
FORMATIVE ASSESSMENT PROBES: A WEBSITE TOOL FOR FORMATIVE ASSESSMENT

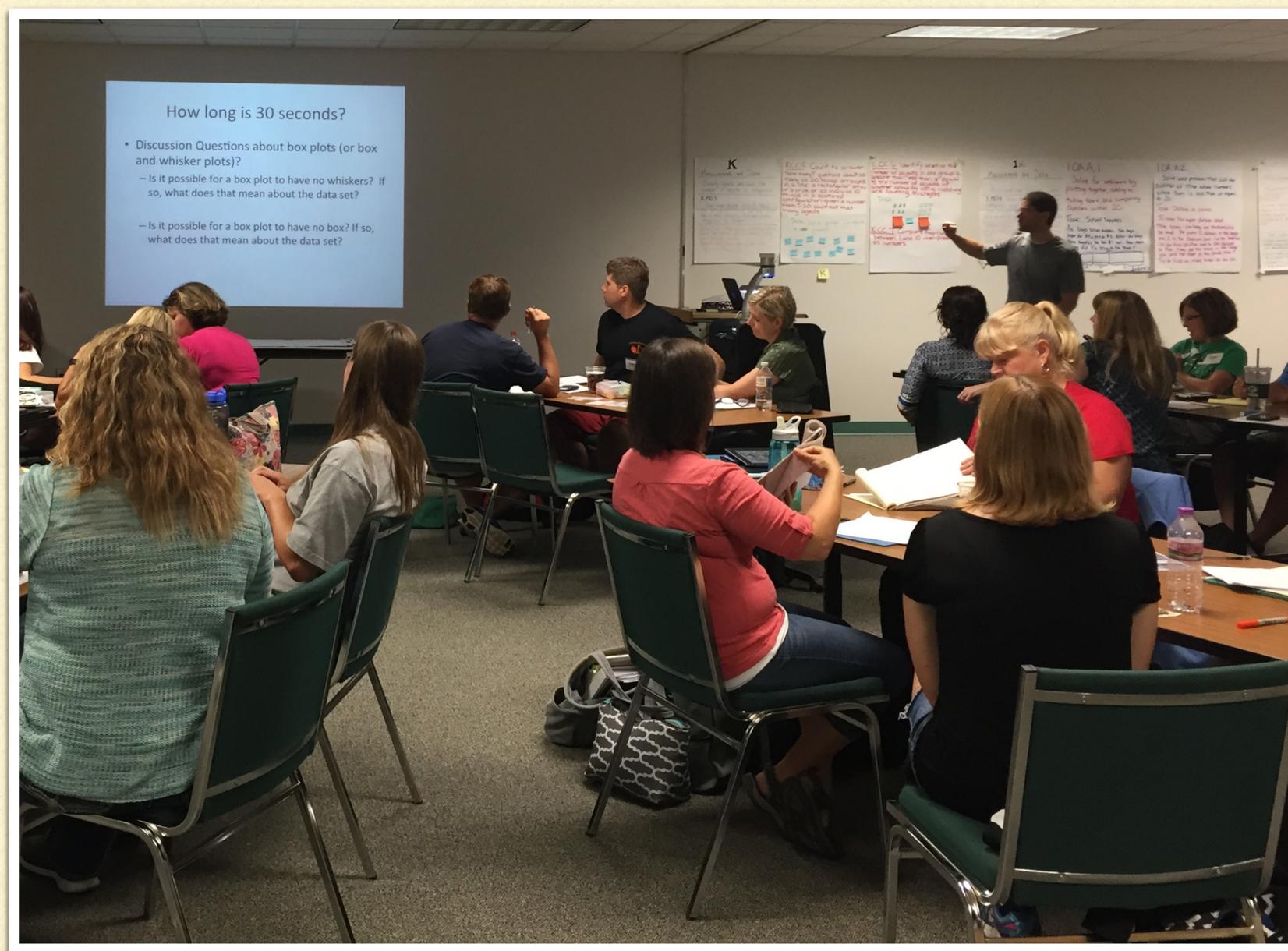
A³: Assess, Analyze, and Address
Green Lake, May 2018

