Exploring Money

Adding, Counting, Sorting, and Patterning
Exploring Money: Adding, Counting, Sorting and Patterning
A Math Learning Center Publication

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1. The Days in School chart

Overheads
1. One Turn to Win gameboard
2. Two Turns to Win gameboard
3. Coins on Board gameboard
4. Coins on Board coordinate cards
5. Coins on Board record sheet
6. Two Turns to Win: Count & Compare record sheet
7. Race to a Quarter gameboard
8. 25¢ or Bust! coin cards
9. 25¢ or Bust! record sheet
10. Spin, Shake, Reach & Add gameboard
11. How Much Money?
12. Three Turns to Win gameboard
13. Three Turns to Win: Count & Compare record sheet

Student Book
Coin Patterns
Pennies: 5 & More
Pennies: 5 & More pieces
Coins on Board record sheet
Coins on Board record sheet
Two Turns to Win: Count & Compare record sheet
25¢ or Bust! record sheet
Spin, Shake, Reach & Add record sheet
How Much Money?
Make It Equal
Share & Share Alike
Three Turns to Win: Count & Compare record sheet
How Much Is Each Collection Worth?

Economy Materials Masters
Coin Cards
Coin Pattern Cards
Five & More Number Sentences
Five & More Cards
A Nickel & More Cards
Bridges Breakouts

Exploring Money  Adding, Counting, Sorting and Patterning
Exploring Money strengthens students’ understanding of money with 35 ses-
sions designed for use once a week over a school year. Children practice identi-
fying, counting, and adding coins. The “You’ll need” list outlines supplies you
need to gather in order to conduct the lessons. Deluxe Breakout contents are
also listed; those who purchased an Economy Breakout will need to collect
these items as well.

You’ll need
★ overhead projector
★ overhead pens (4 different colors)
★ pocket chart
★ a sock box (Slide a yogurt or cottage cheese carton into a stretchy sock.)

Deluxe Breakout includes
★ overhead coins
★ Coin Cards
★ Coin Pattern Cards
★ Five & More Number Sentences
★ Five & More Cards
★ A Nickel & More Cards
**Challenge 1**

### EXPLORING MONEY

#### Sorting Coin Cards at the Pocket Chart

**Overview**

In this lesson, children examine a set of Coin cards for likenesses and differences and then sort the cards in several different ways.

**Skills**

- identifying coins by names and values
- identifying likenesses and differences
- sorting by various attributes

**You’ll need**

- Coin cards
- pocket chart

**Note** Some students are more interested in this and some of the other money lessons when they are allowed to handle small collections of real or plastic coins individually or in partners prior to considering the pictures of coins at the pocket chart.

Because sorting encourages children to notice likenesses and differences, it’s a good way to help them begin to learn coin names and values. You might open this lesson by displaying eight coin cards in your pocket chart (heads and tails for each coin—penny, nickel, dime, and quarter). Once the cards are set out, ask students for observations.

**Teacher** Look at the pocket chart. What do you notice about the coins?

**Children** Some are gray and 2 are brown. There are some pennies and nickels. And some quarters. There are some of those 10's too.

**Teacher** You’ve made some great observations about the coins. Does anyone know the other name for the 10's?

**Marcie** Those are dimes.

After children have had a chance to share their observations, remove the cards from the pocket chart and distribute them, along with the other cards...
in your collection, among your students. There are 35 coin cards in the set, so each child should be able to have one. Then engage them in some simple sorting based on their initial comments about the coins.

**Teacher** Let’s put all the silver coins together on one side of our pocket chart and all the brown coins on the other side. If you have a silver coin in your hand, please bring it to the pocket chart. Now let’s put the brown coins on this side. How have these coins been sorted?

**Anna** By brown and silver!

**Teacher** That’s right, we’ve sorted the coins by color.

Continue soliciting sorting possibilities and placing the coins accordingly into the pocket chart. Our first graders have suggested sorting by color, value, heads and tails, and size, as shown below. Your students may have other ideas.
Challenge 2

EXPLORING MONEY

Coin Patterns

Overview
This mini-lesson extends the sorting children did last week into patterning, as they copy and extend several different coin sequences at the pocket chart.

Skills
★ identifying coins by names and values
★ recognizing, describing, and extending patterns

You’ll need
★ Coin Pattern cards
★ Coin cards, arranged by coin type on a nearby desk, table, or shelf
★ pocket chart

Start by posting one of the Coin Pattern cards in your pocket chart. Ask children to name the coins in the pattern and whisper to a friend what should come next. With students’ help, use the coin cards to build the pattern in the pocket directly below. Ask two volunteers to extend the pattern to the end of the pocket as the other children watch. Then ask students to “read” the pattern, first by coin value and then by coin name.

Continue in this manner with each of the Coin Pattern cards. You’ll notice that some of the patterns involve growth. Some children may think there’s been a mistake, not seeing a steady rate of change as another kind of pattern. Take some time to talk about growing patterns.
Teacher  Here’s a different kind of pattern. What do you think is happening?

Sarah  First it’s 2, then it’s 3, then it’s 4.

Stephanie  It’s a dime with 1 nickel and then a dime with 2 nickels and a dime with 3 nickels.

Jacob  I’ve got it. It’s getting more money each time. Next time it will be a dime with 4 nickels, then 5 nickels.

Teacher  Jacob, you seem to have some definite ideas about this pattern. Would you like to come up and build the pattern with large coins and then show us what you think would come next? You can use 2 pockets to do your work. The rest of you, watch carefully to see what you think of Jacob’s idea.
**Teacher** What do you think, girls and boys?

**Children** It's like I thought—1 and 1, 1 and 2, 1 and 3, 1 and 4. The nickels are getting more each time. I see 1, 2, 3, 4 on the nickels row.

**Teacher** Let's see if we can figure out how to count each group. How much is the first group worth? the second? the third? and the group of coins Jacob added at the end? How much money would be in the group after that?

While some of your students may not understand this pattern or some of the others, they will almost surely be getting something out of this lesson. It might be as simple as counting the coins by 1’s for some students, while others may be starting to recognize the coins by name and/or value. Some children will be learning to count by 5’s and 10’s, while a few may be processing and extending the most sophisticated patterns. There is something for everyone in the activity, and that is all we ask of any single lesson, knowing that students will have many other opportunities to learn these skills.
Challenge 3

EXPLORING MONEY

Coin Patterns Worksheet

Overview
In this lesson children work together to create several different coin patterns at the pocket chart. Then using the first page in the Student Book, they each create two of their own coin patterns.

You’ll need
★ Coin cards
★ pocket chart
★ Student Book, page 1
★ scissors, pencils, and glue

Skills
★ identifying coins by names and values
★ creating coin patterns

Open the lesson by asking students to work together to build several coin patterns, including a growing pattern, in the pocket chart. Read these patterns together and then show children the worksheet they’ll complete today. Explain that they’re to cut around the coin boxes at the bottom of the sheet and use them to create two different patterns in the boxes at the top.
Leave one of the coin patterns in the pocket chart for children who may need help to get started. Some students might copy this pattern or use it as a starting point to create one of their own, while others will be quick to generate new patterns on their worksheets with very little trouble. Some children may become totally engaged in cutting and gluing and forget the task at hand. Though it’s always a judgment call, we usually give them a new sheet, offer to help them cut new pieces and guide them in planning and gluing the first pattern.

**Looking at Children’s Work**

We like to chat with as many children as we can as they’re finishing, and jot some quick notes on their papers regarding their comfort level with coin names and values and their ease with patterning. This information is helpful in planning future lessons and working with individual students. You may want to collect the worksheets and save them in children’s work folders.
Challenge 4

EXPLORING MONEY

The Date in Coins

Overview
In this lesson, children work together to figure out how to display the day’s date in coins at the pocket chart. The amount of modeling and guidance needed will depend partly upon how much coin work your students have had, although the money lessons you’ve taught will also influence their thinking.

You’ll need
- Coin cards
- Pocket chart

Skills
- Identifying coins by names and values
- Combining coins to match the number of the day’s date
- Counting by 10’s, 5’s, and 1’s

Ask children to think about how to show the day’s date in coins at the pocket chart.

Teacher It’s time for Exploring Money. Today we’re going to use the coin cards in our pocket chart to show the amount of money for the date. How many days have passed this month?

