

Bubble Gum

Lesson Plan

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The Task

Have you ever wondered why gum loses its sweetness so quickly? Does it seem like the gum gets smaller after you chew it? Well, sugar contributes to gum's flavor. During chewing, the sugar is lost, which makes the gum get smaller as it loses sweetness.

Materials

- The Task
- Calculators
- Grid Paper
- Poster Paper (one sheet per group)

Facilitating Task

- Launch the task by reading it aloud.
- Clarify the task as needed by asking students to retell the story and identify what's known and unknown.
- Provide individual think time, so students can process and begin solving.
- Small groups (4 students maximum) compare strategies and solutions. After reaching consensus, small groups record solution and justification on Poster Paper.
- Each group shares their solution and justification.
- The teacher asks questions to support students in connecting the strategies shared and the mathematical ideas highlighted.

Misconceptions

- Students might use an additive approach instead of multiplicative reasoning.
- Students might have trouble keeping track of the whole.
- Students might have difficulty realizing that the stuff other than sugar remains constant before and after chewing.

Suggested Prompts or Questions

- How is this problem similar to other problems you might have solved?
- What's staying the same and what's changing?
- How might you represent this situation?
- Before chewing, what percent of the gum is not sugar?
- After chewing, what percent of the gum is not sugar?