A³: ASSESS, ANALYZE, AND ADDRESS

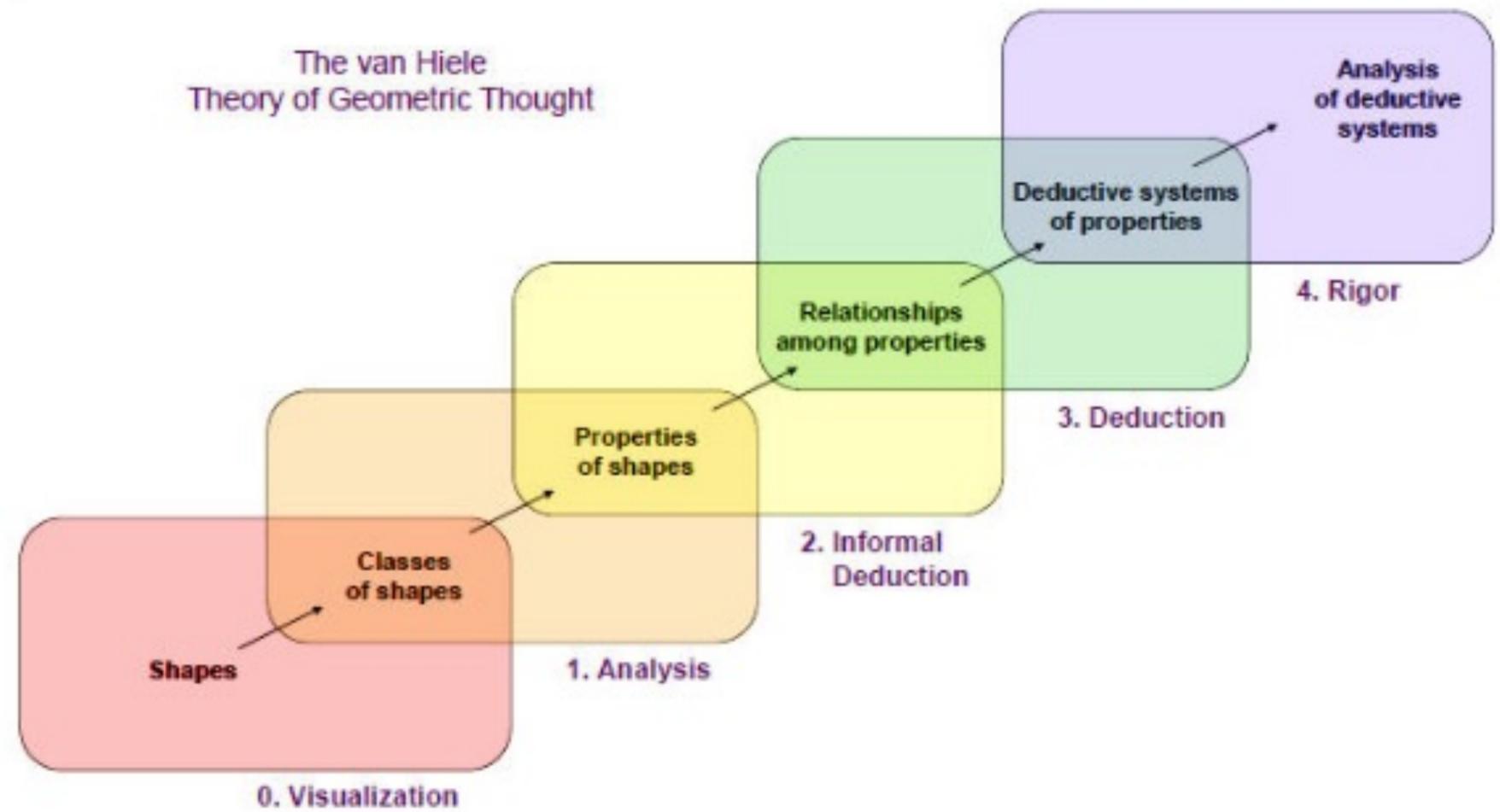
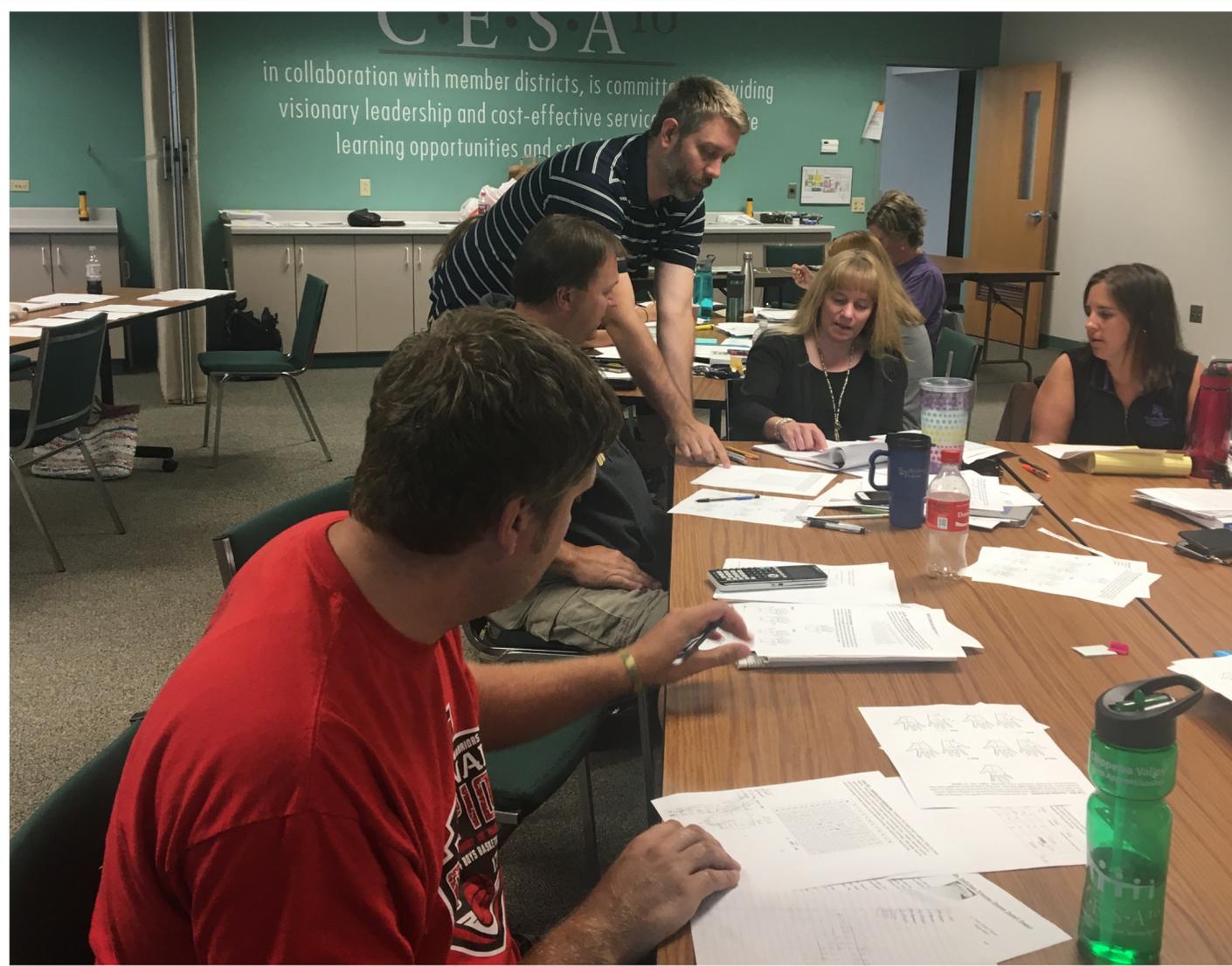
- Chris Hlas, UW-Eau Claire
- Michelle Parks, CESA 10
- Lorna Vazquez, Independent Consultant - CPM Teacher Leader / Coach