Children 20!

Teacher How could you use our coin cards to show 20¢?

David You could use 20 pennies.

Teacher That’s true, but we only have 15 penny cards. We’ll have to think of something else. Sammy, why don’t you show us your idea?

Sammy That’s easy for me. It’s two 10’s. See, I can use 2 dimes. 10, 20!

Savannah I can see 5, 10, 15, 20. I’m going to use all 5’s. See?
Teacher  Savannah, why don’t you point to the nickels while we all count by 5’s?

Children  5, 10, 15, 20!

Jesse  I have another idea. Those 2 nickels are like a dime. I can do it another way. It’s 10 and 2 more 5’s make another 10, so it’s 20!

Samuel  I have a different idea but I need some pennies. I can do 3 nickels and 5 pennies.

Teacher  These are great ways to make 20¢. Let’s count them together. Are there any other possibilities?
Challenge 5

Matching Five & More Cards with Number Sentences

Overview
In this lesson, the teacher introduces a set of cards in which pennies have been organized into single ten-frames for easy counting. After children have examined each of the 5 cards and shared their strategies for counting the pennies, the teacher introduces a set of matching number sentences. Children then play a game to match the 2 sets of cards, and finally display the pairs on the pocket chart.

You’ll need
★ Five & More cards
★ Five & More number sentences
★ your key ring or a small bell
★ pocket chart

Skills
★ counting by 5’s and 1’s
★ adding 5 and more
★ matching number sentences to visual models

Begin the lesson by displaying one of the penny cards on your pocket chart. How many pennies are on the card? How are students counting them?

Children That’s easy. It’s 6!
5 and 1 more makes 6.
You can just say 5, 6.
You can go 1, 2, 3, 4, 5, 6 too.

Show the rest of the penny cards, one at a time. Ask children to determine how many pennies are on each and have them share their counting strategies with classmates. After you’ve gone through the set, hand these cards out to 5 students.

Show a number sentence card and guide the children in reading it. Ask the child who is holding the matching penny card to stand. Do the cards really match?
Display the rest of the number sentence cards, one at a time. As you show each card, work with students to read it, and then ask the child who is holding the matching penny card to stand.

Finally, collect all the penny cards. Distribute these cards, along with the number sentence cards, to students who haven’t yet had a turn to hold anything. Explain that you’re going to jingle your keys while everyone who is holding a card moves about searching for a classmate with a card that matches theirs. There are only ten cards in the set, so you might go through the game twice to give everyone a turn. Once the second round is finished, ask children to return to the group meeting area and be seated with their partners. Call on youngsters, two at a time, to place their matching cards into the pocket chart.
Challenge 6

EXPLORING MONEY

Nickels Too  A 3-Way Matching Game

Overview
In this lesson, the teacher introduces a set of 5 cards featuring nickels and pennies. These cards match the penny cards and number sentence cards from last week, but may be more challenging for some children to count. After the class has determined how much money is on each of the new cards, children play a game in which they try to match the nickel cards, the penny cards, and the number sentences. Finally, these triple matches are displayed on the pocket chart.

You’ll need
★ Five & More cards
★ Five & More number sentences
★ A Nickel & More cards
★ your key ring or a small bell
★ pocket chart

Skills
★ identifying pennies and nickels by names and values
★ counting by 5’s and 1’s
★ matching number sentences to coin sets

Begin the lesson by showing one of your A Nickel & More cards. How much money is shown on the card?

Children  That’s 4!
No, wait. That’s a nickel. A nickel is 5. I think it’s 8¢.
Wait, maybe it’s 20.

Although students were encouraged to count on from 5 last week as they determined how many pennies were shown on each ten-frame, some children will still find it difficult to jump to the more abstract thinking required when 5 is represented by 1 nickel instead of 5 pennies. For some, the nickel will represent 1 because it is one thing. These youngsters may believe that the total on the card shown above is 4. For students who are starting to think in chunks, it may be difficult to break from counting by 5’s to counting by 1’s. These children may conclude that the amount shown on the card above is 5, 10, 15, 20. You may need to offer some guidance and modeling. We try to accomplish this through questioning rather than telling.
**Challenge 6** (cont.)

*Teacher* I hear a lot of different opinions this time. Let’s see if we can figure it out. How much is the nickel worth?

*Children* 5¢.

*Teacher* How much is a penny worth?

*Children* 1¢.

*Teacher* It’s 5¢ and 3¢. 5, 6, 7, 8—8¢!

You could think about 4 + 4 too, if you took 1 off the nickel and put it with the pennies.

If you had 2 more, it would be 10¢.

Show the rest of the nickel cards, one at a time. Ask children to determine how much money is shown on each and have them share their counting strategies with classmates. Then hand out all three sets of cards—there are 15 in all. Jingle your keys and have the children who are holding cards search out a triple match. This will be a bit more complicated, but with guidance they’ll put everything together. If you feel that every child in your group needs to participate, you can play the game a second time and then have each threesome bring their cards to the pocket chart for the group to see and discuss.

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<td>5¢ + 2¢ = 7¢</td>
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**Challenge 7**

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**EXPLORING MONEY**

**Pennies  Five & More Worksheets**

**Overview**
After reviewing last week’s triple match game, children do an independent version of the activity in their Student Books.

**Skills**
- identifying coins by names and values
- counting nickels and pennies
- matching number sentences and sets of coins

**You’ll need**
- Five & More cards
- Five & More number sentences
- A Nickel & More cards
- your key ring or a small bell
- pocket chart
- Student Book, pages 2–3
- scissors and glue

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Begin the lesson with a quick review of last week’s challenge by handing out all three sets of cards and asking children to find their matches. When your keys stop jingling, there should be five sets of three children around the room. Display the matching sets of cards in your pocket chart. Are they all correct? Have children practice counting how much money there is on each of the nickel cards—this may still pose a challenge to some.

Then show the worksheets to your students. Explain that you want them to cut around the pieces on the second sheet, look carefully to find where they belong on the first sheet, and then glue them down. It’s important to caution children to cut only one set at a time so they don’t mix up all of their pieces. Leave the pocket chart cards posted to help them.
Challenge 7 (cont.)

Pennies 5 & More

Cut around each box. Find the right spot on the worksheet for each piece and glue it down.

5¢ + 1¢ = 6¢
5¢ + 2¢ = 7¢
5¢ + 3¢ = 8¢
5¢ + 4¢ = 9¢
5¢ + 5¢ = 10¢
Challenge 8

The Date in Coins

Overview
This week's money challenge repeats the fourth task, which was building the date in coins at the pocket chart. This may still pose a significant problem for many of your students.

You'll need
★ Coin cards
★ pocket chart

Skills
★ identifying coins by names and values
★ combining coins to match the day's date

Challenge children to think of ways to build the day's date in coins.

Teacher  Wow! It's the 25th. How can we show 25¢ in our pocket chart?

Sarah  Not by 25 pennies—last time you said we don't have enough.

Teacher  That's true! Tommy, do you have an idea? Why don't you show us at the pocket chart.

Tommy  It's two 10's. See, I just used 2 dimes—10, 20! But then you need 5 more. I'm going to do it with pennies.

Marissa  I think you can do it this way too. My dad has been helping me with counting my money.

How much work have your youngsters had with money? If dimes, nickels, and pennies are new to them, they're going to need a lot of guidance from you to build the date in money, especially this late in the month. Don't despair if only a few children are able to contribute now. Have everyone help count each amount as it's placed in the pocket chart and trust that with time and exposure youngsters will gain confidence.
Challenges 9–10

EXPLORING MONEY

One Turn to Win

Overview
In this and next week’s lesson, the teacher plays a simple spinner game featuring money.

You’ll need
★ overhead coins
★ One Turn to Win gameboard (Overhead 1)

Skills
★ identifying coins by names and values
★ counting and comparing coin combinations

Note If you are making your own overheads, be sure to attach a spinner arrow to each spinner on the transparency.

In One Turn to Win, both teams get one turn to spin both spinners on the left-hand side of the gameboard (see next page) and to collect the number of coins indicated. The collections of coins are counted and compared. Then the more/less spinner is spun to determine the winner of each round. This game leads to bigger and better things when it reappears week after next as Two Turns to Win.

