

# A Collaborative 3 ACT Task

Title: Graham Cracker

link: <https://gfletchy.com/graham-cracker/>

**Big Ideas:** -using flexible computation strategies (repeated addition, commutative property)  
-understanding the relationship between addition and multiplication.

**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*



**Learning Target:** I can represent my mathematical thinking in pictures, numbers and words.

## ACT ONE:

Establishing a Need to Know: share the 15 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 Question:** *How many graham crackers are inside a full box of Graham Crackers?*

**Estimating:** invite students to think of a reasonable estimate for how many graham crackers would be too few, and a reasonable estimate for how many graham crackers would be too many for a full box of Graham Crackers.

A too low estimate:	A too high estimate:

**ACT TWO:** share the 21 second video clip...

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Ask, “What information would be helpful to know for solving this investigation?”  
and jot down student responses...

Share the photos that are offered as more information for solving this problem...



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

Teacher role: Circulate and listen with purpose. Observe student collaboration; interactions, discussions. Are students building on or acknowledging each other’s ideas? Observations will enable teachers to formulate questions that can target specific mathematical concepts *during* the learning process.

### ACT THREE:

Share the photograph that reveals the solution. Invite students to communicate their strategies for arriving at the solution for how many graham crackers there are in a full box of Graham Crackers.



### 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?