Funded by ESEA Title II, Part B – Mathematics and Science Partnerships through Wisconsin DPI

YEAR 1



YEAR 2

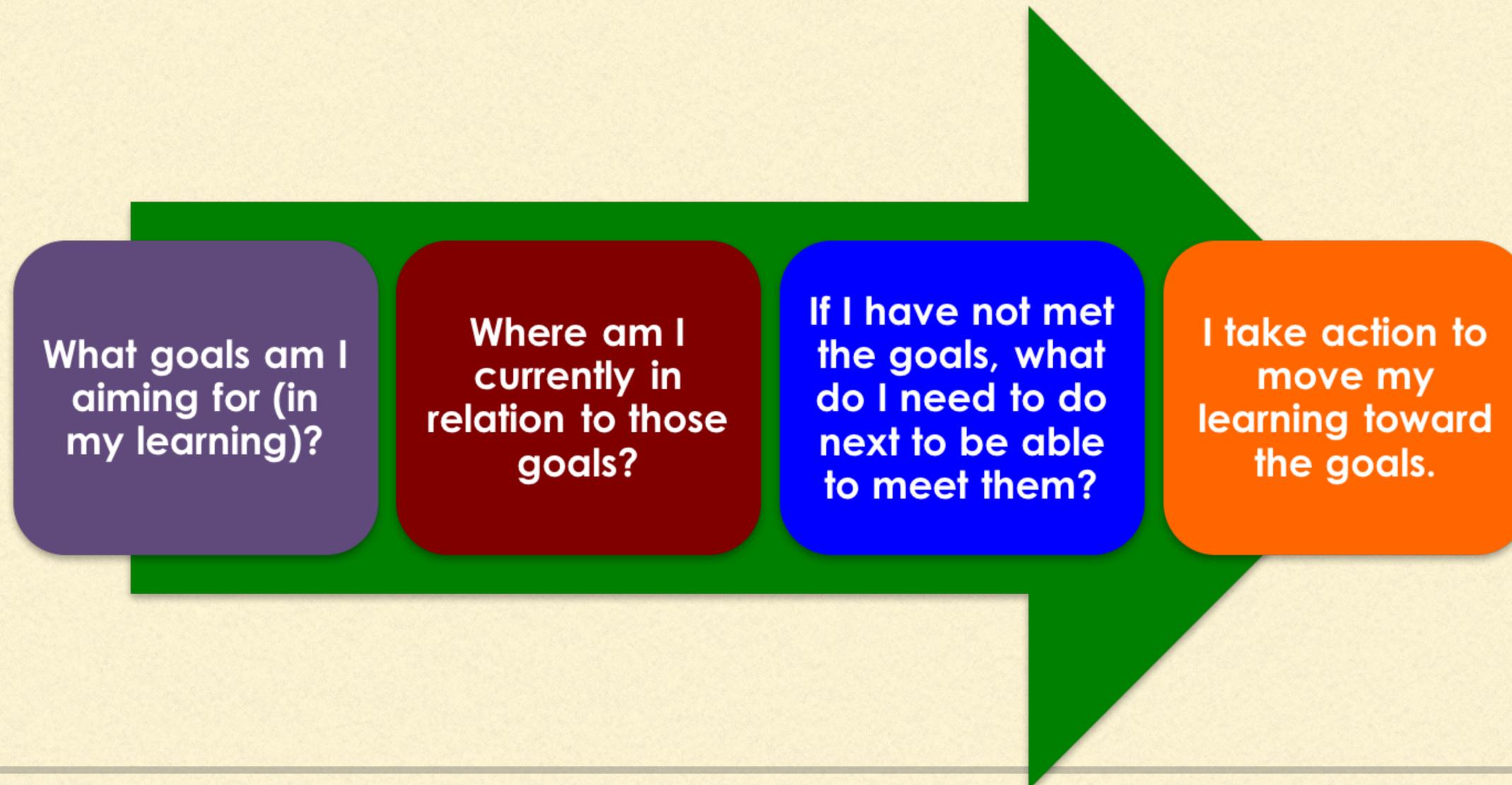


YEAR 3



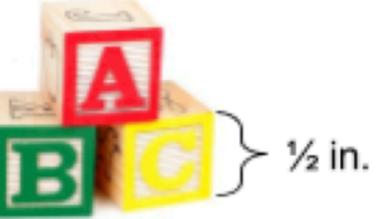
THINKING LIKE A SELF-REGULATED LEARNER

The primary goal of the formative assessment process is to help students become **self-regulating learners** who can answer the following questions and take action.

