

## FRENCH FRY FUN

Estimation, measurement, and graphing

### Episode 201: Math is everywhere, Part One 2nd Grade

#### Georgia Performance Standards

- M2M1a Compare the relationship of one unit to another by measuring objects twice using different units each time
- M2M1b Estimate lengths, and then measure to determine if estimations were reasonable
- M2M1c Determine an appropriate tool and unit for measuring
- M2D1a Organize and display data using picture graphs, Venn diagrams, bar graphs, and simple charts/tables to record results
- M2D1b Know how to interpret picture graphs, Venn diagrams, and bar graphs
- M2P2 Students will be able to investigate, develop, and evaluate mathematical arguments
- M2P3 Students will be able to 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 inch).
- Students will make a class bar graph of the results of the measuring.
- 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 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 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 2<sup>nd</sup> graders, they do not need to fully 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 chance no group will come up with the mathematical reason as to which one size is a better value than the other. That's all right.
- At this point, share 201 Count On It 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.