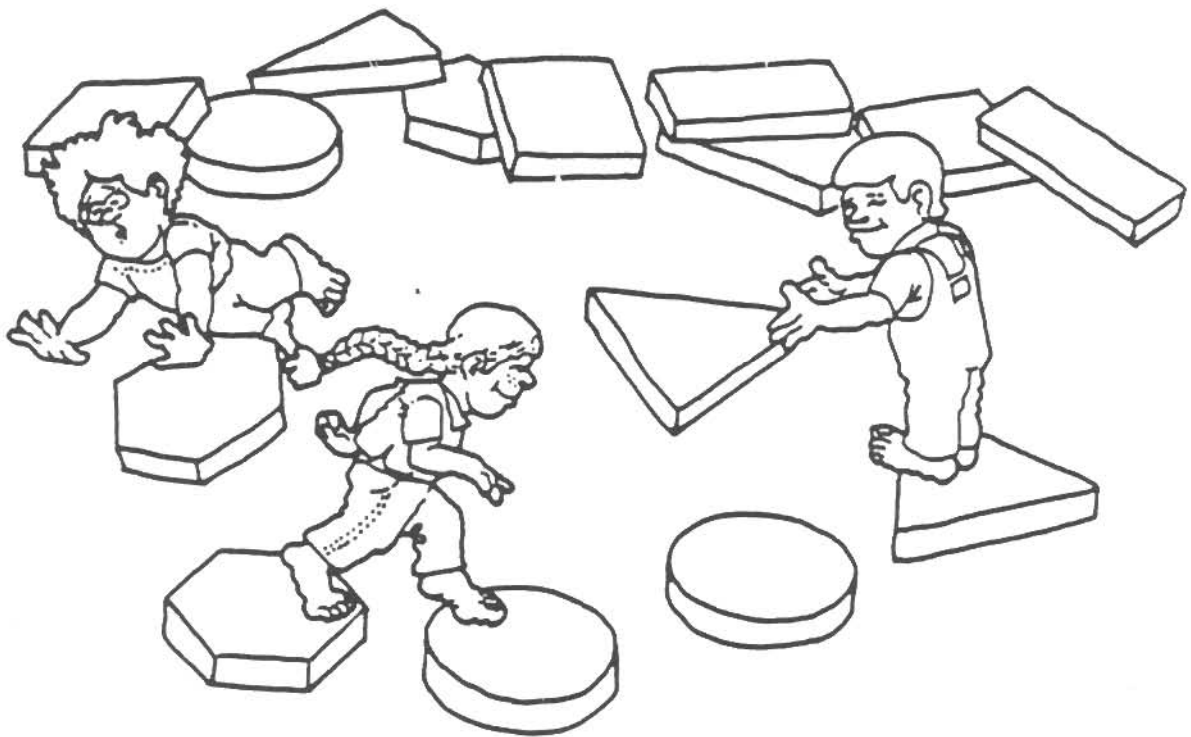