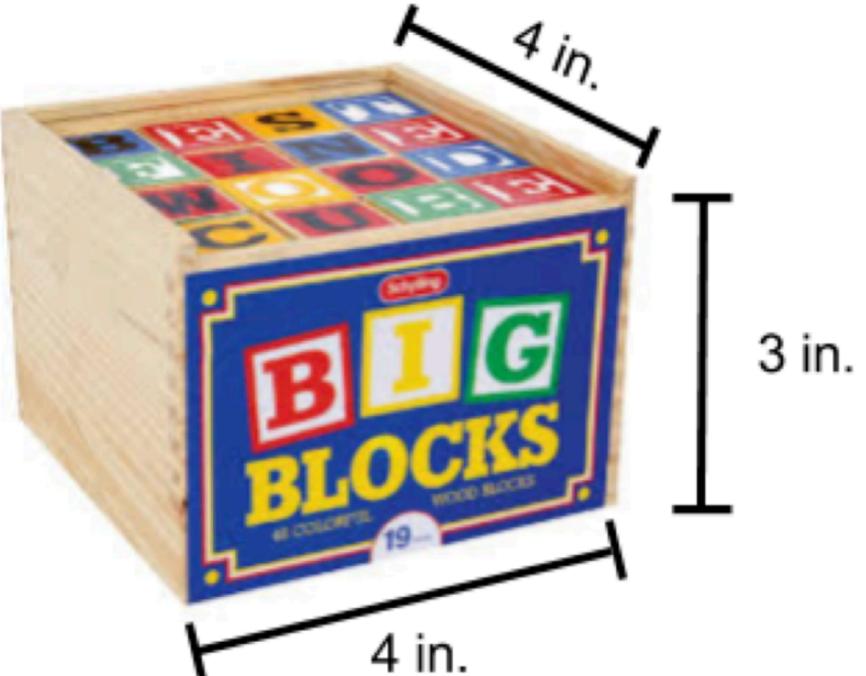


WHAT IS A FORMATIVE ASSESSMENT PROBE?

The A to Z Alphabet Block Company sells two different types of alphabet blocks: “Big Blocks” and “Mini Blocks” (see below).

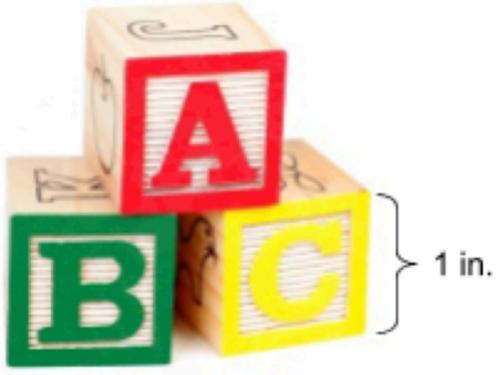
Big Blocks: Cubes that are 1 inch on each side.	Mini blocks: Cubes that are $\frac{1}{2}$ of an inch on each side
	

