

Lab Framework

Text: Cord Applied Math

Unit number and title: Unit 2 - Estimating Answers

Short Description: Students will use their estimating skills to determine the cost of a breakfast for their group and then for the entire class. Students will be estimating the amount of food needed, and researching costs.

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Lab Title

Who wants breakfast? I do, I do.



TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective:**

To estimate the amount of food needed and estimated cost to provide breakfast for the class.

- **Statement of pre-requisite skills needed** (i.e., vocabulary, measurement techniques, formulas,

- **Vocabulary**

Rough estimate,
Communication skills

- **Materials List**

Sheets of paper
Grocery advertisement
Calculator

- **State Standards addressed**

- Math:** 1.1 Understands and uses properties and symbolic representations of real numbers.
1.1.6 Apply strategies to compute fluently with rational numbers in...
1.1.8 Apply estimation strategies to determine reasonableness...
Gather information.
4.2. Organize, represent, and share information.

- Reading:** 3.2 Read to perform a task,
.2.2 Apply strategies to comprehend words and ideas.

- Writing:** 2.1 Demonstrates understanding of different purposes for writing.

- **Leadership Skills**

- **Group Skills**

2.1 The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals.

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- **SCAN Skills/Workplace Skills**
- Arithmetic
- A. Performs basic computations
- B. Uses basic numerical concepts such as whole numbers and percentages in practical situations
- C. Makes reasonable estimates of arithmetic results without a calculator
- Writing
- B. Records information completely and accurately
- **Set-up information**
 - Pre-locate grocery store advertising.
 - Divide students into groups of 3 to 4
 - Explain portions and how different food items are packaged
 - Have students determine their own group portions (eggs, bread,bacon,etc)
 - Have groups interview other groups on estimated portions.
 - Price groceries using store ads or online shopping (ie. Safeway, Albertsons).
 - Debrief and discuss the lab.

- **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required**)
This should require about 3-4 fifty- five minute class periods to set up and finish. One day would be set up for students to gather information with in their groups and begin to poll other groups for their estimates. The second and third day would involve students finding the correct data for their labs (estimates of items to be purchased for groups and class as a whole. The third day would entail students preparing their meal and calculating the actual cost of the event. The 4th day would be used to do all the calculations of estimates and actual costs.

Groups of 3 to 4 students:

Recorder
Interviewer
Facilitator

- **Teacher Assessment of student learning** (scoring guide, rubric)
 - Instructor Observation
 - Grading Lab sheets.
- **Summary of learning** (to be finished after students completes lab)
 - discuss real world application of learning from lab
 - opportunity for students to share/present learning knowledge of estimating process for cooking or restaurant management.
- **Optional activities**
 - Compare cost with other groups and other Applied Math classes.
 - Combine other classes and actually have a breakfast day
- **Career Applications**
 - Food and Beverage Manager, homemaker, day care provider,
 - Catering business, Grocery shopper, Short order cook

LAB TITLE: Who wants breakfast? I do, I do

STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**
Estimate food consumption of your individual group and the entire class for breakfast.
- **Grouping instructions and roles**
 - Form into Groups of 3 to 4 students:
Roles: Recorder, Interviewer and facilitator
- **Procedures** – steps to follow/instructions
 1. Estimate the number of eggs, bread, bacon, butter and jelly for class
 2. Calculate number of cartons of eggs, loaves, cubes of butter and jars of jelly needed for breakfast
 3. Check in grocery advertising ad and/or on line stores for prices of items for your group
 4. Interview other groups to determine amount of supplies needed for the class
 5. Compare your results with the other groups
- **Outcome instructions**
Develop a Shopping list based on your estimations and calculations:
- **Assessment instructions** (peer-teacher)
Compare costs with other groups.

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Lab Data Collection

Student: _____ Date: _____

Unit: 2 Estimating Answers

Lab Title: Who wants breakfast?? I do, I do

Criteria: Write the problem/objective in statement form

Estimate the food consumption of breakfast for your class.

Data Collection: Record the collected/given data and put into chart below

Please write answers in correct units. (\$, loaves, cubes, etc.)

Estimate:

Number of eggs your group will consume: _____

Number of loaves of bread: _____

Number of packages of bacon: _____

Number of cubes of butter or tubs of margarine _____

Number of jars of jelly _____

Cost of eggs: _____

Cost of bread: _____

Cost of bacon: _____

Cost of butter/margarine: _____

Cost of jelly: _____

Estimated cost for your group. _____

Estimate:

Number of eggs entire class will consume: _____

Number of loaves of bread entire class will consume: _____

Number of packages of bacon entire class will consume: _____

Number of cubes of butter or tubs of margarine entire class will consume _____

Number of jars of jelly entire class will consume _____

Cost of eggs: _____

Cost of bread: _____

Cost of bacon: _____

Cost of butter/margarine: _____

Cost of jelly: _____

Estimated cost for entire class: _____

Calculations: Complete the given calculations to solve for an answer(s)
and place in chart below:

Actual Numbers and cost:

Number of eggs your group consumed: _____

Number of loaves of bread: _____

Number of packages of bacon: _____

Number of cubes of butter or tubs of margarine _____

Number of jars of jelly _____

Cost of eggs: _____

Cost of bread: _____

Cost of bacon: _____
 Cost of butter/margarine: _____
 Cost of jelly: _____
 Real cost for your group: _____
 Number of eggs entire class consumed: _____
 Number of loaves of bread entire class consumed: _____
 Number of packages of bacon entire class consumed: _____
 Number of cubes of butter or tubs of margarine entire class consumed: _____
 Number of jars of jelly entire class consumed: _____
 Cost of eggs: _____
 Cost of bread: _____
 Cost of bacon: _____
 Cost of butter/margarine: _____
 Cost of jelly: _____
 Real cost for entire class. _____

Items group estimated cost class estimated cost Actual cost of item

eggs			
Loaves of bread			
Butter/margarine			
bacon			
Jars of jelly			
Total for all ingredients			

Total Cost for Breakfast:
 Store to purchase items:

Summary Statement:

Create a shopping list by following the example given.

2 gallons of milk
 1 (16 oz) brick of cheese
 4 (3 oz) cans of green chilies

Other Assessment(s)

None

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