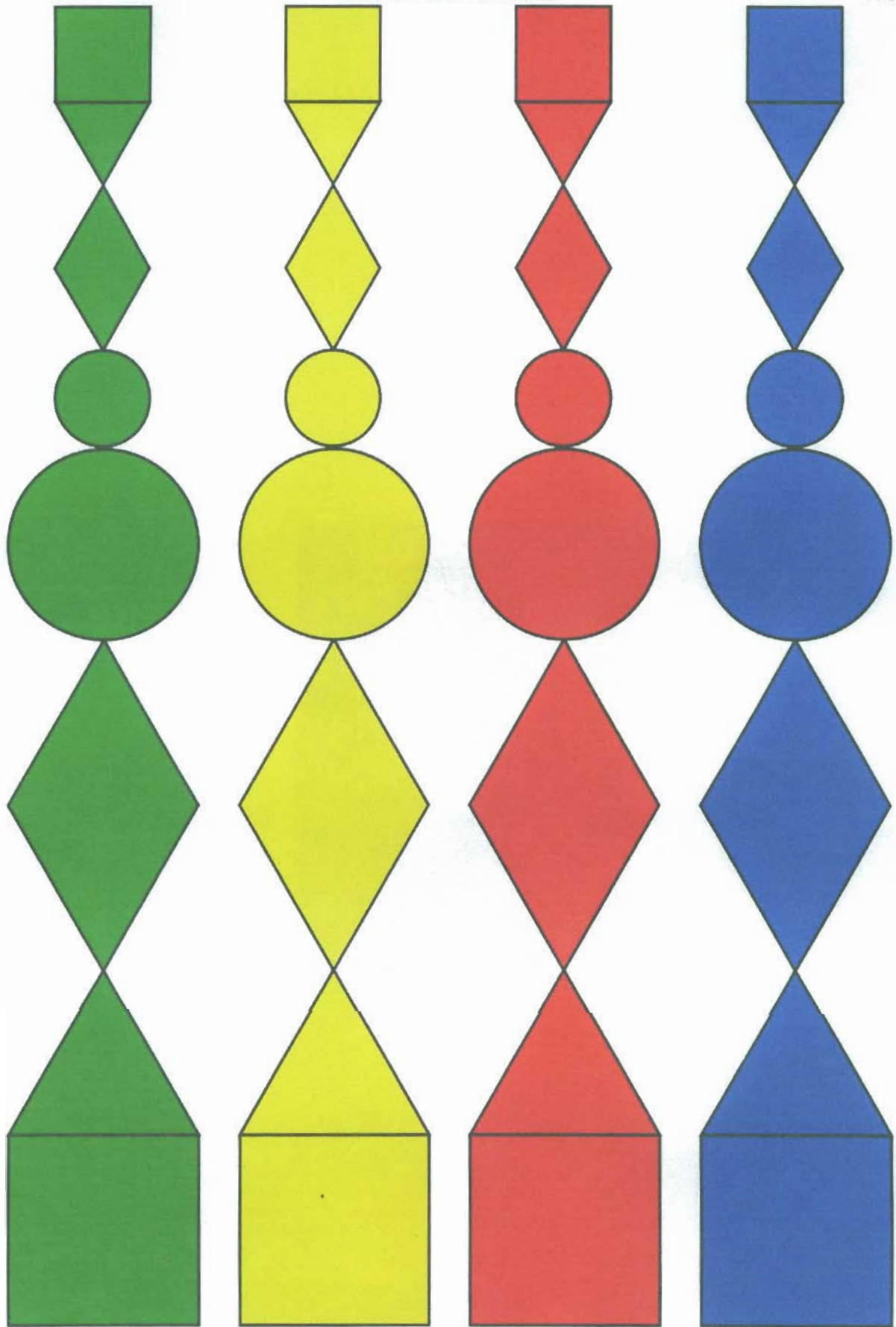