48 Big Blocks fit into the wooden box shown below. How many Mini Blocks would fit into the same box? (Circle one.)

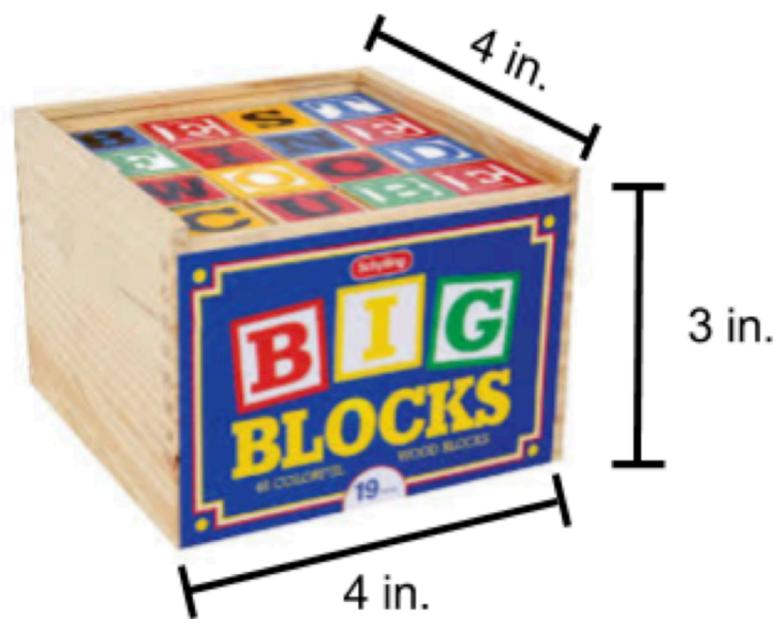
	<p>A. 24 Mini Blocks</p> <p>B. 96 Mini Blocks</p> <p>C. 192 Mini Blocks</p> <p>D. 384 Mini Blocks</p>
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Explain your thinking:

The A to Z Alphabet Block Company sells two different types of alphabet blocks: “Big Blocks” and “Mini Blocks” (see below).

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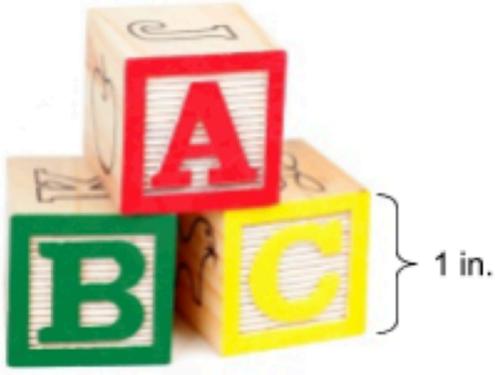
This written probe analyzes student thinking about volume of rectangular prisms for 6th-8th students.

Math idea: What happens to volume when dimensions change by a scale factor?

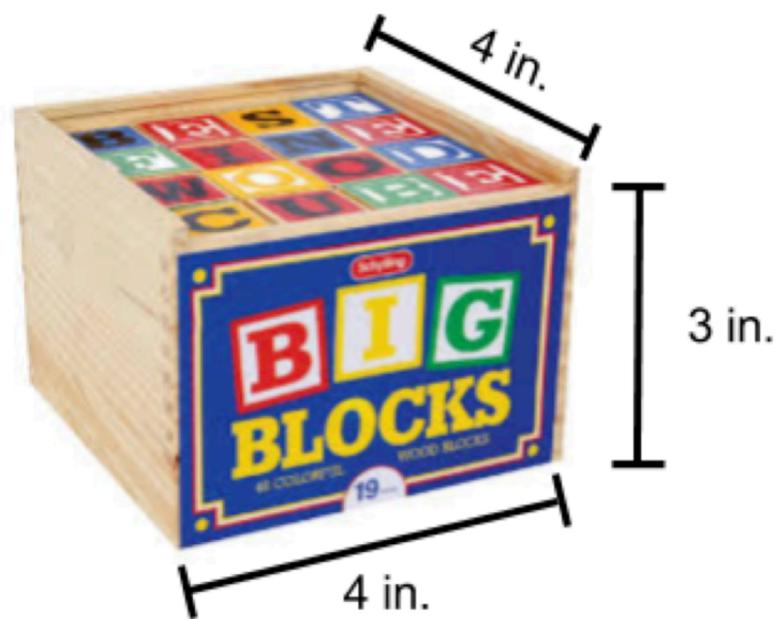
Success criteria:

1. I can explain what happens to the volume when a scale factor is applied.
2. I can determine volume of a right rectangular prism using different units.

