

FRENCH FRY FUN

Estimating and measuring

Episode 201: Math is everywhere, Part One 3rd Grade

Georgia Performance Standards

- M3M2b Measure to the nearest $\frac{1}{4}$ inch, $\frac{1}{2}$ inch and millimeter (mm) in addition to the previously learned inch, foot, yard, centimeter, and meter
- M3M2c Estimate length and represent it with the appropriate units
- M3M2d Compare one unit to another within a single system of measurement
- M3D1a Solve problems by organizing and displaying data in bar graphs and tables
- M3D1b Construct and interpret bar graphs using scale increments of 1, 2, 5, and 10
- M3P2 Students will investigate, develop, and evaluate mathematical arguments
- M3P3 Students will use the language of mathematics to express ideas precisely

Objectives

- Students will estimate the amount of French fries and the length of the French fries when placed end-to-end.
- Students will measure the length of French fries when placed end-to-end in inches and feet (to the nearest fourth of an inch).
- Students will make a class bar graph of the results of the measuring (graph will be in increments of 5).
- Students will come up with and defend their opinion of which size of French fries is the best value.

Materials

- TV/VCR or Computer/LCD Projector
- Video *Count On It! 201*
- About four of each: small fries, medium fries, large fries from McDonalds
- Rulers and/or tape measures in inches and feet
- Computer with Graph Club OR chart paper and markers

Procedure

Opening

- View *Count On It! 201* clip “Ordering Fries” (VHS 17:27 – 19:01).

Work time

- Ask the students who they think got the best value for their money, Snappy or Blossom. Discuss their answers briefly.

- Brainstorm ways to find out who got the best deal. Make a web of the ideas on the board. If no child offers linear measurement as an option, pull it out of them so that you can get it on the web. Circle it and let the kids know that today they are going to estimate and measure French fries to find the best value.
- THE STUDENTS MAY NOT EAT THE FRIES DURING OR AFTER THE LESSON DUE TO GERMS!!!
- Put the class in pairs. Four pairs of students will get small fries, four pairs will get medium fries, and four pairs will get large fries.
- Pass out recording sheets (students will record their estimations and their measurements).
- Have students estimate how many fries they have.
- Have students count their fries.
- Have students estimate how many inches total they have of fries as well as how many feet they have.
- Have students measure the total inches (to the nearest $\frac{1}{4}$ inch) of fries. (Do not force them to do it a certain way – some may want to add each fry up and some may want to put them end to end. This is a great opportunity for them to struggle a bit by your not telling them how to measure them. With your guidance, they should come to the discovery that trying to measure one at a time is way more difficult than laying them end to end.)
- Have students re-measure their fries in feet to the nearest $\frac{1}{4}$ inch (this is a good opportunity for them to be introduced to division in a real world situation – have them check to see if for every 12 inches they measured in their first measurement they have a foot in their second measurement).
- Students may enter their results onto the Graph Club graph that you have started OR the graph on the chart paper that you have started. Have the price up on the board or graph so that they can see what you (hopefully a room mother, actually) paid for each size of fries.
- Make groups of three, and have them come up with an opinion of which size is the best value and WHY. As they are 3rd graders, they do not need to understand rate (in this case, price per inch) but get them thinking about it in a real world situation like this.

Closing

- Pick a few groups to share which size they think is the best value and why. There's a possibility a few groups will not be able to come up with the mathematical reason as to which one size is a better value than the other.
- At this point, share 201 Count On It clip Counting Fries (VHS 19:02 – 20:49). This will not get into rate, but will show that Blossom paid less for more.

Assessment

- Teacher observation/documentation on student rubric used by your school/county during work time and closing (sample rubric can be found on our website)

- Recording sheets (estimates and measurements)
- Class graph

Culminating Activity

Watch whole episode, eating fries that a sweet room mom brings in for you after the lesson.