

## **Guiding Math Ideas:**

- Math Enthusiasm- Playing Math Games
- Geometry- Describing shape attributes

# Math Concepts from Unit Learning Progressions:

- Math ideas relate to games (comparisons, and quantity)
- Classifying shapes by describing and comparing some attributes

<ul> <li>Materials:</li> <li>Color and Shape Bingo Set</li> <li>small manipulatives for game pieces</li> <li>small numerals, or numbers written on small pieces of paper</li> </ul>	<ul> <li>Math Vocabulary:</li> <li>clue- some words or actions that help people guess</li> </ul>
---	--

### **Preparation:**

Prepare the number cards. Assemble materials. Up to 4 children can play on their individual cards at a time.

# Procedure:

This is a variation of Color and Shape Bingo by adding an *I Spy* element (similar to the I Spy Shapes Hunt). Ideas of discrete attributes and number provide clues. Children take turns being the Bingo Caller and Clue Giver. As they draw the card, they must describe orally the object by color and shape- e.g., pink diamond, or blue circle. Children guess what the shape is, and the caller then reveals the card. Children then place a counter/manipulative on the shape/color on their cards.

Model drawing a card and giving clues. After a child's card is full she/he continues playing, placing extra markers on the squares when duplicated. When all cards are full, each child counts the number of markers on their card and describes it to their friends: *I have 3 markers on red circles, 1 on a blue square and 1 on a yellow triangle. All together I have 5 markers.* 

# Strategies to Provoke Math Thinking:

• Describing shapes: Describing the different attributes of shapes requires more complex thinking skills than identifying shapes, which can be a just simple matching skill. Encourage less verbal

children to expand their math vocabulary as they describe the shapes to their peers instead of relying on pointing or simple naming.

 Modifying traditional games: There are usually ways to change games to meet teaching goals, increasing or decreasing the difficulty, adding a dimension, such as counting or clue-giving, or using the materials without the game board. An example of this is frameless puzzles. Remove puzzles from their frames and ask children to re-create the picture without the benefit of the underlying outlines. Children grow in their visual discrimination skills rather than relying on matching the lines.

# Adaptations for Additional Challenge:

- Giving clues: Children have to work at giving clues without "giving away" the answer. Observe children and if there are some who grasp the idea of clues and descriptions, add the element of acting out a clue, rather than describing, in a version of charades for preschoolers.
- See Modifying traditional games [ above] for other ideas on changing games to match skill level.

#### **Documentation**:

As children play games, adults can step back from close interaction and supervision and document the many math skills that are embedded in game playing. Matching, attribute recognition, counting and spatial understandings are some of the math skills that are observable while playing color and shape bingo.

#### **Provocation:**

Make a grid on the floor of the block area with masking tape. Choose blocks for 3-D Shape Bingo, and have children work together to fill in their "Block Bingo Card."