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Explain your thinking:

ANSWERS	POSSIBLE STUDENT THINKING
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D. 384 (correct)	Student correctly understands that eight half-inch cubes have a volume equal to one, 1-inch cube.
D. 384 (correct)	Student doubles each of the box dimensions and multiplies $8 \times 8 \times 6$.
A. 24 (incorrect)	Student incorrectly thinks that when the edge length is halved, the number of blocks should also be halved.
B. 96 (incorrect)	Student incorrectly thinks that half-inch cubes have half the volume of 1-inch cubes.
C. 192 (incorrect)	Student incorrectly thinks that four half-inch cubes have a volume equal to one, 1-inch cube (looks at two dimensions, not all three).



WHAT IS A LEARNING TARGET?

LEARNING TARGETS



- Clear Learning Targets are "Step one".
 - Components of a Learning Target (a la Cheryl Tobey)
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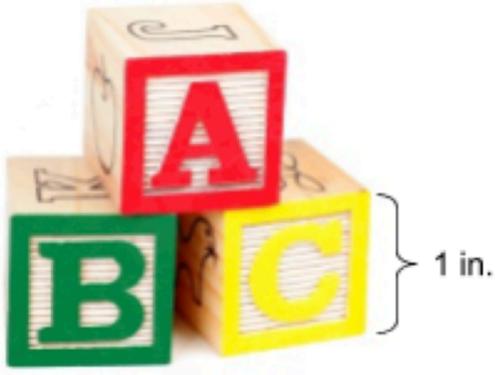
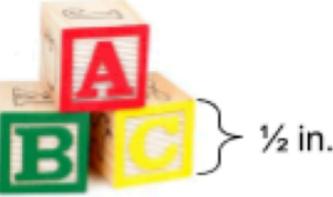
LEARNING TARGETS



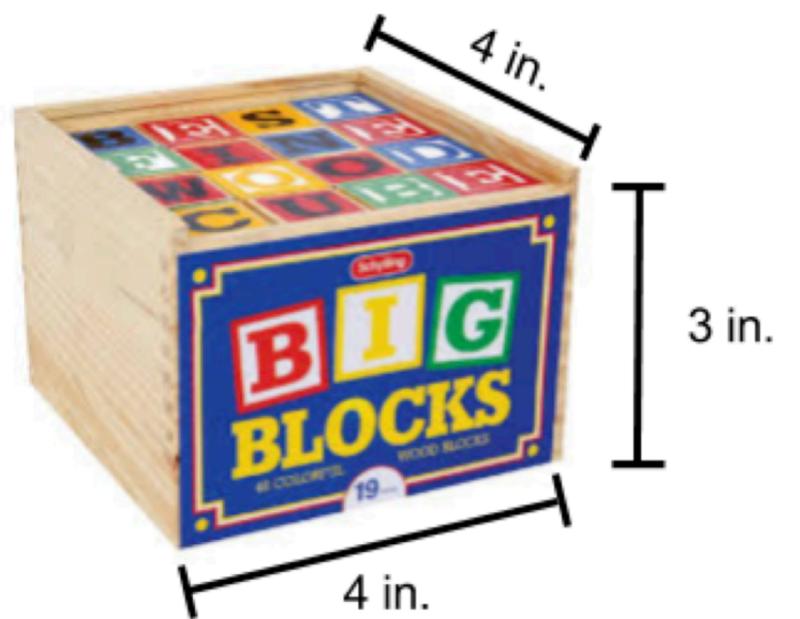
- A learning target has two important components:
 - (1) A mathematical idea describing the important conceptual math students will learn
 - (2) A set of success criteria (“look-fors”) that indicate successful learning - that include **both analytical and procedural criteria**

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This written probe analyzes student thinking about volume of rectangular prisms for 6th-8th students.

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Success criteria:

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2. I can determine volume of a right rectangular prism using different units.

LEARNING TARGETS



- Difficulties in Writing quality Learning Targets
 - Learning Targets that are more than just wall paper
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PROBE WEBSITE

- <http://bit.ly/A-cubed>

QUESTIONS -- HLASCS@UWVEC.EDU

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