Halloween Math Circle Game List

Mastermind (2 players, more if codebreakers form a team)
Description: One player makes a code, the other tries to figure it out by making guesses and getting feedback.
Food for thought: Can you come up with a general strategy so that you always win in 7 moves? 6 moves? 5 moves?

Spot It (2 - 8 players)
Description: Each player gets one card, and tries to find the matching symbol between their card and the center card as quickly as possible.
Food for thought: Let C be the number of cards, S the total number of symbols, and N the number of symbols per card. Spot It has (C, S, N) = (55, 8, 50) and has the property that any two cards selected will always have one (and only one) matching symbol between them. The triple (4, 6, 4) also has this property - the cards can be abc, ade, bdf, and cef. Can you think of any more?

Zometools
Description: Zometools are a model-construction toy which can be used to make many 3-D geometric figures.
Food for thought: Which Platonic Solids can you make? The Platonic solids are the tetrahedron (4 triangle faces), cube (6 square faces), octahedron (8 triangle faces), dodecahedron (12 pentagon faces), and icosahedron (20 triangle faces).

Fluxx (2 - 6 players)
Description: Fluxx is a card game where the rules and conditions for winning are altered throughout the game, via cards played by the players.
Food for thought: Luck is a pretty big factor in any game of Fluxx. But can you write down some strategies that can help you win?

Blokus (2 - 4 players, ideally 4 to start out with)
Description: Players alternate adding their tiles to the board, with the rule that each new piece must touch at least one tile of the same color, with only corner-to-corner contact allowed between tiles of the same color.
Food for thought: Is the game fun with 2 or 3 players? If not, can you think of a way to modify it?

Logic Links (1 player per puzzle, more if work as team)
Description: Use the clues to figure out where to place colored chips on each of 166 puzzles.
Food for thought: Can you design your own logic links puzzle?

Alice in the Forest of Forgetfulness
Description: Fun logic problems with an Alice in Wonderland theme.
Food for thought: Can you make your own logic problems involving these characters?

Qwirkle (2 to 4 players)
Description: Each piece has two attributes (shape and color). Take turns adding pieces which share one attribute with their neighbors.
Food for thought: Can you invent another game using the Qwirkle pieces?

24 (1+ players)
Description: Draw four cards from a regular deck with face cards removed. Can you use addition, subtraction, multiplication, and division to make 24?
Food for thought: Are there any sets of four cards where it is impossible to make 24?

Space Chips
Description: Space chips are a model-construction toy that can be used to build 3-D shapes.
Food for thought: Make a shape where at every corner, a triangle (3), a square (4), a triangle (3), and a square (4) meet. Note that two triangles are never next to each other, and two squares are never next to each other. We call this shape a cuboctahedron and say that its recipe is (3, 4, 3, 4). What other recipes can you make? Can you think of some that are impossible?