



# Puzzle Corner

## Coin Capers

by Michelle and Dave Youngs

The Puzzle Corner this month has two versions which are variations of a common theme in manipulation puzzles. In each game the goal is to switch the position of two or more sets of coins by moving them within the spaces provided. Coins may only move into adjacent empty spaces. No jumping is allowed, but coins may move in either direction.

In **Version One** there is a row of 13 squares, with two additional squares above the middle square. In this version, four pennies are placed at the four far-left squares, and four dimes are placed in the four far-right squares. The challenge is to switch the positions of the dimes and the pennies, and to do this in the fewest possible moves.

In **Version Two** there are two rows of 11 squares connected by a single square in the middle. **Version Two** has two games, both of which require four types of coins. Quarters go in the upper left corner, nickels go in the lower left corner, dimes go in the upper right corner, and pennies go in the lower right corner. In the first game, the quarters and nickels switch places, and the dimes and pennies switch places. In the second game, the quarters and pennies switch places, and the dimes and nickels switch places. You may decide to use both or only one of these versions with your students.

Other objects may be substituted for coins, however, they must be small enough to fit in the spaces on the student sheets, and be of four different types. Colored buttons, different types of beans, or centicubes would all work equally well,

We hope you and your students enjoy **Coin Capers**. Stay tuned next month for another exciting activity,

# COIN CAPERS

## Version One

Place four pennies in the four left squares. Place four dimes in the four right squares. The object of this puzzle is to have the dimes and the pennies switch places. Coins may be moved by sliding them into an empty square adjacent to the one they are in. Coins may move in either direction, but you may not jump coins at any time.

The puzzle consists of a 4x10 grid. The top row contains four squares on the left and four squares on the right. The second row contains a policeman on the left and a thief on the right. The third row contains a thief with a sack labeled 'PENNIES & DIMES' on the left and a thief on the right. The bottom row contains four empty squares on the left and four empty squares on the right. Below the grid are two arrows: one pointing right labeled 'pennies' and one pointing left labeled 'dimes'.

Once you have solved the puzzle, attempt to do it in the fewest possible moves. Describe your solution below.

