Rainbow Logic

Supplies: The resource monitor should pick up a game board and a set of 16 colored squares (4 of each color) for each group member. The grid keeper will also need something to block the rest of the group from seeing his/her design.

Objective: The group must determine the color of each square on the grid by asking the least number of questions possible.

Rules:

- 1. Determine which person in the group will be the grid keeper.
- Without letting anyone in the group see, the grid keeper forms a 3 x 3 pattern using exactly 3 squares each of 3 different colors. ALL squares of the same color must be connected by at least one full side.
- 3. Since the goal is to determine the color of each square in the grid with the least number of questions, the group should discuss and decide before asking the grid keeper a question.
- 4. If the grid keeper is asked what colors are in the top row, he/she must answer truthfully. However, the grid keeper does not have to give the colors in the order they are arranged on the board.
- 5. The grid keeper should record how many questions the group asks.

Norms:

- Discuss and decide.
- Give reasons for your suggestions.

Activity Adapted from Stenmark, Thompson, & Cossey, *Family Math*, Lawrence Hall of Science, Copyright 1987 Regents University of California. All rights reserved. Included in Designing Groupwork: Strategies for the Heterogeneous Classroom by Elizabeth G. Cohen.