# Lesson 22
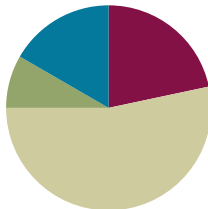
Objective:  Identify varied coins by their image, name, or value.  Add one cent to the value of any coin.

## Suggested Lesson Structure

| | | |
|---|---|---|
| ■ Fluency Practice | (13 minutes) | |
| ■ Application Problem | (5 minutes) | |
| ■ Concept Development | (32 minutes) | |
| ■ Student Debrief | (10 minutes) | |
| **Total Time** | **(60 minutes)** | |

## Fluency Practice  (13 minutes)

- Core Fluency Differentiated Practice Sets  **1.OA.6**    (5 minutes)
- Standards Check:  Addition Within 20  **1.OA.6**    (8 minutes)

### Core Fluency Differentiated Practice Sets  (5 minutes)

Materials:   (S) Core Fluency Practice Sets (Lesson 1)

Note:  Give the appropriate Practice Set to each student.  Students who completed all questions correctly on their most recent Practice Set should be given the next level of difficulty.  All other students should try to improve their scores on their current levels.

Students complete as many problems as they can in 90 seconds.  Assign a counting pattern and start number for early finishers, or have them practice make ten addition or subtraction on the back of their papers.  Collect and correct any Practice Sets completed within the allotted time.

### Standards Check:  Addition Within 20  (8 minutes)

Materials:   (S) Personal white board

Note:  This fluency activity shows which strategies students are using to add within 20.  Students may show their work with a number bond, the arrow way, multi-step equations, or listing numbers to show how to count on.

Write the following list of strategies:

1. Count all.
2. Count on.
3. Make ten.

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4. Use a doubles fact.
5. Use a helper problem (e.g., to solve 15 + 3, add 5 and 3 first).

Say an addition expression. Students use their personal boards to solve. Choose students who used different strategies to share what they did, or instruct students to share their strategies with a partner.

Suggested sequence:

- 9 + 2, 3 + 9, 2 + 8 + 2
- 5 + 6, 7 + 6, 4 + 4 + 6
- 15 + 1, 3 + 16
- 13 + 4, 12 + 7

## Application Problem  (5 minutes)

Peter has 6 more red pencils than blue pencils.  He has 8 blue pencils. How many red pencils does he have?

Note:  Today's problem is a *compare with bigger unknown* problem type. Because yesterday's Application Problem suggested an incorrect operation, students may expect the same experience with today's problem.  Encourage students to read through the entire problem, checking that their drawings and solutions make sense for all sentences in the story problem.  Having students check their work helps them to become better problem solvers.  Be sure to point this out.
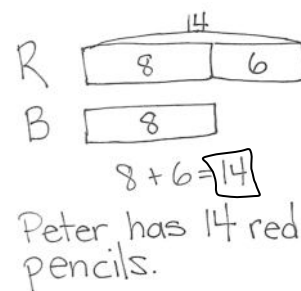


## Concept Development  (32 minutes)

Materials:  (T) 5–10 different quarters (e.g., various commemorative quarters), 5 dimes, 5 nickels (possibly with different images), 20 pennies, 1 dollar coin if available (real or plastic), projector (S) 1 quarter, 2–5 dimes, 3–5 nickels, 10–20 pennies (real or plastic), 1 die, coin spinner with quarter (Template), paper clip, pencil per pair, personal white board

Gather students in the meeting area with their materials.  Distribute 1 or 2 coins to each student as they come to the meeting area.

T:  I had all of these coins at home.  Tell your partner the name and value of the coin(s) you have.  Explain how you know what coin it is.  (Wait as students share. Consider having them pass their coin to the right until each student has had a chance to identify all the major coins.)

T:  Let's sort them into piles of the same coin.  (Call out each coin.  Students holding that type of coin place their coins in a common pile in the middle of the group.)

**NOTES ON MULTIPLE MEANS OF ENGAGEMENT:**

If a classroom economy has started, use students' coins to have them identify the image, name, and value of coins.  Allow students to trade their pennies (or nickels) for different coins if they have enough to do so.

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T:  (Point to the pennies.)  What kind of coins are these?

S:  Pennies!

T:  What is the value of 1 penny?

S:  1 cent!

T:  (Push forward 1 nickel.)  What is the name of this coin?

S:  It's a nickel.

T:  What is its value?

S:  5 cents.

T:  Use a complete sentence.  A nickel's value is…?

S:  A nickel's value is 5 cents.

T:  (Push 1 penny next to the nickel.)  If I have 1 nickel *and* 1 penny, how many cents do I have altogether?

S:  6 cents!

**MP.4**

T:  How do you know?

