Lab Framework

Text:CORD Applied Mathematics

Unit number and title: Unit 2 Estimating Answers

Short Description: Estimates

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Lab Title

Shopping Spree

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective**

  Students know how to round and multiply multi-digit numbers by single digit numbers to solve real-life problems. Students will try to spend as close to $1,000 as they can as they estimate the cost of a shopping spree.

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

  n/a

- **Vocabulary**

  n/a

- **Materials List**

  Newspaper ads (department stores, grocery stores, specialty stores, electronics, etc.)
  Recording sheet with columns labeled like this:

Item	Rounded Price

- **State Standards addressed**

Math:
2.2.E Estimate sums and differences.
3.1.D Estimate sums and differences to approximate solutions to problems and determine reasonableness of answers.
4.1.H Estimate products to approximate solutions to problems and determine reasonableness of answers.
5.1.D Estimate quotients to approximate solutions and determine reasonableness of answers in problems involving up to two-digit divisors.
A1.1. Core Content: Solving problems
Reading: EALR 3: The student reads different materials for a variety of purposes.
Component 3.1: Read to learn new information.
Writing: EALR 3: The student writes clearly and effectively.
3.1 – Develops ideas and organizes writing
3.2 – Uses appropriate style
3.3 – Knows and applies writing conventions

- **Leadership Skills**

  Demonstrate individual skills

- **SCAN Skills/Workplace Skills**

Basic Skills: Arithmetic Mathematics: performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.

Thinking Skills: Seeing things in the mind's eye: organizes and processes symbols, pictures, objects and other information.

- **Set-up information**

1. You must "buy" at least 15 items.
2. You can not buy more than 5 of any kind of item.
3. You must try to get as close to $1,000.00 as you can.

- **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required)**

1. Tell students they will be going on a shopping spree to spend $1,000.00. They can work individually, in partners, or groups.
2. Project an overhead transparency of the recording sheet.
3. Model what to do. Choose an ad and say, "I think I'll buy some rings." Write "ring" under item. Talk about the cost, say $79.99, but instead of writing the exact price, they will round (to $80) and write that under "rounded price."
4. Next, they need to decide how many to buy and write that amount under "quantity."
5. In the last column (rounded total) they should estimate the total cost by multiplying the rounded price ($80) by the quantity (2). So $160 ($80x2) goes in the last column.
6. Remind students they have a $1,000 limit and they should keep track as they work. Keeping a running total of the last column will help.
7. You can extend students' problem-solving by asking "How much more do you need to get $1,000?" as they work.

- **Teacher Assessment of student learning** (scoring guide, rubric)

  Collect worksheet

  Observation

- **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

- **Optional activities**

  Students could research ads on the internet.

  List at least five jobs that could benefit from this kind of estimating skills.

LAB TITLE: Shopping Spree
STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**
  Students will try to spend as close to $1,000 as they can as they estimate the cost of a shopping spree.

- **Grouping instructions and roles**
  This activity can be done individually or with a partner.
- **Procedures** – steps to follow/instructions
  1. You must "buy" at least 15 items.
  2. You can not buy more than 5 of any kind of item.

Item	Rounded Price	Quantity	Rounded Total	Running Total

- **Outcome instructions**
  You must try to get as close to $1,000.00 as you can.

- **Assessment instructions** (peer-teacher)
  Compare your shopping list with at least 2 other classmates.

Lab Data Collection

Student: _____ Date: _____

Unit 2: Estimating Answers

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Criteria: Write the problem/objective in statement form

Data Collection: Record the collected/given data

Item	Rounded Price	Quantity	Rounding Total	Running Total

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

Summary Statement:

Other Assessment(s)

Provide 3 items on classmates shopping list that you compared with