

A Collaborative 3 ACT lesson

Title: Packing Sugar

link: <https://gfletchy.com/packing-sugar/>

Big Idea: Spatial Relationship - volume of rectangular prisms;
volume = area of the base X height

Curricular Competencies:

- *estimating reasonably*
- *developing mental math strategies and abilities to make sense of quantities*
- *visualizing to explore mathematical concepts*
- *developing and using multiple strategies to engage in problem solving*



ACT ONE:

Establishing a Need to Know: watch the 22 second video clip. After viewing the short clip, invite students to consider:

What did you notice?	What do you wonder?

and jot down the ideas as students share their thinking...

Driving Questions: *How are the sugar cubes packed in the box? How many are in the box?*

Estimating: invite students to think of a reasonable estimate for how many sugar cubes would be too few for a whole box of sugar and how many would be too few...

A too low estimate:	A too high estimate:

ACT TWO:

What information would be helpful to know for solving this investigation?

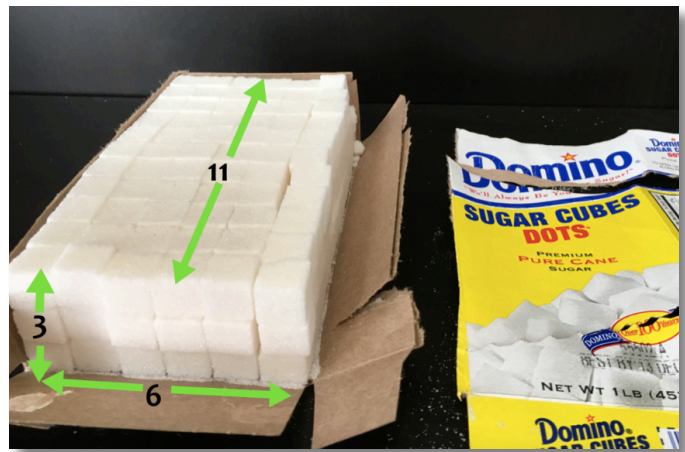
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Students will now work in visibly random teams of three to solve the investigation using one dry erase marker, one eraser and one large vertical non-permanent surface.

ACT THREE:

Share the photograph that reveals the solution. Invite students to communicate their strategies for arriving at the solution for how many sugar cubes there are in a box of sugar.



Whole Group reflection:

Strengths: What worked (What strategies did you use to work toward a solution)?

Stretches: What was difficult?

Next steps: What would you do differently next time?