S:  5 + 1 = 6.  → 5 cents plus one more cent is 6 cents.

T:  (Draw 1 nickel and 1 penny on the chart paper, including their individual values and their total value, as shown to the right.)

nickel  penny

(5) (1)

5 cents + 1 cent = 6 cents
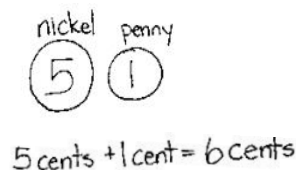
Repeat the process, first with 1 dime and 1 penny, and then with 1 quarter and 1 penny.  Finally, push forward the dollar coin.

T:  (Push forward a 1 dollar coin.)  Does anyone know the name of this coin?

S:  It's a **dollar coin**!  (If students do not know, introduce this as a dollar coin.)

T:  A dollar coin is worth 100 cents!

T:  (Push 1 penny next to the dollar coin.)  If I have a 1 dollar coin whose value is 100 cents and 1 penny, how many cents do I have altogether?

S:  101 cents!

T:  (Add the dollar coin and penny to the chart paper, including their individual values and their total value.)

> **NOTES ON**
> **MULTIPLE MEANS**
> **OF ENGAGEMENT:**
>
> Engage students in a hunt at home for quarters, pennies, and nickels with various images.  When students bring in their findings, have them sort and name each coin and its value.  Encourage students to share interesting observations.

dollar  penny

(100) (1)

100 cents + 1 cent = 101 cents
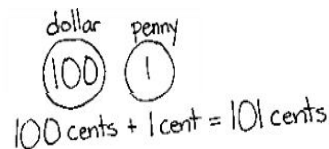
Based on students' ability to identify the name, value, and image of each coin, choose one of the games played during the past two days.  To practice coin values of the dime, nickel, and penny, play Coin Trade. To practice adding on coins as well as trading coins, play 25 Cents.

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**Coin Trade**

If students are ready, include the quarter, and use the new spinner at the end of this lesson.

The object of the game is to continue to trade coins, always having 10 cents.

Materials:   Each player has 10 pennies (25 pennies, if using the new spinner) and the spinner with a paper clip and pencil; each pair has a pot with pennies, nickels, and dimes (and quarters if using the new spinner) for trading per pair.

- Partner A spins the spinner.
- Partner A trades pennies for the coin landed on.  (For instance, if the student lands on a nickel, he trades 5 pennies for 1 nickel.  If he lands on a dime, he trades 10 pennies for 1 dime.  If he lands on a penny, he trades a penny for a penny.)  Player A counts his coins to be sure he still has 10 cents.
- Partner B takes a turn.  Player B counts her coins to be sure she still has 10 cents.
- Play continues as time allows.
- The person with the most pennies at the end of the game is the winner.

As play continues, students might land on the coins they already have, such as landing on a penny when they have 10 pennies.  Students may trade one of their pennies for a new penny.  Play the game for about five minutes or as time allows.

**25 Cents**

The object of the game is to be the first player to exchange their money for 1 quarter.  For students who are ready for greater challenges, you can choose to make the goal 50 cents or 100 cents.

Materials:   One die; 25 pennies, 5 nickels, 3 dimes and 2 quarters for trading; and a pot per pair of students

- Put all coins in a pot in the middle.
- Player A rolls the die and takes that number of pennies.
- Player B rolls the die and does the same.
- On each turn, players roll the die, add the additional pennies, and exchange their pennies for larger coins, if possible.  For instance, if Player A has 6 pennies, he may trade 5 pennies for 1 nickel.  If Player B has 1 nickel and 5 pennies, she may trade the coins for 1 dime.
- Play continues until a player can exchange his coins for 1 quarter, explaining that he has 25 cents.

## Problem Set  (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes.  For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first.  Some problems do not specify a method for solving.  Students should solve these problems using the RDW approach used for Application Problems.

# Student Debrief (10 minutes)

**Lesson Objective:** Identify varied coins by their image, name, or value. Add one cent to the value of any coin.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- Look at Problem 2. What other combinations of coins could you use to have the same value as a quarter? As a dime? As a nickel?
- Look at Problem 3. What are some ways to tell a nickel from a quarter?
- Create other problems like those in Problem 5. Who can identify the coin with the same value?
- What new coin did we see today? (**Dollar coin.** If applicable) Have you seen the dollar coin before? Where have you seen or used it?

## Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lessons. The questions may be read aloud to the students.