Attribute Blocks



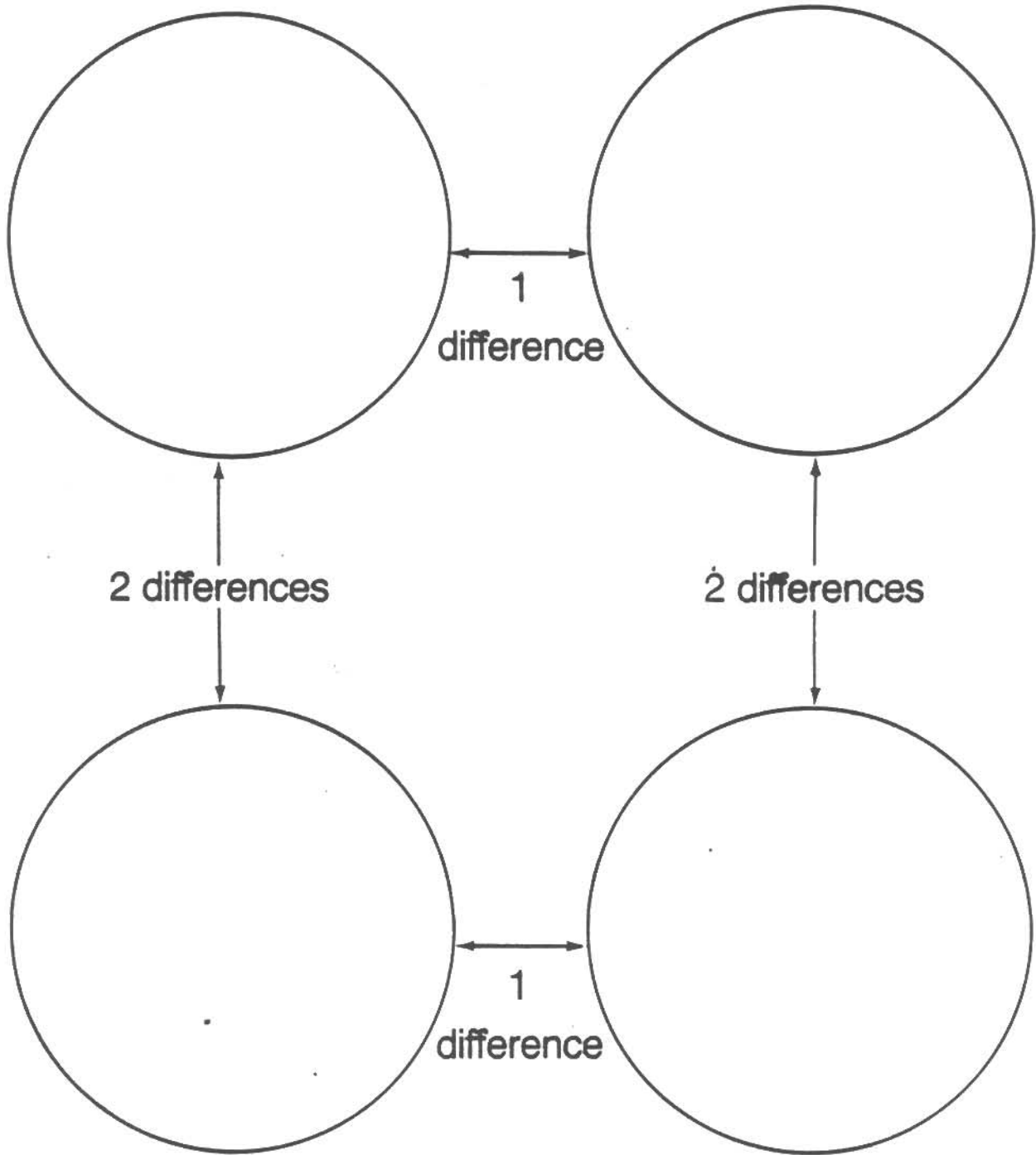
ATTRIBUTE PIECES

A-5



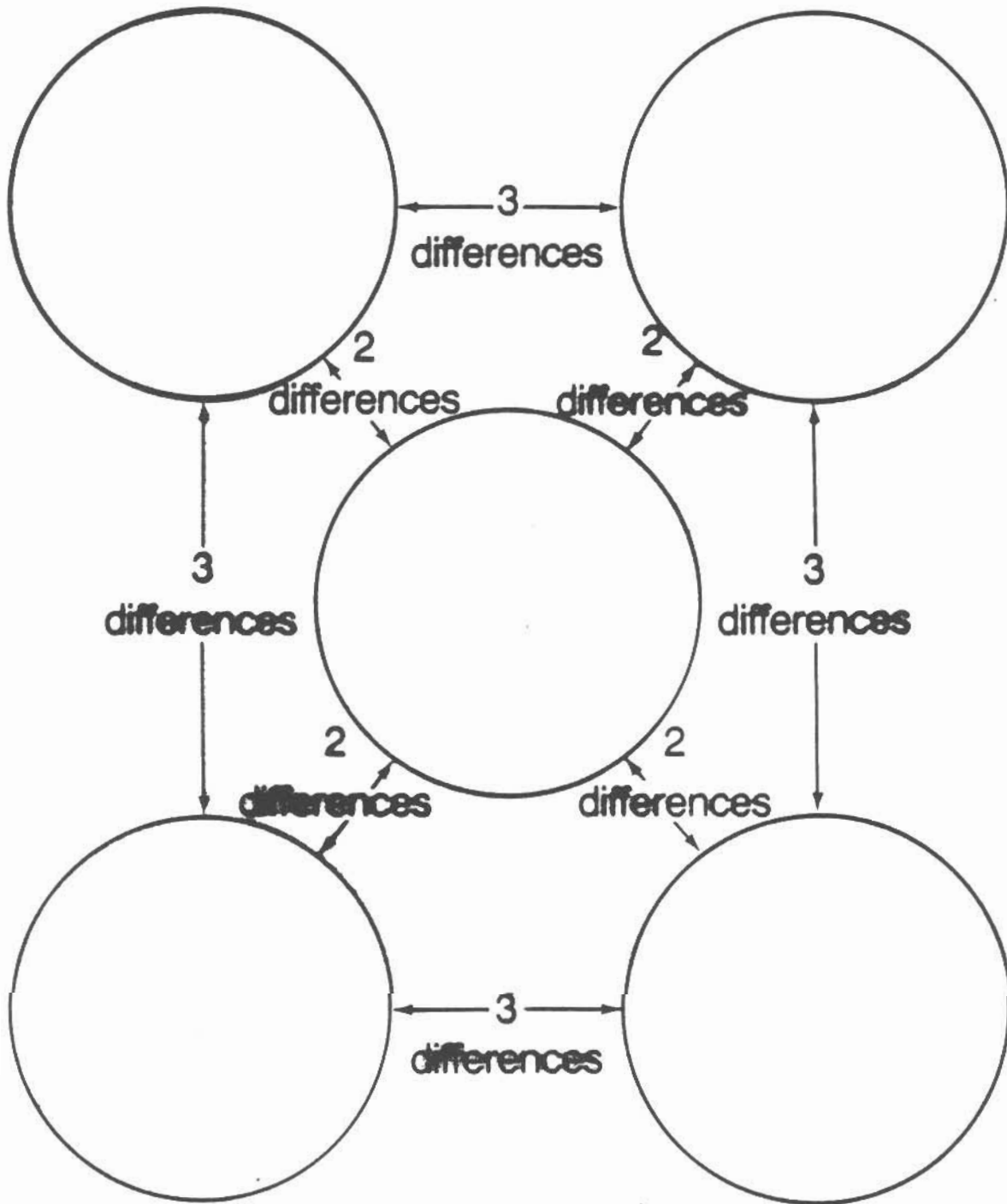


Find the blocks that solve the puzzle. Trace and color.





Find the blocks that solve the puzzle. Trace and color.



Attribute blocks

One set per group -- they must be worked with as set.

Activity: Check to be sure that all pieces are there (don't tell them how many pieces are to be there).

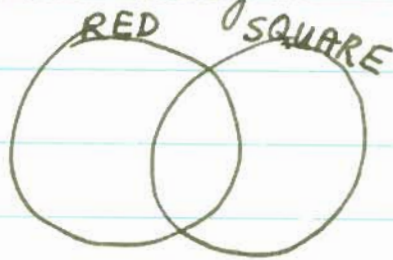
How many blocks are in a complete set? $\Rightarrow 32$

Get to know the set well enough that you could describe the set without having ^{it} in front of you.

Teacher thinks of a piece and answers yes/no questions to determine it. After playing, determine which are the best questions. And why?

Have cards so each group can do this activity.

Do Venn Diagrams -- place blocks in rings.



Ask questions such as: How many are in

the red loop? In the square loop? How many are red or square? How many are red and square? etc.

AND/OR STATEMENTS

Select the blocks having the properties below. Indicate the number of blocks chosen.

1.
 - a. circle and red _____
 - b. not circle and red _____
 - c. not circle and not red _____
 - d. not circle and square _____
 - e. red and not red _____
 - f. circle and not red _____

2.
 - a. blue or square _____
 - b. large or triangle _____
 - c. small or large _____
 - d. blue or not diamond _____
 - e. not green or square _____
 - f. yellow or not red _____

3. Describe the blocks below.
 - a. LRT, LRD, LRS, LRC, SRT, SRD, SRS, SRC _____
 - b. LRD, LRT, LRS, LRC _____
 - c. LRT, SRT _____
 - d. SRC, SBC, SYC, SGC _____
 - e. SBC, SGC, SYC _____
 - f. LBS, LYS _____

