## Coin Counting

Summary
Students will identify the value of coins and complete coin counting activities.
Main Core Tie
Mathematics Grade 1
Strand: MEASUREMENT AND DATA (1.MD.) Standard 1.MD. 5

## Additional Core Ties

Mathematics Grade 2
Strand: OPERATIONS AND ALGEBRAIC THINKING (2.OA) Standard 2.OA.1
Mathematics Grade 2
Strand: MEASUREMENT AND DATA (2.MD) Standard 2.MD. 8

## Materials

Coin cubes (heads/tails)

- Counting Coins worksheet (pdf)
for each student
- The Coin Counting Book
, by Rozanne Lanczak Williams
Coin manipulatives for each student (real, plastic, or paper coins)
Prepared chalkboard/ poster
Pocket/bag/bank
Large coin visuals
Overhead coins/ magnetic money
- Variation on The Pocket Song (pdf)
- Count These Coins worksheet (pdf)

Additional Resources
Books

- A Dollar for Penny , by Dr. Julie Glass; ISBN 0-439-32296-0
- Pigs Will Be Pigs
, by Amy Axelrod; ISBN 0-590-13213-X
- Once Upon a Dime A Math Adventure
, by Nancy Kelly Allen; ISBN 1-57091-161-4
- The Coin Counting Book
, by Rozanne Lanczak Williams; ISBN 0-88106-325-8


## Background for Teachers

Before presenting this activity, it is recommended that counting by fives and tens be taught. Already having mastery of these skills will contribute to your students' success with this activity. Step four of this activity may be done as a whole class activity or as small group centers.

## Intended Learning Outcomes

5. Understand and use basic concepts and skills.
6. Communicate clearly in oral, artistic, written, and nonverbal form.

Instructional Procedures
Invitation to Learn
Read The Coin Counting Book.
Instructional Procedures
Prepare the chalkboard or a poster that has problems written in large bold print, duplicating the problems on Counting Coins worksheet.
Point out that in the book, we read about how to count and add coins. We also saw many pennies traded for fewer coins that were worth more. For example, 25 pennies were traded for one quarter. Explain that for the next activity, the students will practice their money counting skills.
Hold up a bag/bank/pocket with coins in it. Invite one student to the front of the room. Have him/her pull a coin from the pocket. Ask students to name the coin and tell you its value. Fill in the first two blanks on the chalkboard with the correct value. Ask students for an idea of how to figure out the value of two of that same coin. Students may offer strategies such as counting on, using tools, drawing a picture, using their fingers, and using their memory of the addition fact. Accept all strategies. Repeat this step.
Invite another student to roll a coin cube and hold up a large visual depicting the coin rolled. Ask students to identify the name of the coin and the value. Fill in the blanks on the chalkboard as you guide the class to tell you what to write. Repeat this step.
Pass out the Counting Coins worksheet to each student and a coin cube to each pair/group of students. Explain that they will be tossing the cube once for each problem on the page. After the first roll, they should record the value of the coin rolled in the first and second spaces, then add the values to reach a sum. Encourage students to use coins or other manipulatives if they need to in order to add the amounts correctly.
When students finish their Counting Coins worksheet, invite them to share their sums with the class. As they share, ask them if they could make the same sum with (a) different coin(s). Help them model with magnetic money/money visuals/overhead money; let the rest of the class use coins to practice.

## Extensions

Reread The Coin Counting Book. Pass out coin manipulatives to each student (Each student needs at least 25 pennies, five nickels, two dimes, and one quarter). Read the book aloud and have the students model the instructions in the book with their coins. Invite them to count out loud and point at the coins as they do so.
They will be adding pennies and trading them for larger coins. Read only up to the 15 th page.
The final pages of the book deal with counting collections to make 50¢ and a dollar. (This extension is perfect for advanced students to continue their learning.)
Create a concentration/memory game that requires the students to match collections of coins with their sums.
Add a "pocket" to your calendar discussion every day. Have a pocket with similar coins that the students retrieve and count to make sums up to 25¢.
Provide coin stamps/stickers to students in a center. Invite them to create collections of their own and write the total value in a math sentence. Using the Pocket Pattern for Collections Book, combine all of the pages created by the students and bind them to make a class book. Play a counting coins game. Put a bowl of coins in the middle of each table/group. Provide each group with a number cube. Students take turns rolling the cube. Each time the cube is rolled, every member of the group adds that many pennies to their personal pile. When they have enough to trade for a larger coin, they do so (e.g., five pennies are traded for one nickel; two nickels are traded for one dime). This is one activity you can assess by walking around and
observing students as they play. Try giving them a time limit. When time is up, have each group tell what sum they made with which coins. You could even play this like musical chairs. When the music stops, they share their sums.
Use a Variation on The Pocket Song. Instead of singing about one coin, students take a given value and decide how many coins would be in the pocket to make a certain amount of cents. Use the Variation on The Pocket Song to make a class book. Collaborative groups find all of the different ways to make a given value. Record them in the song and illustrate with stamps / stickers / student drawings.
Make your own practice pages using http://www.aplusmath.com.
Play a game with the Palm Pockets. Supply students with Palm Pockets, Palm Pocket Cards, and manipulatives. List two coins and ask them to figure out the total, placing the correct cards in the pocket. Then, give them the signal to show.
Differentiate for advanced learners by inviting them to make collections totaling up to one dollar or more.
Set up a classroom store. Place price tags on various objects and have students calculate how much money they will need to buy certain objects. You might choose to have the objects be school supplies/rewards that they can buy, and pass out paper coins as an incentive program. Write about the collections you count as a class for interactive writing.
Encourage the students to write their own stories about adding money. Provide them with stamps/stickers to help them illustrate their published work.
Family Connections
Write a note home to parents asking them to take out their"pocket change" each evening for a week and invite their child to count the coins all together or in collections. You may leave this up to the parents or advise the parents, based on their child's understanding and mastery of counting coins.
Send the class book of coin collections home with each child, over the space of a month, to let the students share their work and knowledge with their families.
Send home a page/activity/assignment that aligns with your assessment choice. Ask parents to practice with their child as a final practice before the assessment.

## Assessment Plan

Meet with students one on one or in small groups. Give them coins of the same type totaling 25\$ or less and ask them to add them. This type of assessment allows you to actually see their strategies and comfort/confidence level as they count the coins.
Provide an assessment that shows coin addition sentences and asks students to count the collection and write the sum ( Count These Coins worksheet).
Invite students to write to you about the different collections they know how to make up to 25¢ using like coins.

## Authors

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