Playing Instructions
1. Explain to your class that they are going to work together as a team to play a new game with you.

2. Call on a child to come up and spin the number and coin spinners. How many and which kind of overhead coin can this player collect for her team? Have the child set her coins in the box labeled “Students.” Then have everyone count the coins together. How much is the students’ collection worth?

3. Do the same for yourself. How many and which kind of coin can you collect? Work with your students to count the coins. How much is the teacher’s collection worth? Then spin the more/less spinner to determine who wins—you or your students.
**Teacher**  Hmmm…I got a 3 and dimes.  
I get 3 dimes. How much is that worth?

**Children**  10, 20, 30—you got 30. You win!  
We got 4, though. That’s more than 3!  
But we only got 4 pennies, 30 cents is way more.

**Teacher**  Let’s spin the more/less spinner to see which team wins this time. If it lands on “more,” who will win?

**Children**  You.  
You! You got 30¢—we only got 4¢.  
3 dimes is more than 4 pennies.

**Teacher**  And if it lands on less?

**Children**  The kids!  
4 isn’t very much when it’s pennies.

4. Play several more times before putting the game away with the promise that you’ll play it again next week.
Challenges 11–12

Two Turns to Win

Overview
Two Turns to Win, another team game, is similar to the game you and the children played last week. The difference is that each team gets to spin the spinners twice and total their collections before spinning the more/less spinner to determine the winner.

You’ll need
★ Two Turns to Win gameboard (Overhead 2)
★ overhead coins

Skills
★ identifying coins by names and values
★ counting and comparing coin combinations

Note
If you are making your own overheads, be sure to attach a spinner arrow to each spinner on the transparency.

Playing Instructions
1. Call on a child to come up and spin the number and coin spinners for the students’ team. How many and which kind of overhead coin can the player collect for her team? Place these coins in the class’s top box and ask children to work together to count their “take.” How much is their collection worth so far?

2. Spin the spinners for yourself. How many and which kind of coin can you collect? Place these coins in your top box and ask everyone to help count them. How much is your collection worth?

3. Repeat steps 1 and 2. As the students take another turn, help them count the second amount and determine their total winnings. Do the same for yourself. Which team has more money now? Which has less?

Teacher  Wow! My last spin was 5 nickels. Do you think I’ll win?

Children  No way! We have 35¢.
That’s 5, 10, 15, 20, 25!
You have 2 more pennies too.
Let’s see. That’s 26, 27. You have 27¢. We have more than you.

Teacher  How much do you have?

Jasmine  We have 10, 20, 30 and some more.
Savannah 5 more.

Dimitrius 30 and 5. That’s 35!

Teacher You have 35¢ and I have 27¢. Who wins?

Children We do!
The kids—we have more! More is better.
Spin that spinner ’cause you could still win if it’s less.

4. Spin the more/less spinner to see which team wins. Play another round before putting the game away with a promise that you’ll play it again next week.

Note If your overhead projector stays cool enough that children can safely play on its surface, you might make this overhead game available throughout the day if a few children would like to play again.
Challenges 13–14

EXPLORING MONEY

Coins on Board

Overview
The purpose of today’s game is to name and count coins and to locate coordinates on a grid.

You’ll need
★ Coins on Board gameboard (Overhead NC 3)
★ Coins on Board coordinate cards (Overhead NC 4, cut the cards apart and store in an open envelope)
★ overhead coins

Skills
★ locating coordinates on a grid
★ identifying coins by names and values
★ counting accumulated coins
Begin the lesson by asking children to sit where they can see the screen. Display the gameboard and ask students to share their observations. What do they notice?

**Children**  
There are lots of coins.  
It says Coins on Board at the top.  
I see A, B, C, D at the bottom.  
There are numbers, too.  
The coins are all in squares. I see some pennies.  
I see a dime in the corner, and there’s another one in the same row.  
There are nickels too.  
Hey, we’ve done this game before!

**Teacher**  
You’re right. A while back, you took Coins on Board home to play with your families.

Once children have had a chance to examine the transparency, explain that you’re going to work together to set an overhead coin on top of each coin pictured on the board. Once the coins are laid out, the children will play as a team against you. The coordinate cards will determine the coins each team gets to capture. The team that captures the most money wins.

Before setting out the overhead coins, help children remember how to read coordinates and locate them on the grid. Pull a coordinate card out of the envelope. Display it on the overhead and read it. Have students find that coordinate square on the board and identify the coin pictured in the square. Then have a volunteer set the appropriate overhead coin directly on top of the pictured coin.

Continue in this fashion until three or four coordinates have been located. Quickly set the remaining coins on the gameboard. Mix up the coordinate cards and put them back in the envelope. Ask a student to pull a card out of the envelope and display it on the overhead so everyone can see. Have the child locate the coordinate square, remove the coin, and set it in the Class Box at the bottom of the transparency. What is the name of the coin? How much is it worth? Now it’s your turn.

Play back and forth, stopping every few turns to count the money each team has captured. Guide children to sort the dimes, the nickels, and the pennies into groups to make it easier to count the collections. How much money does the class have? the teacher? Who’s winning so far? How much would the other side need to catch up?
Continue playing until all the coins have been removed from the board. Figure the final scores together and promise the children you’ll play again next week.
Challenge 15

EXPLORING MONEY

Coins on Board  Counting & Recording

Overview
In this activity, the children and teacher play another round of Coins on Board and then show the results on a record sheet. Each coin is translated into a number of squares—10 for each dime, 5 for each nickel, and 1 for each penny. This representation is especially important for youngsters who are still learning to trust that 1 dime represents 10 instead of 1 and that 1 nickel represents 5. Even students who can recite the value of each coin may remain unconvinced of this fact for months to come. The Coins on Board record sheet helps first graders begin to bridge the gap from concrete to more abstract, while offering a model that enables them to count the totals one by one if necessary.

You’ll need
★ Coins on Board gameboard (Overhead 3)
★ Coins on Board coordinate cards (Overhead 4)
★ overhead coins
★ Coins on Board record sheet (Overhead 5)
★ overhead pens in 3 different colors
★ Student Book, page 4
★ a pencil and crayons in 3 different colors for each student
★ a hard writing surface for each student

Skills
★ locating coordinates on a grid
★ counting by 5’s, 10’s, and 1’s
★ determining the sum of coins collected

Begin the lesson with a round of Coins On Board. Play until all the coins have been captured, and then have children turn their attention to page 4 from the Student Book. Have them take a look at the dimes the teacher captured. How much is each dime worth? Ask them to color in a stack of 10 for each dime, using a single color. Do the same at the overhead so students who need help can follow your model. How many nickels did the teacher win? How much is each nickel worth? Color enough 5’s to match the collection of nickels, using a different color. How many pennies did the teacher win? Color in single squares using a third color to match the pennies in the teacher’s coin collection. How much money is that altogether? Write the total in the box.
Repeat this procedure with the money the class won. Record their total in the proper box when you’re finished coloring in the boxes. Which team won? How much would the other team have needed to catch up?

**Children** The teacher got 39¢ and we got 42¢.
We won!
We got 3 more cents—I can tell from my paper.

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**Note** If you’ve been using these lessons weekly, you’re probably approaching winter break. Now is a good time to take a break from Exploring Money as well. Return to it after the break with Challenge 16, another round of Coins on Board.
Challenge 16

EXPLORING MONEY

Coins on Board  Counting & Recording

Overview
After the winter break, it’s nice to begin with a lesson that’s familiar to the children and doesn’t require new preparation on your part. We suggest Coins on Board which was introduced just before winter break. It provides another way for children to count mixed coins.

Skills
★ locating coordinates on a grid
★ identifying coins by names and values
★ counting by 10’s, 5’s, and 1’s
★ determining the sum of coins

You’ll need
★ Coins on Board gameboard (Overhead 3)
★ Coins on Board coordinate cards (Overhead 4)
★ overhead coins
★ Coins on Board record sheet (Overhead 5)
★ overhead pens in 3 different colors
★ Student Book, page 5
★ a pencil and crayons in 3 different colors for each student
★ a hard writing surface for each student

Begin the lesson with a round of Coins on Board. For this game, the students will be on one team, and the teacher on the other. Quickly set the coins on the gameboard. Mix up the coordinate cards and place them in an envelope. Ask a student to pull a card out of the envelope and display it on the overhead so everyone can see. Have the child locate the coordinate square, remove the coin, and set it in the appropriate box at the bottom of the transparency. What is the name of the coin? How much is it worth? Now it’s your turn. Play continues back and forth, stopping every few turns to count the money each team has captured.

