

A 3 ACT lesson

Title: Sugar Packets

link: <http://threeacts.mrmeyer.com/sugarpackets/>

Big Idea: computational fluency and flexibility with numbers

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: share the 39 second 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 Question: *How many sugar packets are inside a 20 oz. bottle of soda?*

Estimating: invite students to think of and share a reasonable estimate for how many sugar packets would be too few, and a reasonable estimate for how many sugar packets would too many inside a 20 oz. bottle of soda.

A too low estimate:	A too high estimate:

ACT TWO:

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

A 3 ACT lesson

Coca-Cola
20 fl oz bottle

Nutrition Facts
Serving Size 1 bottle
Amount Per Serving
Calories 240
Total Fat 0g 0%
Sodium 35mg 2%
Total Carbohydrate 35g 72%
Sugars 35g

high fructose corn syrup
A sweetener derived from corn, high fructose corn syrup is a mixture of two simple sugars, glucose and fructose.

sparkling soft drinks
Our dozens of sparkling soft drink brands provide refreshment, enjoyment and hydration in a wide range of regular, no- and low-calorie options and portion sizes.

caffeine & you
You know it gives you a morning pick-me-up, but what is caffeine, where does it come from and is it safe?

did you know
Low-calorie beverages contain 40 calories or less per serving. See the next fact.

65g of sugar in one 20 oz bottle of soda

Domino SUGAR
We'll Always Be Your Sugar!

Nutrition Facts
Serving size 1 Teaspoon (4g)
Amount Per Serving
Calories 15
Total Fat 0g 0%
Sodium 0mg 0%
Total Carbohydrate 4g 1%
Sugars 4g
Protein 0g

PERSONALIZE your baking
Add a special touch to your favorite baked goods with these handy measurements you can personalize and print right from your home computer. What better way to say - "Baked with love!"

4g of sugar in one sugar packet

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 39 second video clip that reveals the solution. Invite students to communicate their strategies for arriving at the solution for how many sugar packets there is in a 20 oz. bottle of soda.



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?