

The Change Game

Context:

This is a lesson to be taught to second graders during a unit on money. It will provide them practice in working with coins and understanding the value of each coin. It would be appropriate to teach after an introductory lesson on coins and their values as this lesson provides additional practice working with coins. The entire lesson should last about 30 minutes.

Objectives:

During this lesson, students will be able to demonstrate an understanding of coins and their value but correctly exchanging coins while playing the change game.

Benchmarks:

Identify, order and compare coins by making equivalent amounts up to 25 cents.

Preparation:

Materials:

Assortment of coins (pennies, nickels, dimes, quarters)

Coin overhead

Dice

Money game boards

Paper cups

Overhead pens

Preparation:

Money game boards need to be created so that there is one for every student. Take an 8.5 x 11 piece of paper and place it horizontally. Draw a line two inches from the top so that it is parallel to the long edge of the paper. Then draw three vertical lines to create four columns.

In the upper right square place/stamp/draw pictures of pennies. In the next square place nickels, then dimes and in the far left square should be quarters. These are the labels for the columns. Make copies of the game board so that there is one for each student. Money also needs to be divided into paper cups so that there is a cupful of coins for each pair of students.

Lesson Introduction/Set: (1 min)

Begin with a review of the different coins and their names. Place an overhead showing the different coins (penny, nickel, dime, quarter) on the overhead. Point to a coin and ask the students: What is the name of this coin? Ask this question as you point to each coin.

Sharing Objectives: (1 min)

The penny, nickel, dime and quarter are the four most common coins we see and today we are going to have fun using these coins as part of a math activity.

Learning Activities:Group Instruction (5 mins)

A. Point to the penny on the overhead. Ask students how much it is worth? Then point to the nickel and ask how much it is worth? Then ask students how many pennies are needed to equal a nickel? Draw the pennies on the overhead as you count them out loud. That's right. You need five pennies to equal a nickel.

B. Now draw eight pennies on the overhead. Have students count the pennies out loud with you as you draw them. Ask them how many nickels can they make with this 8 pennies. Count five pennies and circle them. Trade them for a nickel. Ask students if there are enough pennies to make another nickel.

C. Now do the same with nickels and dimes. Point to the nickel on the overhead. Ask students how much it is worth? Then point to the dime and ask how much it is worth? Then ask students how many nickels are needed to equal a dime? Draw the nickels on the overhead as you count out loud.

That's right. You need two nickels to equal a dime.

Partner Activity (10 mins)

A. Demonstrate game. Gather the group in a circle on the carpet. Have one student be your partner and walk through a couple of rounds of the game. Tell students that the goal of this game is to be the first to get to three dimes.

Instructions: Each player has their own game board. On their turn, they roll the die. The number they roll is the number of pennies they take and put in their pennies column. Now it is the next player's turn to roll the die and take pennies. Once a player has five pennies in their pennies column, they exchange them in for a nickel to place in the nickel column. Play continues alternating turns to roll the die and collect pennies and exchanging them for nickels. Once a player has two nickels they can exchange them for a dime to place in the dime column. The goal is to be the first person to get three dimes in their dime column.

B. Pair students up. Hand them two game boards, a cup of coins, and one die.

C. Have students begin to play the game. Walk around and monitor student's progress.

D. If students finish early have them start another round.

Group Instruction (2 min)

A. Briefly stop game play and ask students what they would need to get a quarter on the board? Show them that with 2 dimes, they only need a nickel to make a quarter and that they can exchange two dimes and a nickel for a quarter.

Partner Activity (5 mins)

- A. Have students play the game and try to be the first to get a quarter.
- B. If there is additional time, have students make up their own combinations.

Closure: (6 mins)

Have students pile their game boards on the table, and return the money and dice. Gather the group back together and lead a discussion about the game and money. Some questions to ask:

1. Do you need more pennies to make a nickel or more pennies to make a dime?
2. By rolling the die only once, could you get enough pennies to exchange for a dime? Why or why not?
3. The columns on your game board, are they in any particular order? Like lowest to highest or highest to lowest? (may need to have the game board visible to students for this question)
4. Do you need more pennies to make a nickel or more nickels to make a dime?
5. To get a nickel, you could exchange five pennies and place a nickel in the next column. To get a dime, you could exchange two nickels and place a dime in the next column. How is the quarter different? Can you exchange just dimes or do you need another coin too?
6. If I were to add a column next to the quarter column. What would it be for?

Student Evaluation:

As students are playing the game, circulate around the room. Observe whether the correct combinations of coins are being exchanged and if students are understanding the concepts behind the game. You will also be able to evaluate the students' understanding during the closing discussion based on their answers to the questions.

Teacher Self-Reflection: Since students may be at various levels in their understanding of coins and money, it may be beneficial to pair up students based on ability levels. Therefore, if there are lower level students who may have difficulty with the game, you can challenge them to try to get to a certain goal only involving nickels. For higher level students who need more of a challenge you can provide them with a goal that involves more quarters and possibly a combination of quarters and dimes, or something more complex. Once students learn and understand the game, the combinations are endless. Students can make up their own combinations or you can provide them with various other goals. The challenge first, however, is to help the students understand the basics of the game and then it can be easily expanded and adapted to fit individual needs.

Lesson based on the Money Game Board found at:
<http://www.theteacherscorner.net/thematicunits/board.htm>