Play until all the coins have been captured. Then have the children turn their attention to the record sheet on page 5 of the Student Book. Have them take a look at the dimes the teacher captured. How much is each dime worth? Ask them to color in one stack of 10 (using one color) on their record sheet for each dime captured. Do the same at the overhead (Overhead 5) so students can follow your model. How many nickels did the teacher win? How much is each nickel worth? Use a second color to fill in enough 5’s on the record sheet to match the collection of nickels. How many pennies did the teacher capture? Color in single squares with a third color, matching the number of pennies in the teacher’s coin collection. How much money is your whole collection worth? Write the total in the proper box.
Repeat this procedure with the money the students won. Record their total in the proper box when you're finished coloring the squares. Determine which team has the most money. Which team won? How much would the other team have needed to catch up?
Challenge 17

EXPLORING MONEY

Two Turns to Win  Count & Compare, Part 1

Overview
Two Turns to Win returns. The game was introduced earlier, but this time a record sheet is included, which the teacher models in this lesson. The record sheet is designed to help children see the coins each team has won in 10’s, 5’s, and 1’s, and to compare totals of different coin combinations.

You’ll need
★ Two Turns to Win (Overhead 2)
★ overhead coins
★ Two Turns to Win: Count & Compare record sheet (Overhead 6)
★ overhead pens in 4 different colors

Skills
★ identifying coins by name and value
★ counting by 10’s, 5’s, and 1’s
★ counting and comparing totals of coin collections

Gather the children together, so they can see the overhead and explain that you are going to revisit a game introduced a few weeks ago. The students will be one team and you will be the other.

1. Call on a child to come up and spin the number and coin spinners for the students’ team. How many pennies, nickels, or dimes can the player collect for her team? Place these coins in the class’s designated box and ask children to work together to count their “take.” How much is their collection worth so far?

![Image of a child using an overhead projector]

2. Spin the spinners for yourself. How many pennies, nickels, or dimes can you collect? Place these coins in your box and ask the class to help count them. How much is your collection worth?
3. Repeat steps 1 and 2. As you and your students take another turn, place the coins in the designated boxes, help children count the second amount, and total each team’s money. Which team has more money now? Which has less?

4. Spin the more/less spinner to determine the winning team.

After the game is finished, show the class the record sheet. Fill in the sheet asking the children’s guidance as you go. Record the number and kinds of coins each team collected. Change colors every time you record a new coin so that it is easy to see what each team scored.

**Teacher**  Let’s take a look at the record sheet. Next week, you’ll all complete your own sheet like this. Today, I’ll have you help me. Our first job is to record how many dimes, nickels, and pennies we each won.

**Children**  You didn’t get any dimes and we got 1.
We have 4 nickels.
You have 5 pennies.

**Teacher**  Let’s figure this out. We’ll do your coins first. How many cents is a dime worth?

**Children**  10!

**Teacher**  This grid is like our Days in School chart. Where can I color 10?

**Children**  Just go up and down that first part.
You can see the line in the middle so it’s like 5 + 5 makes 10.
**Challenge 17 (cont.)**

*Teacher* How many nickels do you have and how much is a nickel worth?

*Children* 1 nickel is 5¢. We have 4 nickels. That’s 20¢.

*Teacher* Good job! I want to be able to see each nickel so I’ll change pens every time I color in a new set of 5 boxes. Take a look. Where should I color those nickels so that we can easily see the four 5’s?

*Children* Put them right next door to the 10. You can see that it’s 30¢
2 nickels make 10¢. You can see that.
We could go 10, 20, 30.
You could even go 10—15, 20, 25, 30.
You could go 1, 2, 3, 4, 5, 6, 7—and keep going all the way to the end.

Finally, have children help you fill in your side of the record sheet. Make sure that the colors you use show the difference on the grid between every single new coin. Count each collection, record the totals, and compare.

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**Two Turns to Win** Count & Compare record sheet

- **Students**
  - 1
  - 4
  - Total 30

- **Teacher**
  - 4
  - 5
  - Total 25

*Teacher* Who won?

*Andrea* We did!

*Teacher* You did? How do you know?

*Children* We got 30 and you only got 25. 30 is more than 25. You can see that we got more. See those extra boxes on our side? We got 5 more squares than you.
Challenge 18

EXPLORING MONEY

Two Turns to Win  Count & Compare, Part 2

Overview
Teacher and children play Two Turns to Win again today, and work together to record the results of the game. Each student fills in his or her own record sheet this time.

Skills
★ identifying coins by names and values
★ counting by 10’s, 5’s, and 1’s
★ counting and comparing total collections of coins

You’ll need
★ Two Turns to Win (Overhead 2)
★ overhead coins
★ Two Turns to Win: Count & Compare record sheet (Overhead 6)
★ overhead pens in 4 different colors
★ Student Book, page 6, have a few extra copies of this sheet on hand
★ crayons in 4 different colors for each student
★ pencils

Start this session by playing Two Turns to Win with your class as you did last week. When the game is complete, have the children help you count the coin collections. Then have children turn to Student Book, page 6. Ask youngsters to work along with you, filling out their record sheets as you work at the overhead.

When the record sheets are complete, have the children check each other’s sheets. How did they do? If there are errors, we supply extra sheets and ask students to try again.

Work together to count the squares you’ve colored in. Who won? By how much? This game will return as Two Turns to Build: Then Spin to Win and children will have another chance to work with these record sheets. With time and practice, even youngsters who may have struggled today will make sense of all of this.
Challenge 19

EXPLORING MONEY

The Date in Coins

Overview
Children work together to figure out how to display the day’s date in coins at the pocket chart.

You’ll need
★ Coin cards
★ pocket chart

Skills
★ identifying coins by names and values
★ combining coins to match the day’s date

Challenge children to think of ways to build the day’s date in coins. Hopefully, you’ll see new confidence in some of the students who haven’t contributed before.

Teacher  It’s the 24th of January. Can you think of some ways to make 24¢ with our coin cards at the pocket chart?

Marcie  That’s easy for me. It’s two 10’s. See, I just used 2 dimes: 10, 20! But then you need 4 more. I’m going to do it with pennies.

Dalena  I think you can do it this way too. My sister has been helping me with money. It’s 5, 10, 15, 20—21, 22, 23, 24.
Savannah  Look! I took away one of Dalena's nickels and did it this way.

Continue until children have exhausted the possibilities or until you've run out of coin cards.
Challenge 20

EXPLORING MONEY

Race to a Quarter

Overview
Race to a Quarter is a simple spinner game that introduces quarters while giving children opportunities to count by 5’s and 1’s. It is easy enough and quick enough that every child should connect with the fun. The first team to mark off 25 pennies “earns” the quarter and wins the game. We suggest that you play against the class in order to speed the process along. You may even have time to play the game twice.

To start the lesson, have children sit where they can see the screen. Display the new gameboard at the overhead. Take a minute for children to share observations with their classmates. What do they notice? During this discussion, you’ll want to be sure that children correctly identify the quarters and the amounts of money shown in each section of the spinner.

You’ll need
★ Race to a Quarter gameboard (Overhead 7)
★ overhead pens

Skills
★ recognizing coins and their values
★ counting by 5’s and 1’s
Children  Race to a Quarter? That’s what it says at the top.
Those 2 big ones at the top—they’re quarters.
There are lots of pennies.
5, 10, 15, 20, 25 pennies for the class, and 25 for the teacher.
I bet we’re going to spin that spinner and get pennies.

Teacher  How much money do you see in each section of the spinner?

Children  1¢!
I see 3 pennies in one spot.
There’s a nickel—that’s worth 5.
The best is the place with a nickel and a penny—that’s 6¢. I hope we
get that one lots.
If we got all 6’s we could probably beat you!

