



STRATEGY – LEVEL 1: SHAPE SUDOKU

Materials:

Paper with Sudoku puzzles at various levels

Playing pieces

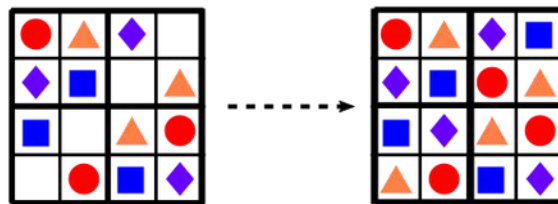
Instructions:

Start with a 3 x 3 Sudoku puzzle. Have your child complete the puzzle with the following rules:

- Each row must contain each shape without repetition
- Each column must contain each shape without repetition.

When your child gets the idea, move on to a 4 x 4 square, with the additional rule:

Each 2 by 2 corner box of the grid must contain each shape without repetition.



Questions and discussion points:

- Feel free to give your child hints, for example: this row already has a square and a circle, so we still need a diamond and a triangle. Now let's look at the column, does it need a diamond or a triangle? And point to the rows and columns you are talking about.

Thoughts to take home:

If your child likes these puzzles, there are many Sudoku puzzles at various levels (shapes and numbers) that you can print out online or get them from the EFM web site (see bonus materials).

STRATEGY – LEVEL 2: FINDING SQUARES

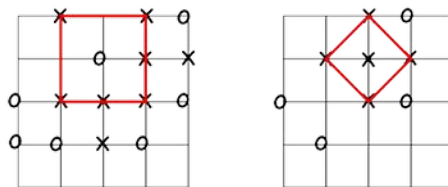
Materials:

Grid paper from Printables section

Pencils

Instructions:

Draw a 5 by 5 grid with five horizontal and vertical lines. This is a game for 2 players. One player chooses to draw X's, the other player chooses O's. Players take turns putting an X or O on points where the lines cross in the grid. The first player with four X's or O's on the corners of a square of any size wins. Show your child the example below to help them get the idea.



As your child gets experience with this, change the rules to allow squares with diagonal sides.

Questions and discussion points:

- Which squares are you about to make?
- Which squares am I about to make?
- Should I try to make my own square or do I need to prevent you from making yours?

Thoughts to take home:

This game is easy and quick, and can be played anywhere. All you need is pencil and paper, draw a quick grid, and you're good to go!

STRATEGY – LEVEL 3: DOTS AND BOXES

Materials:

Paper

Pencils

Instructions:

For this 2 player game, draw a grid of dots, say 3 by 4. During a turn, a player draws a horizontal or vertical line connecting two dots that are **next to each other** anywhere in the grid. If the line does not complete a 1 by 1 box, the turn is over. If the line completes a 1 by 1 box, the player who drew the line puts their initial in the box and may continue their turn by drawing another line. When no more lines can be drawn, each player counts the boxes with their initial and the player with the most boxes wins.



Questions and discussion points:

- After you have played this game multiple times, wonder out loud: How come someone gets to make so many boxes in a row at the end of the game? Is there a way to make that happen for yourself or to prevent that happening for the opponent?
- It is also PERFECTLY ok for your child not to notice the strategy and to play the game for the simple pleasure of creating boxes.

Thoughts to take home:

If your child figures out a strategy to win, change the grid size. You can play 4 x 4, 4 x 5 or larger grids. This is another game that is easily played on the go.