Name _____     Date _____

1. Use the word bank to label the coins.

   | quarter   dime   nickel   penny |

   a. _____     b. _____     c. _____     d. _____

2. Match the coin combinations to the coin on the right with the same value.
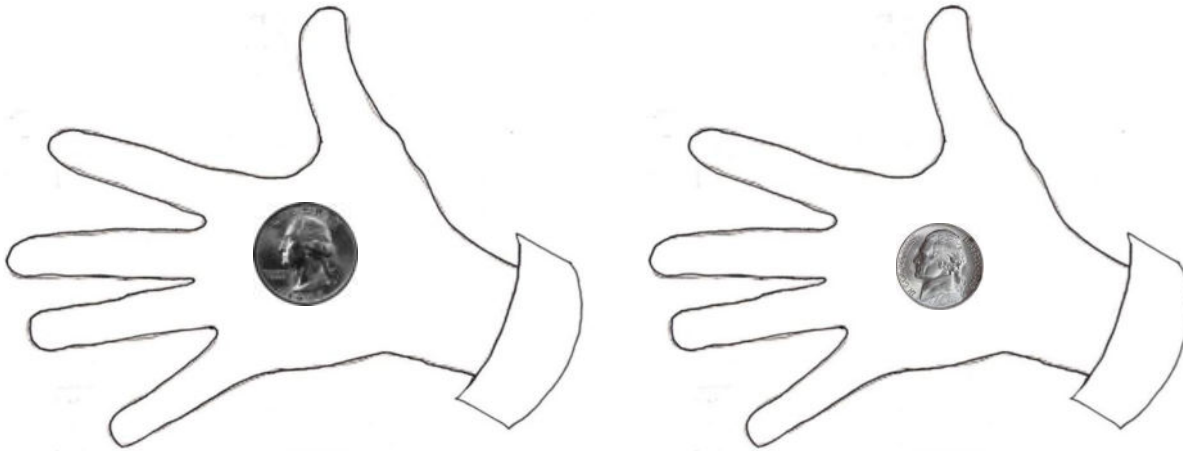
   a.

   •          •

   b.

   •          •

   c.

   •          •

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3.  Tamra has 25 cents in her hand.  Cross off (x) the hand that cannot be Tamra's.



4.  Ben thinks he has more money than Peter.  Is he correct?  Why or why not?

       **Ben's Money**                    **Peter's Money**



Ben is _____ because _____

_____

5.  Solve.  Match each statement to the coin that shows the value
    of the answer.

    a.  5 pennies = _____ cents

    b.  6 cents + 4 cents = _____ cents

    c.  1 quarter = _____ cents

    d.  6 cents – 5 cents = _____ cent(s)

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Name _____    Date _____

Draw a line to match each coin to its correct name.

| dime |

| nickel |

| penny |

| quarter |

Name _____    Date _____

1.  Match the label to the correct coins, and write the value.  There will be more than one match for each coin name.

a.

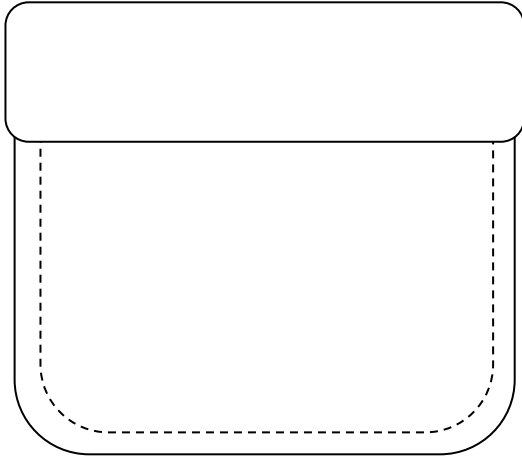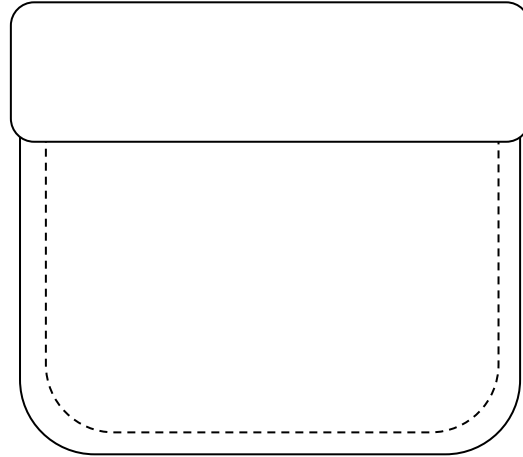| **nickel** |
| _____ cents |

b.

| **dime** |
| _____ cents |

c.

| **quarter** |
| _____ cents |

d.

