## Smart by Shel Silverstein

My dad gave me one dollar bill
'Cause I'm his smartest son, And I swapped it for two shiny quarters
'Cause two is more than one!
And then I took the quarters
And traded them to Lou
For three dimes -- I guess he don't know That three is more than two!

Just then, along came old blind Bates
And just 'cause he can't see
He gave me four nickels for my three dimes, And four is more than three!

And I took the nickels to Hiram Coombs
Down at the seed-feed store, And the fool gave me five pennies for them, And five is more than four!

And then I went and showed my dad, And he got red in the cheeks
And closed his eyes and shook his head-Too proud of me to speak!

## Change for the Better

Materials: Each player needs 1 quarter, 2 dimes, 3 nickels, and 4 pennies.
Rules: Play in groups of 2 to 6 . Each player takes a turn. On their turn they put in one coin. They can take out a combination of coins that is less than the value of what they put in. For example, if you put in a dime ( $10 ¢$ ) you can take back up to $9 ¢$ - if it is there. Play continues until only one person has money left. Instruction: Beginning players should just concentrate on the moves of the game. Aftet students have gained some experience with the game, they can try recording their games by using the following sheet. The data collected can then be examined for patterns.

| Number of Coins |  |  |  |  | $\$$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 1 | 2 | 3 | 4 | \$0.64 |  |
|  |  |  |  |  | \$0._ |  |
|  |  |  |  |  | \$0._ |  |
|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0. |  |
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|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0.__ |  |
|  |  |  |  |  | \$0._ |  |

## Monopoly Money Madness

Materials: play money, 2 dice.
Math content: addition, money recognition, unitizing (grouping into new amounts.)
Game play: Very simple - roll two dice, and take that much money. If you can group your money into a larger bill (for example, a five and five ones into a ten dollar bill). First player to $\$ 100$ wins.
Variation: have players "shop" a catalog or the web for something they would like. Play until they have enough to buy the item they would like.

## Make It, Take It

## 2 Players or teams.

Materials: Play coins or coin pictures or cards, amount cards. Record sheet if desired.
Play: Put the coins in the center. Shuffle the amount cards and make a stack. Players each turn over an amount card, and the player with the smaller amount goes first. On subsequent turns, players turn over an amount card, and see if they can make that amount with the coins. If they can, they take the coins. If they can not, it's the other player's turn. Play until all coins are gone, or both players in a row can't make their amounts. The winner is the player with the biggest total value of coins they collected. (Cards at the end of the pack.)

## Variations:

Recommended starting amounts -4 quarters, 6 dimes, 8 nickels, 10 pennies. Other amounts can be used. Teachers can add amount cards for more complicated amounts.
Players can roll two dice to determine the amount. (Note the dice variation requires more pennies.)
Advanced play allows people to make change with the coins they've collected. For example, trading a dime from the center with two nickels they have taken before.
Players can use dollar value charts to keep a running total.

## Example:

Bill and Keenya have been playing for a few turns.
Bill turns over 12 cents and takes two nickels and two pennies.
Keenya turns over 25 cents, but there are no quarters left. She takes five nickels.

Bill turns over 50 cents and can not make it.
Keenya turns over 6 cents and takes a nickel and a penny.
Bill turns over ...

## Instruction:

As with most games, it is recommended to play a game with teacher vs. the whole class to launch the game. Emphasize the variation in ways to make an amount by soliciting other possibilities from the students. Ask questions like "what card would be good to turn over next?" or "what card would leave me with no possibilities?" If someone is stuck, encourage good sportsmanship in helping them figure out a way to make the total. If that doesn't seem to be working, or you are worried about their ability to make the amounts, students can play in a team of two vs. another team of two. Many students will try a place value approach first, taking dimes and pennies. This will rapidly run them out of one or the other, forcing them to find other amounts. The amount cards concentrate on values that can be made with one, two or three coins, though several can be made with many more coins.

In summary, the teacher may wish to have students share their strategy for figuring their total at the end of the game. It is important to summarize by having students describe how they knew if they could make an amount or not. Another interesting discussion to start is if there is a strategy for better ways to play the game - is there an advantage to using fewer or more coins to make your moves?

## Score Sheet

| $=25$ | $=10$ | $=5$ |  |
| :---: | :---: | :---: | :---: |


| Amount Card | Coins Taken |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |


| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |


| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
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| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

## Coin challenges



| Amount | Coins |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
| 40 cents |  |
| 42 cents |  |
| 28 cents |  |
| 18 cents |  |
| 22 cents |  |
| 22 cents | In a different way! |
|  |  |
|  |  |
| 56 |  |
| 41 |  |
|  |  |
|  |  |
|  |  |
|  |  |

Dollar Grids - Each is worth 100 cents.


|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |  |  |  |  |
|  | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 |  | 11 | 1 | 1 | 1 | 1 |  | 1 |  | 1 | 1 | 1 |  |  |  |  |
| 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 1 |  | 1 |  | 1 | 1 |  |  |  |  |  |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 |  | 1 | 1 | 1 |  | 1 | 1 |  |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |  |  | 11 |  |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |  |  | 1 | 1 | 1 | 1 |  | 1 |  |  | 1 | 1 |  |  |  |  |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 11 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |  |  |  |  |
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|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  | 1 | 1 |  | 1 |  | 1 | 1 | 1 | 1 |  | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 |
|  | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 | 11 | 1 |  | 1 | 1 | 1 | 1 | 1 |  |  | 1 |  |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 | 11 | 1 |  | 1 |  | 1 | 1 | 1 | 1 |  | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 |  |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 |  |  |  | 1 | 1 |  | 1 |  | 1 | 1 | 1 | 1 |  | 1 |  |
|  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 11 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 |  | 1 |  |
|  |  | 1 | 1 | 1 | 1 |  | 1 | 1 |  | 1 | 1 | 1 | 1 |  |  |  | 11 |  |  | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 |
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| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 |  |  | 1 |  | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 |  | 1 | 1 | 1 | 1 |  | 1 |  | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |
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| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 |  | 1 |
| 1 |  | 1 | 1 | 1 | 1 |  | 1 |  | 1 |  |  |  |  |  |  |  | 1 | 1 | 1 |  | 1 |  |  |  | 1 | 1 | 1 |  |  |  |  |  |

## Momey Coumter

We are thinking about a money problem. If Juan has $83 ¢$, what coins could he have in his pocket? Juan says he has no half-dollars, and less than 15 pennies. But that's all the information we have.

Plan: How are you going to solve this problem?

Possibilities: If you need more space use the back of this page.
$\begin{array}{llllllllllll}\mathrm{Q} & \mathrm{D} & \mathrm{N} & \mathrm{P} & \mathrm{Q} & \mathrm{D} & \mathrm{N} & \mathrm{P} & \mathrm{Q} & \mathrm{D} & \mathrm{N} & \mathrm{P}\end{array}$

Do you have all the possibilities? How do you know?


How to play: On your turn, roll a die. Take the coins for that number, if you can put them on your dollar. If there's room, you have to use them.

| 1 | 2 | 3 | 4 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |





Make It Take It cards.

| 25 <br> cents | 10 <br> cents | 5 <br> cents | 1 cent |
| :---: | :---: | :---: | :---: |
| 50 <br> cents | 35 <br> cents | 30 <br> cents | 26 <br> cents |
| 20 | 15 | 11 | 10 |
| cents | cents | cents | cents |
| $\mathbf{6}$ | 2 | 27 | 12 |
| cents | cents | cents | cents |
| 7 | 25 | 10 | 45 |
| cents | cents | cents | cents |

