

Dollar Board

\$1.00















Cut out "quarters" on the dotted lines.























Cut out "dimes" on the dotted lines.

				
\$\$.10	\$\$.10	\$\$.10	\$\$.10	\$\$.10
\$\$.10	\$\$.10	\$\$.10	\$\$.10	\$\$.10
				

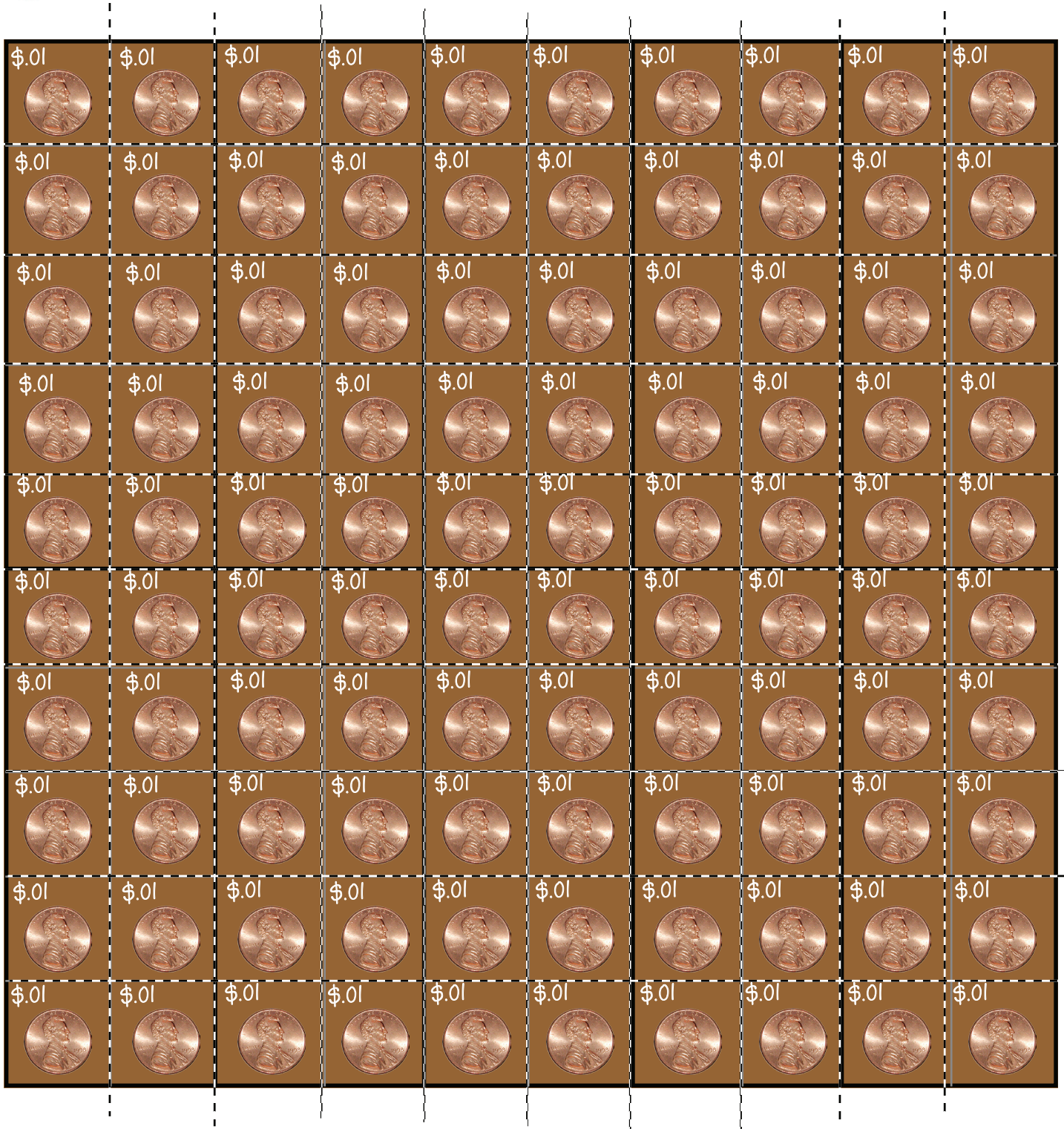


Cut out "nickels" on the dotted lines.

\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05
									
\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05	\$0.05
									

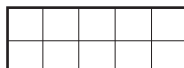


Cut out "pennies" on the dotted lines.



KP Money Boards

Because coins carry no physical clue about their values, using coins to teach coins often fails as a method of instruction for many students. (Witness the fact that even many adults are unable to make change without consulting the cash register.) KP Money Boards provide the means by which students learn the values of coins relative to one dollar and to one another. This method of instruction begins with the ten-frame.



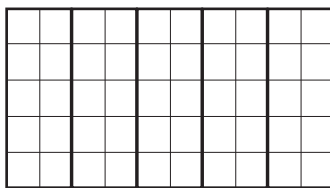
The Ten-Frame

The ten-frame, a visual organizer for numbers 0-10, can be extended and partitioned to represent multiple ten-frames and fractional ten-frames.

