

Sharing Candy Bars

Activity Description:

Students will work and reason the problem “39 students want to share 5 candy bars equally. How much can each student get?” and then students will share the various strategies that they came up with. Students will work independently, then in groups, ending with a whole group strategy sharing session.

Essential Questions:

- What does it mean to have an equal share?
- How can we make sure we give a “fair share”?
- After reading the problem, what do we know?
- After reading the problem, what do we need to know?
- How are the different solution strategies alike? How are they different?

Content Objective:

Students will equally share using multiple (2 or more) strategies within the same problem.

Language Objective:

Students will use the language “equal shares”, fraction names, and the strategy names such as “sharing one at a time” and “sharing groups of items”.

Relevant Common Core Math Standards:

[CCSS.Math.Content.4.NF.B.3.d](#) Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

Purpose Statement to be Shared with Students:

Today we will attack a problem that works with equally sharing an item so that we can understand multiple ways to equally share. I will know you understand when you explain the problem to me using words and pictures in at least two different ways using precise language.

***Note: Adaptations/Modifications include, questioning depth and purposeful grouping when necessary.*

Questions to reveal student understanding:

Lesson Plan Sequence	Time	Anticipated Student Thinking	Responses to Student Thinking
<i>Launch/Beginning/Connect to Prior Knowledge/Clarify Expectations</i>			
<p>“Today we are going to learn about equal shares”</p> <p>“Does anyone have an idea about what it means to equally share something?”</p> <ul style="list-style-type: none"> - create a group definition of “equal sharing” without using the word “equal” <p>Put up three squares on the board and ask for ideas of how we can share these three square pizzas with 18 people (if students are correct the first time, record answer and move on, if not take a new idea)</p>	5 min	<ul style="list-style-type: none"> - An equal share is when you have one thing and everyone get the same amount. - sharing groups of items - sharing one at a time - ratio- 6 people share 1 pizza - multiplicative strategies 	<ul style="list-style-type: none"> - What does equal mean? - How much pizza would each kid get?

*It is important for students to understand that EVERYONE got the same amount and we shared ALL of the pizza (no parts were left out/ no remainder)			
<i>Explore/Middle/Support Student Thinking</i>			
<p>Hand out problem to each child and read aloud “39 students share 5 giant candy bars”</p> <ul style="list-style-type: none"> - students work individually at first - then have students pair and share to gain more understanding and strategies <p>Have students complete the problem so that there is no candy bar left over.</p>	15 min	<p>39/5 Leave off the remainder STUCK Sharing groups of items Sharing one at a time Multiplicative strategies (5/39) $\frac{1}{8} + \frac{1}{39}$ (Okay answer)</p>	<ul style="list-style-type: none"> - What does your answer mean? - How many candy bars do we have? - What can you do with the remainder? - What do we know? - What do we need to know? - What is the whole? - What can you do with the last piece? - $\frac{1}{39}$ of what? - Can you name that piece? - What is $\frac{1}{39}$ of $\frac{1}{8}$? - Is $\frac{1}{39}$ of a candy bar? - Is it $\frac{1}{8}$ of a candy bar? - What if I split each of the candy bars into 39 pieces?
<i>Summarize/Connect/Unpack/Extend/Bring Closure/Facilitate Discussion</i>			
<ul style="list-style-type: none"> - Have students share their strategies (either up on the whiteboard or not, whatever is comfortable) - Ask specific kids with good ideas if they are willing to share (during explore walk around and find good strategies) - Other students will restate what other students did for some of the strategies that were shared. - Collect student work to assess understanding 	10 min	<p>Sharing groups of items Sharing one at a time Multiplicative strategies</p> <p>“Melting” all 5 candy bars into one</p> <p>$\frac{1}{8}$ and $\frac{1}{39}$ of $\frac{1}{8}$ $\frac{5}{39}$</p>	<p>Why did you do that? What idea helped you solve the problem? Did you ever get stuck or struggle?</p> <p>Could you do the same thing with each individual bar?</p> <p>$\frac{1}{8} + \frac{1}{39}$ ($\frac{1}{8}$) You may not quite be able to do this yet, but if we added the fractions and find the common denominators $\frac{1}{8} + \frac{1}{39}$ ($\frac{1}{8}$) would be the same as $\frac{5}{39}$</p>