After children have had a chance to examine the gameboard, explain that
they’re going to play as a team against you. You and the students take turns
spinning the spinner and using an overhead pen to cross off the number of
pennies indicated. The first team to cross out all its pennies wins. The trick
is, in order to win, one side has to go out exactly; for example, if a team has 3
pennies left at the end and spins 6 cents, the players have wait for their next
turn to try again. As you play, ask children to keep track of how many pen-
nies each team has. Although some students will feel more comfortable
counting the pennies one by one, others may use more efficient strategies. Be
sure to model counting by 5’s and 1’s if no one else mentions it.
Challenge 20 (cont.)

**Teacher**  It looks like our game will be over soon. What’s the score right now?

**Zanny**  We have 17.

**Teacher**  How did you know that so quickly?

**Zanny**  We have 3 rows filled in—that’s 5, 10, 15, and then 2 more—16, 17.

**Teacher**  Did anyone have a different way to figure the class total?

**Eddie**  I know how much you have—21! I know that because 4 away from 25 is 21.

**Teacher**  This is interesting. Zanny counted by 5’s and 1’s, and Eddie looked at how many were still left to mark. Could we use Zanny’s idea to count my total? Or Eddie’s to count the class total?

Even in these short lessons, you’ll find opportunities to help children compare and contrast their strategies. Continue playing until one team or the other has marked off all its pennies.

If your overhead projector is cool enough for children to use, you may want to let partners or small groups play this game throughout the day.
Challenge 21

25¢ or Bust!

Overview
25¢ or Bust! offers several challenges. Each new coin card must be counted, the growing collection must be counted and compared, and some strategic decisions are required as each team gets close to 25¢. Do the players dare take another card? We play against our students in order to introduce the game more quickly. They love working together and trying to win. The record sheet is set up so 3 rounds can be played in one lesson.

Skills
★ counting sums of money to 25¢

You'll need
★ 25¢ or Bust! coin cards (Overhead 8, cut the cards apart and store in an envelope)
★ 25¢ or Bust! record sheet (Overhead 9)
★ overhead pens in 3 different colors
★ Student Book, page 7
★ crayons and pencils, each student will need a pencil and crayons in 3 different colors
★ a hard writing surface for each student

Ask children to sit where they can see the screen and display the 25¢ or Bust! record sheet. Explain that you have a new money game called 25¢ or Bust! to teach them today. The object of the game is to get as close as possible to 25¢ without going over. You'll play against the class, and each team will take turns...
drawing coin cards and coloring squares to show how much money they've collected. Each team can take as many as six turns trying to collect 25¢, but players can also stop as soon as they think they've come close enough.

Distribute Student Book, page 7. Each child will need a pencil, 3 different colored crayons, and a hard writing surface. Explain that they'll work along with you on their record sheets to keep score for both teams. Begin the game by reaching into the envelope for a transparent coin card. Display it in the box that says “Teacher’s Card.” Have the children help you count the money on your card. Enter the amount in the first small “cents” box below the ten-strips in your scoring area for Round 1. Color the designated number of squares on your ten-strips, starting from the bottom of the first strip and working toward the top.

Have children follow along on their record sheets as you work at the overhead.

Next, ask a child to come up and pick a card for the Students' Team. Have him set it in the box that says, “Students' card.” With the students' help, count the amount shown on their card. Record the sum in the students' scoring area for Round 1.

Play back and forth, taking a coin card each turn and recording it in the appropriate scoring area. (Let children know that it is important to change colors as they record the worth of each new card on the ten-strips. Changing colors helps avoid mistakes and makes it easy to see how much each team's cards were worth. It may also be necessary to record part of a card's worth on one ten-strip and the rest on the next strip.)

As both teams approach 25¢, tell children that they can stop taking cards whenever they want. If, for instance, they’re 2¢ away from 25¢ after their third turn and they don’t want to risk going “bust,” they can elect not to take any more cards. (Occasionally, children ask to see the cards that are still left in the envelope before they make their decision. If no one asks, you can suggest that they take a look at the cards before they decide whether or not they want to take more.)

**Teacher** How much money have you collected so far and how much more do you need to get to 25¢ without going bust?

**Children** We’ve got 23¢ but you have 24¢.
If we take another card, we might get more than 25¢ and we’ll go bust.
Yes, but the teacher will win if we don’t take another card because she’s closer to 25¢.
Children  Will you show us which cards are still left in the envelope? We need 2¢.

Teacher  You’re really working hard to beat me. I’ll show you what’s left and then you can decide whether to take another card. I think I’m going to stay put with my 24¢ because it’s going to be very hard for you to beat me. Here are the rest of the cards that are still in the envelope.

Children  Those are great cards. We could win as long as we don’t get the card with 4¢. We’d tie the teacher if we get 1¢. Can we take 2 cards?

Teacher  You can take 3 more, but if you go bust, I’ll win.

Children  You’re going to win anyway if we don’t take a card. We have to take a card.

Return the cards to the envelope and continue playing. Record the final card(s) and determine the winner. Put all the cards back in the envelope for a new round.
Challenge 22

Exploring Money

The Days in School with Coins

Overview
In this activity, children generate ways to show with coins the number of days they’ve been in school.

Skills
★ coin worth and recognition
★ counting money

You’ll need
★ Days in School chart (Blackline 1, fill in to show how many days you’ve been in school this year.)
★ Coin cards
★ pocket chart

To begin the lesson, discuss with children the number of days you’ve been in school so far this year. Ask them to think about how they could use coin cards in the pocket chart to show how many days they’ve been in school.

Teacher  Let’s take a look at this Days in School chart. How many days have you been in school this year?

Children  It’s 100 and then 4 more. 104!

Teacher  I’ve got a BIG challenge for you today. I want you to try to find some ways to make that amount with coins.

Sammy  We need a big dollar bill and then we’d be able to do it fast.

Teacher  How would you do it with a dollar bill?

Sammy  Well, the dollar is the same as 100 pennies, so I would just put up a dollar and 4 pennies and that would be 104.

Teacher  You’re absolutely right and for sure, that would be the easiest way. Can you think of some ways using our large coins?

Jasmine  Let’s do it with quarters. We need 4 quarters.
Children  And put up 4 pennies.
The quarters are like the school days chart where you can see that it's 25 in each part.

Once a plan has been suggested, display the proposed coins in the pocket chart and ask children to count them. We encourage you to link the coins back to the Days of School chart, which makes it easy to see 1's, 5's, 10's, and 25's. If they've proposed using 4 quarters, can they see four 25's on the chart? If 10 dimes have been suggested, can they see 10 rows of 10 squares? Pictured in the form of squares seen in relation to a ten-strip or a hundreds grid, coins begin to lose their mystery.

Teacher  Let's look at some ways to count these coins. Who has an idea?

Savannah  I just know that 4 quarters are a dollar because my dad trades me every time I get 4 quarters. So I'd say 1 dollar and 4 cents.

Jose  I know that if you put 2 quarters together it's 50¢, so I'd just say that 50 and 50 make a dollar and then 4 more cents.

Teacher  You're doing very well. Do you think we could count it by 25's?

Children  That's pretty hard. I can go 25, 50, but then I forget.

Teacher  I'll help you out. Let's all do it together: 25, 50, 75, 100. Where can you see that on our hundreds chart?

Children  It's in each corner. It's like 4 parts.

Teacher  Excellent job! Let's see if you can find another way to make $1.04.
Challenge 23

Review a Money Challenge

Things have been happening at a furious pace with the Exploring Money lessons all year long. For this session, we suggest you repeat a Exploring Money activity that your children especially enjoyed or one that seems to fill a gap in their skills. Children love to go back to favorite things.
Challenge 24

EXPLORING MONEY

Spin, Shake, Reach & Add

Overview
Race to a Quarter and 25¢ or Bust! introduced quarters. Most children will need much more time and experience to understand how to count sums of money that include quarters. This game gives children opportunities to count such collections.

Skills
★ identifying coins by names and values
★ using various strategies to count mixed coins
★ recording coin collections with ten-strips

You’ll need
★ a sock box (Slide a yogurt or cottage cheese carton into a stretchy sock.)
★ overhead coins: 1 quarter, 3 dimes, 3 nickels, and 3 pennies
★ Spin, Shake, Reach & Add gameboard (Overhead 10)
★ overhead pens in 4 different colors

Ask children to sit where they can see the overhead screen. Show them the Spin, Shake, Reach & Add gameboard. Invite comments and observations.
After children have examined the new gameboard, show them the sock box and display the collection of overhead coins that will be placed inside. Explain that each team—The Students and The Teacher—spins the spinner, takes the number of coins shown on the spinner out of the sock box, and counts them. A spin of the more or less spinner decides which team wins.

