

PRACTICE TASK: Grocery Store Math

Approximately 1 Day



STANDARDS FOR MATHEMATICAL CONTENT

MCC.2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

MCC.2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

MCC.2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

MCC.2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*

STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

*****Mathematical Practices 1 and 6 should be evident in EVERY lesson.*****

BACKGROUND KNOWLEDGE

Students should have had prior experiences and/or instruction with addition and subtraction of two-digit numbers with and without regrouping. Students should also have had experience working with money amounts.

The purpose of this task is to further develop students' understanding of the concept of addition with money. This task builds on the concepts that were addressed in the previous task Sale Flyer Shopping. Additionally, reinforces the connection between addition to subtraction.

ESSENTIAL QUESTIONS

- How can we model and solve addition problems with and without regrouping?

MATERIALS

- *Lemonade for Sale* by Stuart Murphy or similar book
- Bag containing 5-7 grocery items

GROUPING

Individual

TASK DESCRIPTION, DEVELOPMENT, AND DISCUSSION

Gather students together on the meeting area. Read *Lemonade for Sale* by Stuart J. Murphy or similar book. Discuss scenario from story. Then show students your bag of groceries. The bag should contain 5-7 items, which could include an empty box of cereal, empty carton of juice or milk, bag of peanuts, can of soup, etc. You want to include items that cost between \$1.00 and \$10.00. Keep the amounts in whole dollar quantities.

Create an interactive story about your last visit to the grocery store such as “I went to the grocery store to buy a box of cereal for \$3 and a can of soup for \$1. How much did I spend?” Talk about how adding dollar amounts is just like adding ones. Allow time for students to practice drawing the dollar sign symbol. If none of the students notice that it looks like a capital S with two lines through it ask them “What letter does this symbol look like?”.

Next tell the students that you went to the store with a \$10 bill to buy these two items. Have them figure out how much money you left the store with after buying the two items.

Discuss how to solve the problem and find out how much money was spent to purchase the items. Continue grocery store shopping by having another pair of students select two items to purchase. Share the items and prices with the class and allow all students to find the total amount of money spent. Also ask how much was left from a particular total that you tell them. Keep it a decade number (i.e. \$10, \$20, \$30 etc.). Have the two “shoppers” present their model and solution to the class and discuss the strategies used. Repeat this process with additional pairs of students to allow all students to have an opportunity to shop, solve, and share their purchases with the class.

FORMATIVE ASSESSMENT QUESTIONS

- What addition strategy did you use to determine the total cost?
- What strategy did you use to figure out the remaining money from a total starting amount?

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Common Core Georgia Performance Standards Framework
Second Grade Mathematics • Unit 2

- How are you modeling/showing and checking your work?
- How is this like working with numbers that aren't money amounts?

DIFFERENTIATION

Extension

- Have students choose more than two items.
- Have students create their own grocery store story problem and solve.

Intervention

- Use prices that do not require much regrouping.
- Provide fake bills and coins for students to use to find the total of their purchase.