minutes	Part One 1. Explore the number of cubes with three, two, one, and no sides painted in a 3x3x3 cube	• 1 copy of 3x3x3 cube for display, page 4 • Sugar cubes • Markers • Grid paper • Pencil
	5 minutes	Part Two 1. Think about the number of painted cubes in bigger cubes e.g. 4x4x4 and a cube of any size. 2. How many cubes would be painted on three, two, one, and no sides?	
	10 minutes	Part Three 1. Give the class time to bring together their results on different sized cubes in their table groups. 2. Create a class chart of findings. 3. Work towards agreement on each entry. 4. Share patterns you notice.	• White board • Markers
Closing	3-5 minutes	Review key concepts: • Remind the class of the importance of visualizing and drawing in mathematics • Remember the power of the fingers for representing numbers in the brain	