The Students’ Team will start. Put the coins into the sock box, and ask a student to come up and spin the spinner at the top of the gameboard. Give the sock box a shake or two and have the student reach in and pull out the number of coins indicated on the spinner. Have her set the coins in the coin box. Then ask children to identify the coins and count their collection. Encourage them to think about organizing the coins for easier counting.

**Teacher** Dalena reached for 4 coins. What did she get?

**Children** She got a quarter—good! It’s the biggest. She has 2 nickels and 1 dime.

**Sammy** The dime and the nickels make 20¢. I know 20 + 20 is 40 and then 5 more is 45¢

**Tommy** If you had 2 quarters, it would be 50¢

**Teacher** You’re all thinking so fast it almost makes me dizzy. Can you tell Dalena how to arrange these coins by value?

**Jessica** She has to put the quarter first, then the dime, and then the 2 nickels.
Teach of Money: Adding, Counting, Sorting and Patterning

**Challenge 24 (cont.)**

*Teacher*  Can you figure out a way to count the coins by just looking at them?

*Children*  That's hard.

*It's not so hard if you put the 25 with a 5 and that's 30. Then you put the 10 in and that's 40, and then 41, 42, 43, 44, 45.*

Once students have had a chance to count the money, ask their guidance in coloring in the ten-strips on their side of the gameboard to reflect the amount of money. Be sure to change colors for each coin so that it’s easy to see exactly what the children collected. Finally, with students’ help, write a number sentence in the box below their ten-strips to match the coins.

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**Spin, Shake, Reach & Add** gameboard

![Gameboard Diagram]

**Coin Box**

Teacher  

Students  

25 + 5 + 10 + 5 = 45

Continue by taking your turn to spin, shake, and reach. Ask for help arranging the coins in a way that they’re easy to count, then record the amount on your ten-strips, along with a number sentence in the box below. Then, spin the more or less spinner to determine a winner.
**Challenge 25**

**Spin, Shake, Reach & Add**

**Overview**
In this revisit of Spin, Shake, Reach & Add, a student spins the spinner and pulls the designated number of coins out of the sock box for the class. Children then work with coin cards at the pocket chart to show different ways to organize and count the collection of coins. The teacher records one of their ideas on the game overhead, and then each child chooses a favorite to record on his or her own game sheet. The process is repeated again next week as the class collects, organizes, and records for the Teacher’s side.

**You’ll need**
- a sock box
- overhead coins: 1 quarter, 3 dimes, 3 nickels, and 3 pennies
- Coin cards
- pocket chart
- Spin, Shake, Reach & Add gameboard (Overhead 10)
- overhead pens in 4 different colors
- Student Book, page 8
- a pencil and crayons in 4 different colors for each student
- a hard writing surface for each student

**Skills**
- identifying coins by names and values
- counting mixed collections of coins

Today you’ll play Spin, Shake, Reach & Add again, but this time ask children to use the coin cards at the pocket chart to share different ideas for organizing the money in ways that make it easy to count.

**Teacher**  Lupe gets to reach for 6 coins. Go for it, Lupe.

**Children**  Get the quarter and all the dimes. And some nickels. Don’t get pennies.

**Teacher**  But what if the more or less spinner lands on Less?

**Children**  We still want lots. Lupe, the quarter is biggest.
**Teacher**  Let's use the coin cards in the pocket chart to figure out some ways to arrange your coins to make them easier to count. Who wants to give it a try?

**Luke**  I will. I'm good at money. This is almost like having 2 quarters and 1 penny, 'cause a dime and 3 nickels is the same as a quarter.

25¢  50¢  51¢

**Teacher**  That's a good way to figure it out. Who has a different way?

**Savannah**  I can do it another way.

25¢  30¢  40¢  50¢  51¢

**Teacher**  I've noticed that many of you like to put a nickel with the quarter so that you see the 30¢. Good job, Savannah! Who wants to try another way?

**Sammy**  My dad says you always have to put the ones that are the most first.

25¢  35¢  40¢  45¢  50¢  51¢

**Ellen**  That's hard because you get all mixed up when you say the numbers.

**Sammy**  No, it's not. Look, I can do it by counting by 5's.

5¢,10¢,15¢,20¢,25¢  30¢,35¢  40¢  45¢  50¢  51¢

**Teacher**  You have a lot of excellent ideas for counting the money. I'd like you to pick one method for me to use when I color on the overhead.

**Sammy**  Do it my way.
**Challenge 25 (cont.)**

*Teacher* Is that okay with everyone? Okay, let’s color the ten-strips on your side so that we can identify each coin. Can you help me?

*Sammy* Color the quarter in first. Now do the dime.

*Teacher* Okay, now what?

*Children* Do the nickels but make them different colors so we’ll know it’s not a dime.
Stick that last nickel in that space by the quarter. Now it’s easy to count.

You have to do the penny too. It’s just 1 square. There, that’s it.

*Teacher* How shall I write the number sentence in the box below your ten-strips?

*Gemma* Write $25 + 10 + 5 + 5 + 1 = 51$.

Ask the children to get crayons and pencils. Distribute Student Book, page 8, and have students record their score. Explain that they don't have to copy what's on the overhead, but can look at the various configurations in the pocket chart and use the coin arrangement they like best. Once they've chosen their favorite, they record it by coloring in the ten-strips on the Students' side of their sheets. Be sure to nestle in beside children who need extra support. Save the papers for next session, when you’ll take the Teacher’s turn.
Challenge 26

EXPLORING MONEY

Spin, Shake, Reach & Add

The Teacher’s Side

Overview
This is a repeat of last week’s lesson, but this time you and your students are playing for the Teacher’s side.

Skills
★ identifying coins by names and values
★ counting mixed collections of coins

You’ll need
★ a sock box
★ overhead coins: 1 quarter, 3 dimes, 3 nickels, and 3 pennies
★ Coin cards
★ pocket chart
★ Spin, Shake, Reach & Add gameboard (Overhead 10)
★ overhead pens in 4 different colors
★ Student Book, page 8
★ a pencil and crayons in 4 different colors for each student
★ a hard writing surface for each student

Have children gather their materials and sit where they can see the screen and the pocket chart. Explain that you’re going to finish the game of Spin, Shake, Reach & Add you started last week. They’ll be using the sheets they started last Monday to record the Teacher’s score. Do they think you’ll beat them? Ask a student to spin the spinner for you. Then shake the sock box yourself and pull out the designated number of coins.

Children  The spinner says you can get 5 coins. Hope you don’t get a quarter.

Teacher  Oh dear. I was trying to get 3 dimes but I got a penny instead. They feel almost the same. Oh well, maybe I can still win. Can someone show this collection with coin cards in the pocket chart so they are easy to count?

Samuel  I already know. I’m good at money. It’s 47¢.
Challenge 26 (cont.)

Teacher  You are good at money. I hadn’t figured that out yet. I would still like to see some ideas for arranging the coin cards so that everyone can count the money for themselves. Who has an idea?

Marcie  I can do it this way but then I have to go 20 and 20. That’s 40. Then I put in the 5—45¢. Then I add the pennies—6, 7. Then I know it’s 47¢.

Teacher  Good for you. Who has a different way?

Tommy  I can count it by 5’s. You just go 5, 10, 15, 20, 25 for the quarter, and then you keep going and going: 30, 35, 40, 45, and then 2 more—46, 47.

Teacher  That’s great! Anyone else?

Lupe  If you had 3 more pennies, it would be 50¢, so you just take off 3 and it’s 47¢.

Continue exploring the counting possibilities. Ask children to try and fill in the Teacher’s side of their record sheets making sure it’s easy to see what kind of coins were taken out of the box. Circulate and help as needed. Encourage children to help each other. Be sensitive to the fact that there is more than one way to color the coins on the ten-strips, and that some students will find this entire task difficult. Can the children tell you about their work? Conclude the lesson by spinning the more or less spinner to see who wins.
Challenge 27

EXPLORING MONEY

How Much Money?

