Title: More Muffins   Three Act Task

link: https://mscastillosmath.wordpress.com/2016/09/18/more-muffins/

Big Idea: Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value
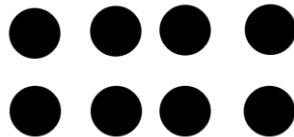
Curricular Competencies:

* *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*

Content:

I can represent and solve problems involving addition and subtraction.

Before

Number Talk: dot image

Number Relationship work at the carpet: using stacking counters and playing 1 more/less, 2 more/less game filling the 20 frame

During

ACT ONE:

Establishing a Need to Know**: (**view video link 1:07)

What did you notice?	What do you wonder?

Driving Question: **How many muffins left to fill the pan?**

Estimating:

Too high estimate	Too low estimate

ACT TWO:

What information would be useful to know for solving this problem?
What information do you know? What information do you need?

Work in random trios to represent thinking in pictures, numbers and words on mini stand-up white boards.

After

ACT THREE:
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?

Extensions

Iliana made chocolate chip muffins for a bake sale. Aurora made blueberry muffins. How many different ways can the girls combine their muffins if they put (8) on a plate. Use objects or counters to solve the problem. Draw and record your solution.

Project cupcake image (below) and follow the number routine. How many muffins do you see? How do you see them? Determine how many more might fill the pan. Image from http://ntimages.weebly.com/photos.html

After you cut a muffin in half, share it with a partner. Talk about how many parts of a whole each of you has. Then solve this problem: If Asa and Ryleigh have 1 muffin to share, how can they both get an equal part? Examine your half of the muffin and compare it to a whole muffin at your table. How is your half of a muffin different from the whole muffin? How is it similar?

Partitioning problems (NCTM Teaching Children mathematics OCT. 2014)