

1096-J5-2497      **M. Reba\*** (mreba@clemsun.edu) and **D. Shier**. *Using Graph Representations to Solve Puzzles*.

Using graphs to solve puzzles not only introduces students to the benefits of using alternative representations in problem-solving, but also motivates their interest in the pervasiveness of graphical structures found in modern transportation, communication, and computer networks. We present activities where solutions to mazes, jug-pouring problems, chip-stacking puzzles, and word puzzles can be revealed by finding paths or colorings in certain graphs. Activities like these are part of in-class group work and individual homework. They encourage students to be creative and many have incorporated these ideas into final classroom projects. (Received September 17, 2013)