

Money Counts

- Strand:** Measurement and Geometry
- Topic:** Counting bills and coins, comparing values, and making change
- Primary SOL:** 3.6 The student will
- determine the value of a collection of bills and coins whose total value is \$5.00 or less;
 - compare the value of two sets of coins and bills; and
 - make change from \$5.00 or less.

Related SOL: 3.4

Materials

- Play money (coins and dollar bills)
- Paper bags labeled A, B, C, ...
- Money Counts Recording Sheet (attached)
- Monthly book club flyer listing multiple books for purchase
- demonstration tool (e.g., document camera, digital display)

Vocabulary

change, coin, collection, dime, dollar, dollar bill, equal to, greater than, half-dollar, less than, money, nickel, penny, quarter, set, skip counting, value

Student/Teacher Actions: What should students be doing? What should teachers be doing?

Note: This lesson can be done over two class periods. It may be beneficial to do the last part (step 7: purchasing books and making change) during a separate class period.

1. Display a combination of coins and bills for students to be able to see. Say: *“I found all of this money in my car change compartment. I found a book in this month’s book club flyer that I want to buy. The book costs \$3.75. I’m wondering if I have enough money here to buy this book. Help me count to see.”*
2. Demonstrate how to count the value of the money, starting with the largest denomination of bill or coin. Continue to count, working toward the coins of lesser value until all of the money has been counted. Repeat the demonstration with a different amount of money. Remind students that they can use their skip-counting skills for counting the coins.
3. Group students in pairs. Give each pair a handful of coins to count. Have them take turns counting the coins and sharing with their partner the strategy they used to count. Explain how they will “verify” the total counted by their partner. Discuss the various strategies for counting with the whole group. Ask, *“Which strategies appear to be the most efficient?”*
4. Distribute the Money Counts Recording Sheet. Give each pair a bag of play money. Explain that each bag contains a different amount of money worth \$5 or less. Direct one student in each pair to count the value of the money and write it down. Then, have the other student in each pair recount it to verify the amount. If the two totals agree, have pairs record the letter of the bag and the amount of money in the bag in the first chart on their

recording sheets. If the totals do not agree, have the pairs recount the money slowly and carefully together.

5. Have partners put the money back in the bags, exchange bags with other partners, and repeat the counting-and-recording process. Have students continue exchanging bags until they have practiced counting at least five collections of coins and bills. To verify the amount is correct, each partner should sign the recording sheet in their respective column.
6. For the second part of the lesson, ask students to suggest a combination of coins and bills that equals \$5. Model recording the suggested combination on a chart similar to the one on the recording sheet. Then, have students work in pairs to create and record six different combinations (each student should generate three collections) of coins and bills that equal \$5. Each partner should sign, verifying the correct amount. Encourage students to include something in each column.
7. For the last part of the activity, demonstrate the process of making change for a \$5 bill, using two different skills:
 - **Counting on**, starting with the amount to be paid (the purchase price), counting forward by cents to the next dollar, and then counting forward by dollars to reach the amount from which you are making change (\$5).
 - **Mentally calculating the difference** between the amount from which to make change (\$5) and the amount to be paid (purchase price). For example: If the cost is \$4.20, count by 10s to reach \$5 to find the difference or the change.
8. Tell students to imagine that the class has been given a special present—a gift certificate to purchase \$125 worth of books from a book club. Each student will be able to spend up to \$5 on books.
9. Explain to students that they will receive the book club flyers from which to choose the book they wish to purchase. The only criteria for the purchase is that it must cost \$5 or less. Distribute copies of the flyer listing the books available and their costs.

Have each student select a book that costs no more than \$5 and figure out the change they would receive after purchasing the selected book with a \$5 bill. Direct each student to record the book’s title and cost and the change amount on his/her recording sheet.

The student then uses the bag of money to count out a combination of coins and bills equal to the cost. Have each student write a number sentence about the value of his or her coins and bills in comparison to his/her partner’s coins and bills.
10. Have students share their strategies for counting coins and finding change. Was one strategy easier than the other? Why?

Assessment

- **Questions**
 - What is the fewest number of coins that you could use to make 37¢?
 - What did you have to consider when selecting your book?
 - What is the least number of coins needed to make the greatest amount of change for an item you chose?

- **Journal/writing prompts**
 - Explain in your own words how to figure out the amount of change you should receive when you use a \$5 bill to buy an item that costs less than \$5.
 - Discuss why it is important for you to know how much change you should receive when you pay for an item at a store.
- **Other Assessments (include informal assessment ideas)**
 - Circulate during the counting of the coins and bills to verify that students are using the correct strategies (e.g., counting on, skip-counting). Note who is having difficulty identifying the coins and bills, skip counting, counting on, writing the values, and/or comparing amounts, and give help as needed.
 - Use the completed recording sheet for assessment purposes.

Extensions and Connections (for all students)

- Repeat the exercise, using advertisements from stores such as toy stores, grocery stores, and clothing stores.
- Discuss which human resources need to know how to calculate money and make change. List types of capital and natural resources they may choose to spend their money on.
- Calculate the total amount the class spent. How much “change” is left from the original budget of \$125? Is there enough to buy more books? If so, which books?
- Is there a book you would purchase that costs more than \$5? If so, how much more money would you need?

Strategies for Differentiation

- Allow students to use calculators.
- Allow students to use grid paper to line up numbers vertically when showing their work.
- Have students work with larger amounts when making change.
- Have students use a hundreds chart to help count coins by placing coins on the appropriate coin value. For example: Begin with the coin that has the greatest value first. Place a quarter on the 25, then the dime on the 35 to indicate 10 more than 25.

Note: The following pages are intended for classroom use for students as a visual aid to learning.

Money Counts Recording Sheet

Name: _____ **Date:** _____

Part I: Money Bags

Count the money in each bag. Sign your name to verify the total in each bag.

Bag letter	Total value of coins and bills	Partner A	Partner B

Which bag contained the greatest value of money? _____

Which bag contained the least value of money? _____

Part II: Combinations of Coins and Bills Worth \$5

Example	No. of \$1 bills	No. of quarters	No. of dimes	No. of nickels	No. of pennies	Partner A	Partner B
1							
2							
3							
4							
5							
6							

Part III: Buying Books

The title of my book is _____.

The cost of my book is _____.

The change that I would get back after buying my book with a \$5 bill is _____.

The coins and bills that equal the cost of my book are the following:

Total value	No. of \$1 bills	No. of half-dollars	No. of quarters	No. of dimes	No. of nickels	No. of pennies

The coins and bills that equal the cost of my partner’s book are the following:

Total value	No. of \$1 bills	No. of half-dollars	No. of quarters	No. of dimes	No. of nickels	No. of pennies

Whose book costs more, yours or your partner’s? _____

Write a sentence that compares the two amounts of money, using the terms *greater than*, *less than*, or *equal to*.

Do you have enough money left to make another purchase? _____

What would you purchase? _____

How much does it cost? _____

How much change do you have left after this purchase? _____