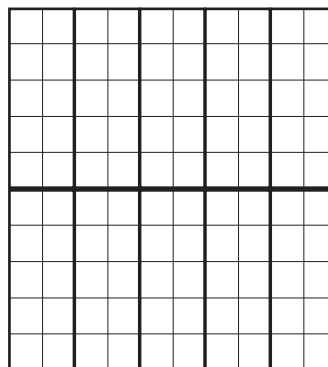
1 ten-frame



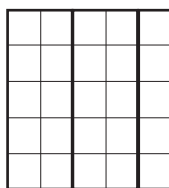
5 ten-frames



10 ten-frames



$2\frac{1}{2}$ ten-frames



$\frac{1}{2}$ ten-frame

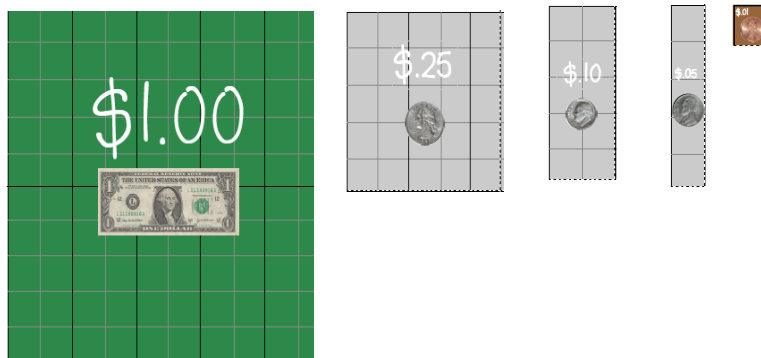


$\frac{1}{10}$ ten-frame



KP Money Boards

KP Money Boards are ten-frames, multiple ten-frames, and fractional ten-frames. The Dollar Board, represented by 10 ten-frames, is the "whole." Each Coin Card is represented by a fractional part of the Dollar Board: the Quarter Card is $2\frac{1}{2}$ ten-frames, the Dime Card is 1 ten-frame, the Nickel Card is $\frac{1}{2}$ a ten-frame, and the Penny Card is $\frac{1}{10}$ of a ten-frame. (Because the 50-cent piece is in limited use, we have omitted the corresponding Coin Card from our Money Board set.)

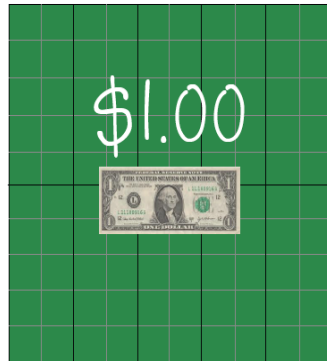


KP Money Boards help students distinguish between *quantity* and *value*. Unlike the coins they represent, Coin Cards' relative sizes denote their value. The physical *sizes* of the Dollar Board and of the Coin Cards is determined by the size of a single cell of the ten-frame. That single unit is the penny, the "piece" that is common to each coin and to the dollar. No longer will students prefer to have 50 pennies instead of 1 dollar!

KP Money Boards as Teaching Tools

KP Money Boards are used to teach a variety of money-related concepts and skills. Use the images shown here to visualize the movements described in the titled descriptions below.

In the situations described below, students first use Coin Cards to carry out steps that may be difficult to understand if they were using real (or play) coins. Then, using the coin pictures on the Coin Cards as guides, they replicate the actions with coins.



The Dollar Board may appear to limit the application of KP Money Boards to only those values up to \$1.00. However, since Coin Cards can be used with any whole-dollar amount, the concepts conveyed by the Money Boards are applicable to any situation involving dollars and cents.

Coin Equivalences to \$1.00

Students discover each coin's quantitative relationship to \$1.00 by using the Coin Cards as puzzle pieces on the Dollar Board. They discover that it takes 4 Quarter Cards, 10 Dime Cards, 20 Nickel Cards, and 100 Penny Cards to equal \$1.00.

Coin Equivalences to Other Coins

In the same way that students use Coin Cards as puzzle pieces on a Dollar Board, they use Coin Boards on which to place "smaller" Coin Cards. They discover, for example, that there are four ways to make \$0.10: 1 dime, 2 nickels, 1 nickel and 5 pennies, and 10 pennies. They can find the two coin equivalences of \$0.05 and experiment to find some of the many coin equivalences of \$0.25.

Counting to a Given Amount of Money up to \$1.00

Counting money involves counting *value* instead of *quantity*. Students place Coin Cards on the Dollar Board to a given amount, value-counting (skip counting) as they go, beginning with the largest Coin Card(s) and ending with the smallest in whatever combination they choose. For example, to value-count to \$0.72, they may place Coin Cards on the Dollar Board like this: 2 Quarter Cards, 1 Dime Card, 2 Nickel Cards, and 2 Penny Cards and count them like this: 25, 50, 60, 65, 70, 71, 72. Of course, any number of other coin combinations is possible.

Making Change from \$1.00.

Suppose an item costing \$0.72 is purchased with a \$1 bill. Students place Coin Cards equaling \$0.72 on the Dollar Board. They turn the Coin Cards over in place and fill the remaining green portion with Coin Cards, beginning with the largest Coin Cards and value-counting as they go. With this method, they have determined the change.

Counting past \$1.00 by Counting in Groups of \$1.00s.

Once students learn to organize their Coin Cards in order of size and to skip count their values, they practice doing the same thing with real coins. They can, of course, count money well past \$1.00 by counting up to \$1.00 in coins as many times as the number of coins requires and then counting each \$1.00 coin-group.