Overview
In this lesson, children color in ten-strips to represent 3 different collections of money. This is a good opportunity for teachers to see what their children have learned about money so far. Do students recognize the 4 different coins and know each coin’s value? Can they organize the coins for easy counting and color a set of ten-strips to accurately reflect their thinking? Are they still counting the squares on the ten-strips by 1’s, or can they count by 10’s and 1’s? You may want to save children’s sheets for future reference.

Gather the children and show them the overhead. Call their attention to the three collections of coins at the bottom of the page. Explain that their job is to color in the ten-strips above the sets of coins to show how much money is in each collection, and record the total.

You’ll need
★ How Much Money? (Overhead II)
★ overhead pens
★ Student Book, page 9
★ crayons and pencils

Skills
★ identifying coins by names and values
★ counting mixed collections of coins
Challenge 27 (cont.)

Do the first problem together at the overhead. Then distribute copies of the worksheet Student Book, page 9. Send students out to work. You may want to leave the projector turned on to give everybody a good start. Nestle in with students and offer assistance as needed.

Save these sheets in children's work folders. If you've had to provide a student with lots of help, be sure to note that on his or her paper.
Challenge 28

EXPLORING MONEY

Make It Equal

Overview
In this session, the teacher displays 2 sets of coins, of different value. Children are guided to count both collections, and challenged to move a single coin from one collection to the other to make the 2 sets equal in value. The problem is repeated with several different sets of coins.

You’ll need
★ Coin cards
★ pocket chart

Skills
★ counting and comparing 2 sets of mixed coins
★ figuring out which coin to move to make 2 sets equal

Have children sit where they can see the pocket chart. As they watch, set up two groups of coins—2 dimes and 2 nickels, and 1 dime and 2 nickels—as pictured. Ask how much money is in each group? Then, ask children if they can figure out which coin to move to make the groups equal in value.

Teacher How much money is in this first group? What about in the second group?

Children 10, 20, 30!
That’s 30¢ because 2 nickels are just like a dime.
The other money is just 20¢

Teacher Great work! Here's a problem for you. You can make these 2 sets of money worth the same amount by moving one coin from the first group to the second. Can you figure out which coin to move?

Move the coins as children make suggestions so they can see the results each time.

Children That first group has 2 dimes, we could move 1.
Oh, oh! Now the other group has 2 dimes, that’s not fair. Move it back!
I've got it. We could move a nickel from the first group.
Yes, but now the second group has 3 nickels. That's not fair.
Yes it is. Look! They both have 25¢ now.
Teacher  Do you agree? Let's count the money in each group to be certain.

Continue in this manner with each of the following paired arrangements. Challenge children to make the two groups equal in value each time by moving a single coin from the first collection to the second.

This task may seem reasonably simple to us as adults, but it presents a major challenge to first graders. Your children deserve a lot of credit if they're able to solve each of problems.
Challenge 29

Make It Equal  A Worksheet

Overview
After a brief review, children do a worksheet version of last week’s activity.

Skills
★ counting and comparing 2 sets of mixed coins
★ figuring out which coin can be moved to make 2 sets equal

You’ll need
★ Student Book, page 10
★ Coin cards
★ pocket chart
★ real, plastic, or paper coins—4 pennies, 4 nickels, and 2 dimes for every pair of children is ideal, although some children will work the problems mentally

Begin the lesson by displaying coin cards in your pocket chart that match the first problem on the worksheet (a dime and 2 pennies in one group and 2 nickels in the other). Ask children to figure out how much each group is worth, and then challenge them to move one coin from the first group to the second to make them equal.

Hand out the worksheets and point out the first example. Do children see how the arrow shows which coin had to be moved? Do they see how the colored ten-strips show that the two sets of money are equal after the move? Send them out to work and encourage them to help one another.
In each case, the task is to move one coin from the first to the second group to make the two sets of money equal in value. Have them color in the ten-strips to prove it. Some children will be able to figure these problems out in their heads, but many will benefit from being able to set up the groups of coins themselves and move them around. Make the pocket chart coin cards available to students, along with real, plastic, or paper coins.
Challenge 30

Share & Share Alike

Overview

In this lesson, children divide a collection of coins into 2 groups of equal value. This problem is repeated with 3 different collections of coins.

You’ll need

★ Coin cards
★ pocket chart

Skills

★ dividing a set of coins into 2 sets of equal value
★ counting mixed coins

Begin by setting out the coin cards in your pocket chart as pictured.

Ask the children to talk to one another about how they can arrange these coins into two groups that are equal in value—two groups that “share and share alike.” As children make suggestions, have them move the coin cards around in the pocket chart and check the values, so they can see if their ideas work.

*Dalena* You could give one group 2 dimes and 2 pennies. The other group could have 2 nickels and 2 pennies.

*Teacher* Let’s check that out. Would that be equal shares?
**Challenge 30** (cont.)

**David**  It’s 4 for each group.

**Tommy**  Wait a minute! I want the side with the dimes then.

**Teacher**  Why is that, Tommy?

**Tommy**  It has more money. It’s 10, 20, 21, 22. The other group is just 12¢

**Teacher**  It looks like we need to work on this some more. Both groups need to have the same value. Who wants to give it another try?

**Jasmine**  I will. I think this will work.

![Images of coins]

**Teacher**  Let’s check it out. How much money is in each group?

After children have figured out how to divide the first set of money into two groups of equal in value, pose the same problem with the two sets shown below

![Images of coins]

“Can you divide these coins into 2 groups that are equal in value?”

![Images of coins]

“What about these?”
Challenge 31

**EXPLORING MONEY**

**Share & Share Alike**  A Worksheet

**Overview**  
After a brief review, children do a worksheet version of last week’s activity.

**Skills**  
★ counting mixed coins  
★ dividing coins into 2 sets of equal value

**You’ll need**  
★ Coin cards  
★ pocket chart  
★ Student Book, page 11  
★ scissors, glue, and pencils

Review the coin sharing activity from last week with coin cards in the pocket chart. (Use one of the problems on page 59 or make up a new one.) Then hand out the worksheets and model how to cut out the coins for Problem 1.

Briefly explore how to divide this set of coins in Problem 1 into two groups of equal value; explain that when they find a solution, they should glue the money into the two boxes beside the big “1” on the page. Once students understand the task, send them out to work. Offer help as needed and encourage them to help one another.
Challenge 32

EXPLORING MONEY

Three Turns to Win  Count & Compare, Part I

Overview
Students have played Two Turns to Win so the game format is familiar, but in this version they collect dimes, nickels, or pennies with 3 different spins instead of 2. Three Turns to Win provides both review and challenge. Children who may still be struggling with money have opportunities to identify and count unmixed quantities of coins (e.g., all nickels, all dimes, or all pennies) and to see the totals colored in on hundreds grids. Students who are more confident have opportunities to count mixed sums of money ranging from 3¢ all the way to $1.80.

You’ll need
★ Three Turns to Win gameboard (Overhead 12)
★ Three Turns to Win: Count & Compare record sheet (Overhead 13)
★ overhead coins
★ overhead pens in 4 different colors

Skills
★ identifying coins by names and values
★ counting by 10’s, 5’s, and 1’s
★ counting and comparing collections of coins

Ask children to sit where they can see the screen and show them the Three Turns to Win gameboard at the overhead.
Explain that Three Turns to Win is just the same as Two Turns to Win except that each team gets to spin the spinners three times instead of two. Tell them you’ll play for Player 1 today and they’ll work together to play for Player 2. The team that collects the most money wins. Then take turns spinning the spinner arrows, naming, collecting, and determining the worth of the designated coins until you and the children have each had three turns.

With students' help, record the results of the game on the second overhead. How many dimes, nickels, and pennies did you collect? How many dimes, nickels, and pennies did they collect? How much is each collection of coins worth? Can youngsters figure this out mentally or make ballpark estimates? Ask students' guidance in showing each amount on the hundreds grids. (Change pen color for every coin to insure you colored in the correct number of each.) After you’ve shown both scores on the hundreds grids, have children count each quantity by 10's and 1's. Take a moment to discuss the results.

