Objective

Know the relationship between the penny and the nickel.

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

The Penny and Nickel

An understanding of money is an important life skill, as it is essential in paying for goods and services, making change, and checking that correct change has been received. Coin Tiles can help children visualize the relationships between coins and help children build a foundation for deeper work with money, such as performing operations with money amounts.

Try It! *Perform the Try It! activity on the next page.*

Talk About It

Discuss the Try It! activity.

- **Ask:** *How much does the toy car cost? How much money does Jared have? Which is greater, 22 or 20? Does Jared have enough money? How much more money does Jared need?*
- **Say:** *Place the 3 nickel tiles and the 5 penny tiles on the Hundred Board starting at 1.* **Ask:** *How many pennies would you need to reach 22?* On the board, write *22 − 20 = 2.*
- **Say:** *Let's say Jared's grandma gives him another nickel.* **Ask:** *How much money would he have? Would he have enough money to buy the toy car?* Have children put another nickel tile with their Coin Tiles and count the coins, or add 20 + 5.

Solve It

With children, reread the problem. Have children draw the coins and write a number sentence showing how much money Jared has. Have them write a sentence telling whether or not Jared can buy the car.

More Ideas

For other ways to teach about the relationship between pennies and nickels—

- Have children work in pairs. Have one child pick a handful of penny tiles out of a bag. Have that child trade in as many pennies as possible for nickels and give the coins to the other child. Have the second child place the tiles on a Hundred Board and tell how much money it is. Switch roles.
- Have children work in pairs. Have one child roll a number cube and take that many nickel tiles. Have the other child roll the number cube and take that many penny tiles. Have the two work together to add the values of the coins.

Formative Assessment

Have children try the following problem.

How many nickels equal 30 pennies?

A. 4   **B.** 5   **C.** 6

Try It! 30 minutes | Pairs

Here is a problem about the relationship between pennies and nickels.

Jared wants to buy a toy car that costs 22 cents. He has 3 nickels and 5 pennies. Does he have enough money to buy the toy car?

Introduce the problem. Then have children do the activity to solve the problem. Distribute Coin Tiles, Hundred Boards, paper, pencils, and crayons to children.
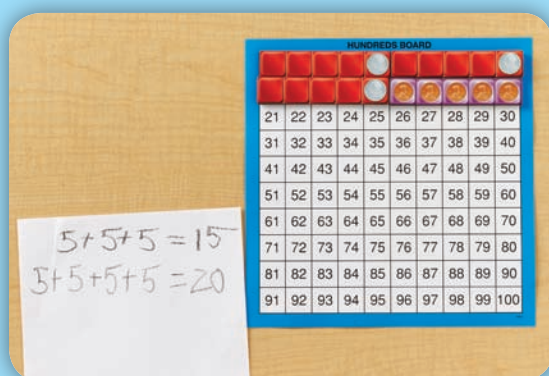
Materials
- Coin Tiles (1 set per pair)
- Hundred Boards (1 per pair)
- paper (1 sheet per pair)
- pencils (1 per child)
- crayons (1 set per pair)
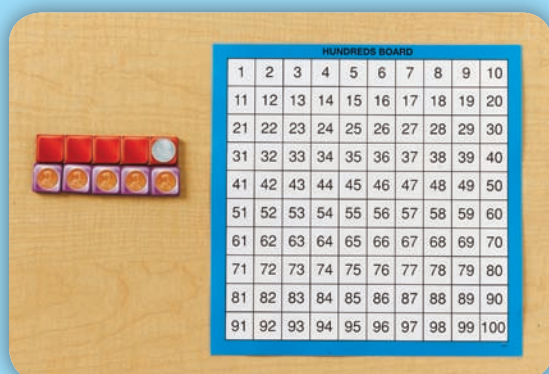
1. Ask: *What do we know about pennies and nickels? How much is 1 penny worth? How much is 1 nickel worth? How many pennies are worth 1 nickel?* **Say:** *Show how many pennies equal 1 nickel by placing penny tiles next to a nickel tile.*
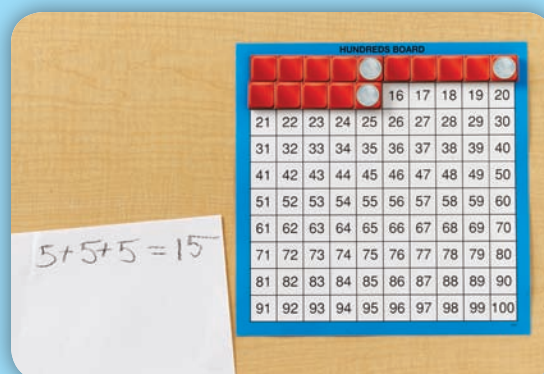
2. Say: *Jared has 3 nickels. We know that 1 nickel equals 5 pennies, or 5 cents.* **Ask:** *How much are 3 nickels worth?* Have children lay out 3 nickel tiles and count by 5s, or place the tiles on the Hundred Board to demonstrate the value. Have children write 5 + 5 + 5 = 15. Then have them practice making the cent sign and write 15¢.

⚠️ Look Out!

Watch for children who have difficulty knowing where to start placing tiles on the Hundred Board or how to position the tiles. Explain that they should start at 1 and build their amounts horizontally without skipping any spaces.

3. Ask: *How many pennies does Jared have?* **Say:** *Put 5 penny tiles with your 3 nickel tiles.* **Ask:** *How much are the 3 nickels worth? How much is 15 cents plus 5 cents? Does Jared have enough money to buy the toy car?*

Use Coin Tiles and a Hundred Board. Build the model. Write the total amount of money.

(Check students' work.)

1.

				(nickel)					(nickel)
(penny)	(penny)	(penny)	(penny)	(penny)	(penny)	(penny)	18	19	20

17¢

Use Coin Tiles and a Hundred Board. Build a model. Draw the model. Write the total amount of money.

2.

(nickel) (nickel) (nickel) (nickel) (penny)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

22¢

3.

(nickel) (nickel) (nickel) (nickel) (nickel)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

25¢

Use Coin Tiles. Show the amount two ways using nickels and pennies. Draw the coins using red for nickels and purple for pennies.

4. 16¢

3 nickels and 1 penny,
2 nickels and 6 pennies,
1 nickel and 11 pennies

5. 25¢

4 nickels and 5 pennies,
3 nickels and 10 pennies,
2 nickels and 15 pennies,
1 nickel and 20 pennies

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Challenge! Thad has money for games at the fair. He has 27¢ in pennies. He wants to play at least 10 games of penny toss and some nickel races. How many nickel races can he play and keep at least 10¢ for penny toss? Draw or use words to explain.

Challenge: (Sample) He could use 3 nickels for the nickel race and have 12 pennies for the penny toss.

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Name _____

Use Coin Tiles and a Hundred Board. Build the model. Write the total amount of money.

1.

				🪙					🪙
🪙	🪙	🪙	🪙	🪙	🪙	🪙	18	19	20

_____

Use Coin Tiles and a Hundred Board. Build a model. Draw the model. Write the total amount of money.

2. 🪙 🪙 🪙 🪙 🪙

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

_____

3. 🪙 🪙 🪙 🪙 🪙

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

_____

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4. 16¢

5. 25¢

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