Funny Money

The Big Idea:

We'll take coins to a new level by "buying" fun prizes using specific amounts, and play a new twist on Rock, Paper, Scissors!

Each Kid Will Need:

★ Coins: 4 quarters, 4 dimes, 4 nickels, and 4 pennies per person
★ Pencil (or other fun prize): 1 per person
★ Ruler (or other fun prize): 1 per person

The Math Behind the Scenes:

Grades K-2
★ Addition
★ Comparisons (greater than, less than)
★ Counting by 5s and 10s
★ Valuing units of money

Grades 3-5
★ Addition
★ Counting by 5s, 10s, and 25s
★ Simple combinatorials
★ Valuing, comparing units of money
★ Bonus: fractions, probability

Time for a Change

When you buy things, the price doesn't always come out to full dollars. That's why we need coins. Today we get to 'buy' fun items, but you'll first have to figure out which coins add up to the right amount.

Grades K-2:

1. Give everyone 4 dimes and 4 pennies then ask:
   - ★ "I've given you 4 pennies and 4 dimes. Do you know how much each coin is worth?"
   - ★ "How much money do you think is in your pile?" (Discuss.)
   - ★ "Do you think you have the best coins to buy a pencil for 12¢? Can you add your coins to make 12¢?"
2. When done, ask: "What combination worked?" (It should be 1 dime and 2 pennies.)
3. "We're just getting warmed up! Now, to buy this ruler you'll need coins worth 33¢." Each person finds coins from the pile that add up to 33 cents.

BONUS: Add 4 nickels to the pile. Challenge kids to pick exactly 6 coins that add up to 31 cents. They should come up with 1 dime, 4 nickels, and 1 penny.

Grades 3-5:

1. Give everyone 4 quarters, 4 dimes, 4 nickels, and 4 pennies then ask:
   - ★ "How much money do you think is in your pile?" (Answer: $1.64)
   - ★ "Do you think you have the right coins to buy this pencil (hold up a pencil) for 32¢? Can you make 32¢ in 4 different ways using these coins?

2. When they're done, ask:
   - ★ "What combos worked?" There are 4 possibilities: 1Q+1N+2P; 3D+2P; 2D+2N+2P; 1D+4N+2P.
   - ★ "What was your system for catching them all?" (Discuss.)
3. "Now, to buy a ruler you'll need to pay 73¢ with exactly 10 coins!" Each kid selects 10 coins from the pile that make 73¢
   - ★ "Which 10 coins did you use?" They should be 1Q+3D+3N+3P.
   - ★ How did you solve it?" (Discuss.)

BONUS: Pick a number between 100 and 150. Challenge players to find the fewest coins and/or the many different coin combinations that add up to that number of cents.

Rock, Paper, Scissors

In the game Rock, Paper, Scissors, two people face each other and say 'Rock, Paper, Scissors,' then each puts out a hand shaped like one of those three things. Rock beats scissors because it can smash them; scissors beat paper because they cut it; and paper beats rock since it can wrap around it. Any item can win or lose. We're going to play this game today, but with coins!

1. Give each player 1 of each coin: quarter, dime, nickel, penny.
2. Each player holds all 4 coins in 1 hand and secretly takes 1 of the 4 coins into the other hand. We'll call that the "playing hand."
3. Each pair of players faces each other and says "Penny, nickel, dime, quarter!" while pumping their playing hand. When they say "quarter," both kids open their playing hand to reveal their coin!
4. Start by counting the number of rectangles along the right-hand column.
5. The winner of each round is the player who has the higher value coin EXCEPT when it's a penny paired with a quarter, in which case the penny wins. The winner keeps both coins, sets them aside and continues the game.
6. If both players reveal the same coin, it's a tie, and players put those coins back to use again in another round. If that's the last coin to play, each player keeps his/her coin and the game ends.
7. After all 4 coins have been played, the winner of the game is the player with the most coins!

If there's time and interest, players can reset their coins (so they each have 1 quarter, 1 dime, 1 nickel, 1 penny) and play again.