

LESSON 10

Objective

Know the quarter.

Common Core State Standards

- **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?

Measurement and Data

Understanding Quarters

When they're ready, children will relate their knowledge of the penny, nickel, and dime to the quarter. Since there are various coin combinations that are equivalent to a quarter, children will need to have a good understanding of the previous coins before advancing to the quarter. With the quarter being $\frac{1}{4}$, or 0.25, of a dollar, children will be able to carry their understanding of quarters into their study of fractions and decimals.

Try It!

Perform the Try It! activity on the next page.

Talk About It

Discuss the Try It! activity.

- **Ask:** How many spaces do the 3 quarter tiles cover on the Hundred Board? How much are 3 quarters worth? Where should you place the 4 dime tiles? How many rows do the 4 dimes cover? **Say:** Now you need to decide how many nickels you can trade for the amount that is left.
- **Ask:** How much of the 75¢ is left? How many nickels can be traded for 35 cents? **Say:** Place 7 nickel tiles on the remaining quarter tiles. **Ask:** Is there any part of the 75¢ left? **Say:** Sophie should give the boy 4 dimes and 7 nickels for his 3 quarters.

Solve It

With children, reread the problem. **Ask:** What if the boy asked for 3 dimes and the rest nickels? How many dimes and nickels would Sophie give the boy? Have children use Coin Tiles on the Hundred Board to show the change and write or draw the number of dimes and nickels.

More Ideas

For other ways to teach about quarters—

- Have pairs use the Four-Section Spinner (BLM 14) and draw a penny (purple circle), a nickel (red circle), a dime (blue circle), and a quarter (green circle) in the 4 sections. Have one child spin 4 times and show the coins with tiles on the Hundred Board. Have the second child tell the amount of the coins and tell another way to show the same amount. Switch roles and repeat.
- Have partners pick a number (25¢–99¢) from a bag. Have one child show that amount using penny, nickel, and dime tiles. Have the other child show the amount using penny, nickel, dime, and quarter tiles. Switch roles and repeat.

Formative Assessment

Have children try the following problem.

Which coins equal 2 quarters?

- A. 2 dimes, 2 nickels, 10 pennies
- B. 3 dimes, 1 nickel, 10 pennies
- C. 3 dimes, 2 nickels, 10 pennies

Try It! 30 minutes | Pairs

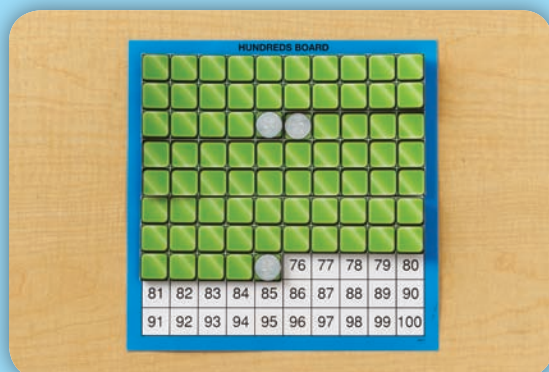
Here is a problem about understanding quarters.

Sophie was helping make change at the school fair. Children were using coins to play the games. Different games cost different amounts. Many of the children came with quarters and wanted change for the nickel and dime games. One boy gave Sophie 3 quarters and asked for 4 dimes and the rest nickels. How many dimes and nickels should Sophie give the boy?

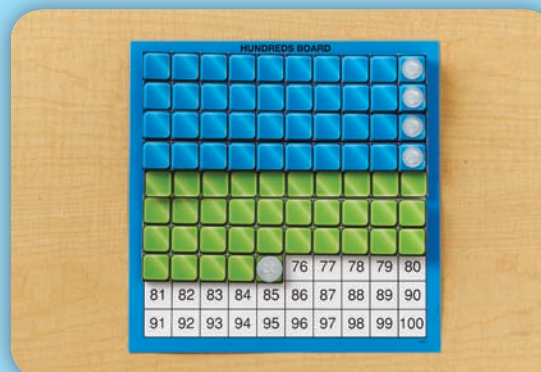
Introduce the problem. Then have children do the activity to solve the problem. Distribute Coin Tiles, Hundred Boards, paper, pencils, and crayons to children.

Materials

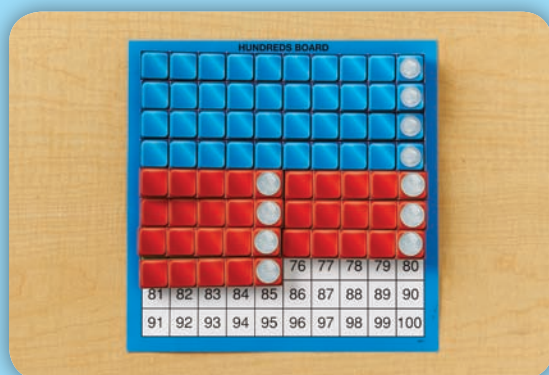
- Coin Tiles (1 set per pair)
- Hundred Boards (1 per pair)
- paper (1 sheet per pair)
- pencils (1 per child)
- crayons (1 set per pair)



1. Ask: How much is a quarter worth? Have children place dime, nickel, and penny tiles on top of a quarter tile to explore which coins equal a quarter. **Say:** Since the boy gave Sophie 3 quarters, place 3 quarter tiles on the Hundred Board. **Ask:** How much are 3 quarters worth?



2. Ask: How many dimes did the boy ask for? **Say:** Use 4 dime tiles to cover part of the quarters on the Hundred Board.



3. Ask: How much is left of the 75 cents we started with? How many nickels can you make with the amount left? **Say:** Place nickel tiles on the remaining spaces to cover a total of 75 cents.

Look Out!

Watch for children who are having difficulty trading coins for quarters. Since a quarter's value does not end in 0, this may be confusing for some children. Provide these children more time to place dime, nickel, and penny tiles on top of the quarter tiles.

Use Coin Tiles and a Hundred Board.

Find the value of the coins.

(Check students' work.)

1.



= 60¢

2.



= 48¢

3.



= 69¢

4.



= 96¢

Draw the coins you would use to pay for the item.

5. a puzzle that costs 67¢

Possible answer:
2 quarters, 1 dime,
1 nickel, 2 pennies

6. a comic book that costs 88¢

Possible answer:
3 quarters, 1 dime,
3 pennies

Answer Key

Challenge! Josh has 6 coins in his pocket. The coins total 56¢. Draw the coins that are in his pocket.

Challenge: 1 quarter, 2 dimes, 2 nickels, and 1 penny

Use Coin Tiles and a Hundred Board.

Find the value of the coins.

1.



= _____

2.



= _____

3.



= _____

4.



= _____

Draw the coins you would use to pay for the item.

5. a puzzle that costs 67¢

6. a comic book that costs 88¢

Name _____

Challenge! Josh has 6 coins in his pocket.
The coins total 56¢. Draw the coins that are
in his pocket.
