

# Money Math

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**Reporting Category** Measurement

**Topics** Identifying and describing a penny, nickel, dime, and quarter  
Counting a collection of pennies or nickels whose value is 10 cents or less

**Primary SOL** K.7 The student will recognize a penny, nickel, dime, and quarter and will determine the value of a collection of pennies and/or nickels whose total value is 10 cents or less.

**Related SOL** K.4a

## Materials

- Tag board
- Glue or tape
- Assortment of pennies, nickels, dimes, and quarters (either real or play money)
- Brown paper bags with collections of coins (one bag per two students)
- Price tags showing prices of between one cent and 10 cents

## Vocabulary

*penny, nickel, dime, quarter, cents, value, one cent, five cents, ten cents, twenty-five cents*

## Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

Note: Prior to instruction, create money strips, as follows: Attach two pennies to a one-inch square of tag board, one on one side of the board and the other on the other side. Be sure to display both the head and the tail of the penny. Similarly, attach two nickels to a 1 x 5 inch strip of tag board marked off in one-inch squares, attach two dimes to a marked-off 1 x 10 inch strip, and attach two quarters to a marked-off 1 x 25 inch strip. Create at least 10 penny strips and two nickel strips.

Also prior to instruction, label classroom items with price tags of from one cent to 10 cents.

1. Show and name each of the four kinds of coins. Show the money strips, and ask students to name the coin on each. Relate the value of each coin to the number of squares on the strip to which it is attached. Discuss the meanings of “one cent,” “five cents,” “ten cents,” and “twenty-five cents.”
2. Ask students to repeat the meaning of “five cents,” and then ask how many ways you can make five cents by making a strip that is five squares long. (five penny strips or one nickel strip). Ask students how they could pay for something in a store that costs five cents. (Use five pennies or use one nickel.)
3. Ask students to repeat the meaning of “ten cents,” and then ask how many ways you can make 10 cents by making a strip that is 10 squares long (10 penny strips, or five penny strips and one nickel strip, or two nickel strips, or one dime strip). Ask students how they could pay for something in a store that costs 10 cents (Use 10 pennies, or use five pennies and one nickel, or use two nickels, or use one dime).
4. Lead students in counting on from five by first putting down a nickel strip and then adding penny strips one by one while counting, “five, six, seven, eight, nine, ten.”

5. Display a collection of pennies, nickels, dimes, and quarters, showing both heads and tails of each type of coin. Invite the students to sort the coins into four groups. Discuss how each of the coins is different. Show and name each of the coins. For review, hold up a coin, and ask a student to name it.
6. Group students into pairs. Distribute a brown paper bag containing a collection of coins to each pair. Explain that one partner will reach in the bag and pull out one coin, and the other partner will name the coin. The partners will then switch and repeat the activity. Then, they will repeat the whole activity several times.
7. To practice counting on from five cents, have students start from five and count to 10 by ones. Hold up five fingers, and have students tell how many fingers there are without counting. Then put up one finger at a time from the other hand, and have students count on from five. This same process can be done with a ten frame. Begin with five counters already in a top row. Then place one more counter on the bottom row, and have students tell the new number. Continue until you get to 10. Show students a nickel, and say “five.” Add one penny at a time, and have students tell the new amount of money.
8. For the final part of the lesson, let the students use their coins to select items in the classroom that have been labeled with price tags from one cent to 10 cents. Give a bag of coins to each student for the shopping activity. Review the name and value of each coin prior to shopping. Have students count the value of the coins in their bag. Then, allow them to “go shopping” to purchase one item with their coins. Have them bring the items they wish to purchase to the clerk (teacher), who verifies that the total value of the coins matches the price of the item. Have students trade bags and repeat the activity.

### Assessment

- **Questions**
  - “How can you make six cents, using pennies and nickels?”
  - “I have a silver coin in my pocket. What coin could be in my pocket?”
- **Journal/Writing Prompts**
  - Have students write and draw everything they know about a penny (repeat with other coins).
  - When given the prompt, “If I were a coin,” have students draw a picture of the coin they want to be and write why.
- **Other**
  - Have students sort a collection of coins and explain how they sorted it.
  - Have students play a bingo game about money in which they identify the coins by name and value.
  - Have students create a coin booklet in which they draw or stamp a picture of each coin and write its value.

### Extensions and Connections (for all students)

- Have students use pocket charts to sort the coin images (heads and tails), names, and values. Let students practice this activity in a center.

**Strategies for Differentiation**

- Provide sorting charts (T-table or chart) to sort coins by coin name and by value.
- Create a large T-table or chart to sort large images of coins by coin name and by value.