| **penny** |
| _____ cent |

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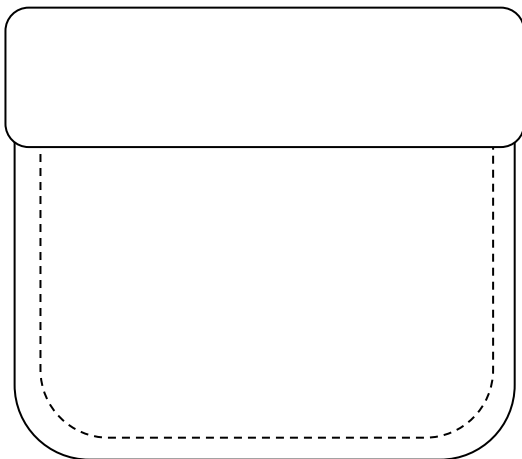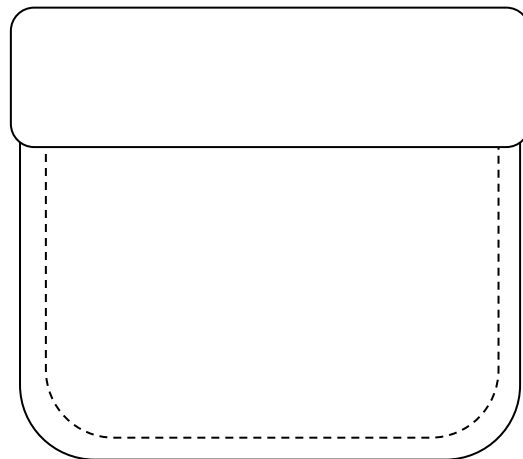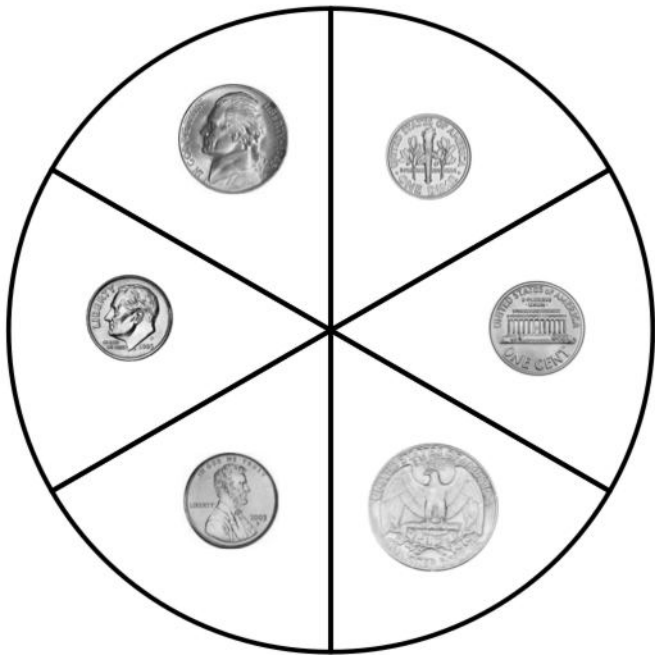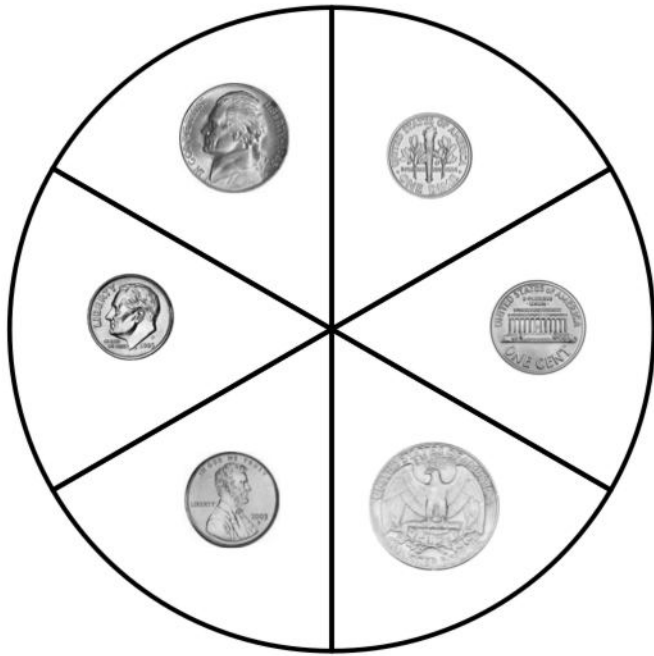
2.  Lee has one coin in his pocket, and Pedro has 3 coins.  Pedro has more money than Lee.  Draw a picture to show the coins each boy might have.

**Lee's Pocket**                                    **Pedro's Pocket**

3.  Bailey has 4 coins in her pocket, and Ingrid has 4 coins.  Ingrid has more money than Bailey.  Draw a picture to show the coins each girl might have.

**Bailey's Pocket**                                **Ingrid's Pocket**

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coin spinner with quarter