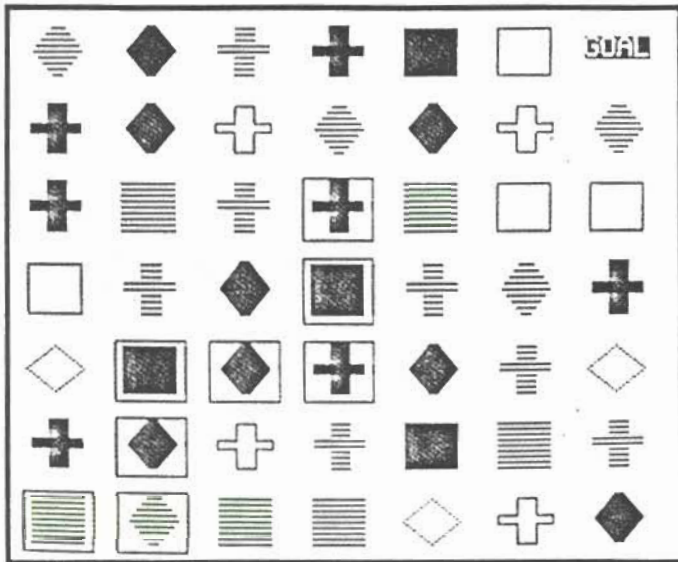
Set of cards to label rings: blue, red,
circle, NOT circle, not green, etc.

Computer Software is a nice link
between the manipulatives + symbols.
See handouts next pages.

WHAT'S MY LOGIC?

MICHAEL O. BAKER / MIDWEST PUBLICATIONS / PROGRAMMING BY TRACY VALLEAU

FIGURAL A-1 / BLACK & WHITE



suppose the computer is comparing to see if it is true that "the marking is the same" or "shape is the same." Then, if you are on a striped diamond shape, you could move to any other diamond regardless of marking, because it is true that the shape is the same. You could also move to any other striped shape, because it is true that the marking is the same.

The logical rule(s) the computer uses will stay the same throughout a game, but the rule(s) will change when you select a new game.

To reach the goal, you will have to try different moves. Pay attention to both the objects you are allowed and not allowed to move to. By keeping track of what moves are allowed and not allowed, you will soon figure out the logical rule(s) that the computer is using.

When you know the logic, you can choose the moves that will take you to the goal in the fewest number of moves.

Good luck and have fun.

PURPOSE OF THE GAMES

1. Help sharpen analytical thinking skills for better academic performance and problem solving skills.
2. To discover some basic rules of logic.

NEGATION
CONJUNCTION
INCLUSIVE OR
EXCLUSIVE OR

INSTRUCTIONS

"What's my logic?" is played on a checker board. Each square has an object on it. To play, you must move the box from the start (bottom left corner) to the goal (top right corner).

Each time you try to move to a new object, the computer will either allow the move or send you back to the beginning of the game.

In deciding if your move is good or not, the computer compares the object you moved from with the object you moved to.

In the early games the computer compares "shape and/or marking." In the later games the computer will compare "shape and/or marking" or "shape and/or size" or "size and/or marking." The computer will never compare more than two qualities of an object in a game.

The computer compares objects to see if something is "true" or "not true" about them. For example,

HELPFUL HINTS

1. Though one student may play the games, as many as three or four students can play the games together.
2. Average third- and fourth-graders can play the beginning games with a little bit of help. It is possible, and sometimes beneficial, to have more than one student play a game.
3. The games are nongraded and can be used from roughly third grade through adult.
4. Don't be discouraged if your students cannot solve the problem right away. They will be doing a lot of thinking, and having fun! Eventually some student will solve the game and usually will be quite happy to explain to other students (and maybe you) how he or she figured out the path and logic involved. Remember, your primary goal is to help sharpen thinking skills for better academic performance and problem solving.

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SPECIAL MEANINGS III

YOUR NAME _____

and - or

The AND-OR rule may be followed in three ways:

1. Both conditions of the AND are present
2. The OR condition is present
3. All three conditions (two from the AND and one from the OR) are present.

Rules:

Circle the correct examples:

1. round and small or star	
2. large and triangle or round	
3. small and black or square	
4. large and round or black	
5. round and black or square	
6. star and black or small	
7. large and square or star	
8. small and square or black	
9. round and black or small	
10. smile and round or frown	