

Lab Framework

Text: Cord

Unit number and title: Unit 15 – Using Formulas to Solve Problems

Short Description:

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Lab Title

Spaghetti Dinner on a Shoestring

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective**

To prepare and eat a spaghetti dinner for the class within a budget of \$1.50 per person.

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

Basic math skills

Ability to read a recipe

Pass safety and sanitation test

Basic cooking skills

Measuring skills

- **Vocabulary**

Unit pricing, budget, overage/shortage

- **Materials List**

Permission slips for shopping (walk to Safeway as a class and purchase ingredients), recipes

- **GLEs (State Standards) addressed**

Math: 11-12 grade

Apply strategies and uses tools to complete tasks involving computation of real numbers. (aligns with CRS 4.2)

Apply estimation strategies involving the computation of real numbers. (aligns with CRS 4.3)

2.1.2 Analyze a situation and describe the problem(s) to be solved. (aligns with CRS 1.1)

2.2.3 Formulate and apply a strategy for solving the problem. (aligns with CRS 1.2)

2.2.4 Use logical reasoning and mathematical knowledge to obtain and justify mathematically correct solutions. (aligns with CRS 1.3)

5.3.1 Use mathematical ideas and strategies to analyze relationships within mathematics and in other disciplines and real-world situations. (aligns with CRS 3.1)

Reading: (Reading)

Writing: (Writing)

- **Leadership Skills**
- **SCAN Skills/Workplace Skills**
- **Set-up**
 - a. get permission from administration to go on an off-campus, walking, one-period field trip to Safeway.
 - b. Have permission slips filled out by parents of each student to walk off-campus.
 - c. Arrange to use the cooking lab on the day of cooking lab.
- **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required**)

Divide students into groups according to tasks.

 - one group for each dish prepared.
 - one group to set-up tables, tablecloths, dishes, etc.
 - one group to write up shopping list with estimated costs on overhead.
- **Teacher Assessment of student learning** (scoring guide, rubric)

Participation and write up of results at the end.
- **Summary of learning** (to be finished after student completes lab)
 - discuss real world application of learning from lab
 - opportunity for students to share/present learning
 - increased awareness of the cost of food
- **Optional activities**
- **Career Applications**

Consumer, personal shopper, entrepreneur, chef,

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LAB TITLE: Spaghetti Dinner on a Shoestring

STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**
Can you feed a family on a limited budget.
- **Grouping instructions and roles**
Divide class into groups as follows:
 - Main dish
 - Vegetable
 - Bread/Drink
 - Dessert
 - Set up
- **Procedures** – steps to follow/instructions
 - Day one: Plan meal by listing ingredients needed and estimating costs.
Write up a shopping list.
 - Day two: Go to Safeway and shop, each group gathers needed supplies and we all check out at once (on purchase order).
Take groceries to cooking lab and put away.
 - Day three: Cook and eat meal/ clean-up.
 - Day four: Provide list costs of ingredients to students. Ask them to figure out the cost per dish and the cost per serving. Figure out percentage of overage or shortage compared to budget.
- **Outcome instructions**
Each student will prepare their own calculations.
- **Assessment instructions** (peer-teacher)
Students will be graded on participation and calculations.

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Lab Data Collection

Student: _____ **Date:** _____

Unit: 15 – Using Formulas to Solve Problems

Lab Title: Spaghetti Dinner on a Shoestring

Criteria: Write the problem/objective in statement form

Can you feed a group of family on a limited budget?

Data Collection: Record the collected/given data

Total cost of ingredients:

Budgeted amount:

Cost of main dish:

Cost per serving:

Cost of vegetable dish:

Cost per serving:

Cost of bread dish:

Cost per serving:

Cost of dessert dish:

Cost per serving:

Cost of drink:

Cost per serving:

Were you over budget or under budget?

What was the dollar amount of overage or shortage?

What was the percent you were over or short?

Calculations: Complete the given calculations to solve for an answer(s)

See above

Summary Statement:

What changes could you make to ensure that you are better able to budget your money wisely and use it the most economically?

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Other Assessment(s)