

Title: On a Budget: Problem Solving with Money

Grade level/course: 4th Grade Mathematics

Time Frame: 2 days/ 1 hour 15 minute periods

Content Objectives:

- Students will add and subtract money amounts
- Students will use problem solving strategies
- Students will compare money amounts
- CMT Correlations: 7a, 9a, 25a; Grade Level Expectations: 2.2.14, 2.2.19

Language Objectives:

- Students will use comparison vocabulary (e.g. greater than, less than) to discuss sums and differences, in order to drive a critical discussion on economics in society.
- Students will work individually, in small groups, and with the whole group to use mathematical vocabulary appropriately to defend their problem solving (language frames)
- Essential Vocabulary: greater than, less than, sum, difference, budget, unit price, dollars, cents

Higher Order Thinking:

- There are multiple answers to this problem.
- Each group will receive different money amounts in order to fulfill the requirements in the problem
- Justification piece: Why did you choose to buy...? Is there any other way you could solve ...? What if we had coupons...? (Think Deeply and Hint Cards)
- Critical Component: Students will compare their solutions among groups. This will drive a discussion about the allocation of wealth in society (labor, wage, cost of living, surplus, etc.)
- Connection between math and their experience (Theme: Real “Hartford”)

Materials:

- In H.O.T. kit: Question on Transparency, Grocery Flyers (One on Transparency), Budget Sheets, Think Deeply and Hint Cards, Play Money, Chart Paper, Language Frames, Student Outline Sheets

Initiation: Introduce the problem: It’s Payday! Use your money to shop for groceries you will need to make tonight’s dinner. You must include one main dish and one side dish. Feel free to include drinks, desserts, or other dishes. You must prepare enough food for AT LEAST one person. Good luck and happy shopping! (Highlight important information)

Procedures: Over 2 days

1. Introduce the problem. Highlight important vocabulary.
2. Allocate funds (Each group will receive a different money amount they will use to budget their meal).
3. Students will work independently to problem solve.
4. Students will move in groups to discuss their strategies, problems, or solutions. Groups will agree on one budget to present to the whole group. (Likely end of Day 1)
USE HINT/ THINK CARDS FOR STRUGGLING STUDENTS or STUDENTS WHO NEED ENRICHMENT☺
5. Groups will create posters (Large Budget Sheets- chart paper) to present their budget.
6. Groups will present their solutions, and justify their reasoning. Discussion will be guided by language frames.
7. Discussion about the difference between budget decisions based on “wealth”. Comparison of in class problem to real life PROBLEM.

Closure: Students will reflect in their student outline sheets- “What have you learned from completing this problem? Please discuss problem solving strategies, mathematical content, mathematical

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vocabulary, or real life connections that you struggled with but now may feel more comfortable with.”
Group Share

Student Work Products:

- Group Posters
- Individual Budget Sheets

Assessment: Collaborative Work Points, Group Posters, Individual Budget Sheets

Differentiation: Multiple Money Amounts (use larger amounts for struggling students), HINT/THINK cards, Individual and group work, Money as a manipulative to help students visualize problem