**Children** That was a close game!
*We got 5 nickels. I was sure we’d win.*
*Mrs. Burk got 4 dimes, though.*
*She didn’t beat us by much—only 3¢.*
*We got 58¢ and she got 61¢.*
*We’ll probably win next time.*

Tell children that you’ll play again next week, but that they’ll color in their own record sheets then.
Challenge 33

**EXPLORING MONEY**

**Three Turns to Win  Count & Compare, Part 2**

**Overview**

The class plays Three Turns to Win at the overhead again, but this time children keep score on their own record sheets.

**Skills**

- identifying coins by names and values
- counting by 10’s, 5’s, and 1’s
- counting and comparing collections of coins

**You’ll need**

- Three Turns to Win gameboard (Overhead 12)
- Three Turns to Win: Count & Compare record sheet (Overhead 13)
- overhead coins
- overhead pens in 4 different colors
- Student Book, page 12
- pencil, crayons, and a hard writing surface for each student

Ask students to find partners and bring all of their materials to the meeting area around the overhead. Have the children in each pair decide which player they’re going to represent—1 or 2. Then have students take turns coming up to play for their side at the overhead. Once both sides have had three turns, pass out Student Book, page 12.
Ask each child to complete his or her own record sheet by filling in the number of coins collected by each player and determining the worth of all the coins collected by coloring in appropriate amounts on the hundreds grids. Remind them that it is important to use different colors for each and every coin. When everyone has completed a record sheet, have children compare results with their classmates. Do they agree on the scores for each player? Who won, and by how much?
Challenge 34

How Much Is Each Collection Worth?

Overview
You’ve played an assortment of games with coins throughout the year. Today’s worksheet is a chance for children to demonstrate their money-counting skills.

Skills
★ identifying coins by names and values
★ making a preliminary count of each collection of coins
★ counting by 10’s, 5’s, and 1’s
★ confirming preliminary count

Start this activity by distributing copies of the worksheet or having children find page 13 in their Student Books.

Explain that there are four parts to complete on this sheet. The first is to carefully count the money in the first collection and write a number in the first small box beside the coins to show what you think they’re worth. The
second task is to color in the ten-strips to match the amount of money in the collection. (Remind children to use a new color for each coin so that they can be sure they've colored in squares for each.) The third is to count the squares by 10's and 1's. Were you correct the first time? Finally, record the total from step three in the “It's really worth” box. Repeat the entire procedure with the money in the second collection.

Once children understand what to do, send them off to work. Have them compare results with their classmates as they finish, and encourage them to help one another.
Challenge 35

EXPLORING MONEY

Showing the Days in School with Coins

Overview
Children work together to represent with coins the number of days they've been in school.

You'll need
- Days in School chart (Blackline 1, fill in to show how many days you've been in school this year.)
- Coin cards
- pocket chart

Skills
- identifying coins by names and values
- counting money

As you refer to the Days in School chart you've filled in, challenge children to show the number of days you've been in school with the coin cards in the pocket chart (children first encountered this task in Challenge 22).

Teacher  How many days have we been in school?

Children  171!

Teacher  How can you use the coin cards to show 171 on the pocket chart?

Ellen  Too bad we don't have a big dollar. That's like 100 pennies.

Mandy  I know! We can use 4 quarters for the dollar.
**Challenge 35 (cont.)**

*Erica*  Let’s use dimes for the 70 cents—they’re easy to count—10, 20, 30, 40, 50, 60, 70!

*Anna*  And 1 penny for the 1 in 71!

If time permits, explore other ways to combine coins to create the same amount. This might be a good time to show children how to write the amount in decimal notation. Explain that the filled grid of 100 is worth 100 cents or one dollar while the 71¢ in this case is only part of a dollar.

So the total amount is written as $1.71 with the .71¢ placed to the right of the decimal point. It’s a drip in the puddle that may set off a small ripple for some children.
Blackline 1 Run enough copies to show how many days you’ve been in school this year.

The Days In School chart

[Blank grid for counting days]
One Turn to Win gameboard
Two Turns to Win gameboard

Teacher

Students

less

more

1 2 3 4 5 6
# Coins on Board gameboard

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Teacher

Students
Cut the cards apart and store in an envelope or ziplock bag.

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Race to a Quarter gameboard

Students

Teacher
Cut cards apart along the lines and store in an envelope.
### 25¢ or Bust! record sheet

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**Teacher's Score**

- Round 1: 3¢
- Round 2: 3¢
- Round 3: 3¢

**Students' Score**

- Round 1: 3¢
- Round 2: 3¢
- Round 3: 3¢
Spin, Shake, Reach & Add gameboard

Coin Box

Teacher

Students

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Bridges Breakouts

Three Turns to Win
Three Turns to Win
Count & Compare record sheet

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Bridges Breakouts
Coin Patterns

Cut around the coin boxes. Make 2 patterns with the coins. Glue them down.

Pattern 1

Pattern 2
Pennies 5 & More

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### Pennies 5 & More pieces

Cut around each box. Find the right spot on the worksheet for each piece and glue it down.

<table>
<thead>
<tr>
<th>Coin 1</th>
<th>Coin 2</th>
<th>Coin 3</th>
<th>Coin 4</th>
<th>Coin 5</th>
<th>Coin 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="penny.png" alt="Penny" /></td>
<td><img src="penny.png" alt="Penny" /></td>
<td><img src="penny.png" alt="Penny" /></td>
<td><img src="penny.png" alt="Penny" /></td>
<td><img src="penny.png" alt="Penny" /></td>
<td><img src="penny.png" alt="Penny" /></td>
</tr>
<tr>
<td>5¢ + 1¢ = 6¢</td>
<td>5¢ + 2¢ = 7¢</td>
<td>5¢ + 3¢ = 8¢</td>
<td>5¢ + 4¢ = 9¢</td>
<td>5¢ + 5¢ = 10¢</td>
<td></td>
</tr>
</tbody>
</table>
Coins on Board record sheet

<table>
<thead>
<tr>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students

© 2001, The Math Learning Center
<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coins</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Two Turns to Win  Count & Compare record sheet

Teacher

Students

Total

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25¢ or Bust! record sheet

Teacher’s Card

Student’s Card

Teacher’s Score

Student’s Score

Round 1

Round 2

Round 3

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### Spin, Shake, Reach & Add record sheet

<table>
<thead>
<tr>
<th>Coin Box</th>
<th>Students’ Score</th>
<th>Teacher’s Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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How Much Money?

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Make It Equal

Draw an arrow to show which coin to move. Color the ten-strips to show that both groups of money are equal.

Example

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Share & Share Alike

Cut around the coin boxes for Problem 1. Figure out how to split the money into 2 equal sets. Glue 1 set into each box. Do the same thing for Problem 2.
Bridges Breakouts

Player 1

1

Player 2

Three Turns to Win
Count & Compare record sheet

© 2001, The Math Learning Center
How Much Is Each Collection Worth?

I think it's worth $\_

It's really worth $\_

NAME

DATE

© 2001, The Math Learning Center
Make 4 copies on cardstock. Color. Cut apart on thin lines. Laminate.
Make 2 copies on cardstock. Color. Cut apart on thin lines. Laminate.
Make 2 copies on cardstock. Color. Cut apart on thin lines. Laminate.
Make 2 copies on cardstock. Color. Cut apart on thin lines. Laminate.
Make 1 copy on cardstock. Color. Cut apart on thin lines. Laminate.
Make 1 copy on cardstock. Color. Cut apart on thin lines. Laminate.
Make 1 copy on cardstock. Color. Cut apart on thin lines. Laminate.
$5¢ + 1¢ = 6¢$

$5¢ + 2¢ = 7¢$

Make 1 copy on cardstock. Cut apart on thin lines. Laminate.
$5\,\text{¢} + 3\,\text{¢} = 8\,\text{¢}$

$5\,\text{¢} + 4\,\text{¢} = 9\,\text{¢}$
$5¢ + 5¢ = 10¢$

**Five & More Number Sentences**

**Five & More Cards**

Make a copy on cardstock. Color. Cut apart on thin lines. Laminate.
Make 1 copy on cardstock. Color. Cut apart on thin lines. Laminate.
Five & More Cards

Five & More Cards
A Nickel & More
Make 1 copy on cardstock. Color. Cut apart on thin lines. Laminate.
Make 1 copy on cardstock. Color. Cut apart on thin lines. Laminate.