

FMF VOLUNTEER GUIDANCE

Whatever families do, everyone should have fun.

The adults should do the activities **with** their children! Heavily discourage adults from leaving their children at the table by themselves.

Let children make mistakes. Emphasize that a mistake is really a discovery of something that didn't work! Draw the children out to explain their reasoning, but try not to guide them.

Addition and Subtraction 1 - These are all two player games.

- 1) Nim - There is a strategy for this game, but these children are too young for that. For the serious player, encourage them to figure out the game when there are just 1, 2, 3, 4, 5, or 6 tokens to start with - they may even discover the general strategy!
- 2) Hit the Target - No special strategy for this game. You can either play that turns always change no matter what happens, or you can play that if there is a match then that player's turn continues.
- 3) Memory Challenge - The initial version using matching, is a level 1 activity. Using a target sum for matching makes this a level 3 activity.

Addition and Subtraction 2 - The first three are two-player games. Sum Difference is a casual activity.

- 1) Shut the Box - An adding game up to 9 or 12.
- 2) Math Tic Tac Toe - An adding to 15 game
- 3) Pairing Down - An adding and Number Bond game with numbers up to 10 or 12.
- 4) Sum Difference - A simple add/sub activity that can be played anywhere

Arithmetic 1

- 1) Who's Out - This is a great game for practicing number bonds and missing addends.
- 2) Number Scramble - This can be played with just addition, subtraction, and double-digit numbers; or multiplication and division can be included in it. This is a great game for sorting through lots of number facts to find out how to get the desired result.
- 3) Product Game - This is great practice with multiplying, factoring, and working on strategies.
- 4) Multiplication Bingo - Standard game of bingo only using multiplication of two randomly drawn numbers.

Comparing 1 - These are all two-player games.

- 1) War - Comparing - This is the classic game. Children who don't know written numbers may count the hearts, spades etc, on the cards instead of using the numbers.
- 2) Going Up - There's lots of opportunity to discuss with the children why they chose one action over another.
- 3) Get out of my House: +-1 - Children love knocking their opponent out of a house.

Count Add Compare 1 - The first three are two-player games. Which Number am I is more of a two-player activity than a game.

- 1) Go Fish - This is the classical game.

- 2) I'm Thinking of a Number - This is a number comparing or ordering game. The player has one kind of question to ask and tries to guess the mystery number with as few questions as possible.
- 3) Pig - A very simple probability and small number adding game.
- 4) Which Number am I? - This activity is all about number bonds.

Count Add Compare 2 - The first three are activities, and Number Line Battleship is a two-player game.

- 1) Number Hunt - hide or place numbers and pictures around an area and then the other person finds them. Very similar to a scavenger hunt.
- 2) String Number Line - Various activities with numbers strung on a piece of string. This may not work very well in a public area.
- 3) In the Other Hand - Simple number bond activity with a slight air of mystery.
- 4) Number Line Battleship

Geometry 1 - The geometry activities are experiential. Don't let adults get goal oriented. This table is for the youngest children and requires the lowest skill levels.

- 1) Patterns - This is very low key. The adult or child can create the pattern. Enthusiastic families can use sounds or even dancing to make patterns.
- 2) Cutting Symmetric Shapes - This is for experimenting and seeing what happens.
- 3) Shapes with Pattern Blocks - Make pretty things. Discuss symmetry if it happens, but otherwise don't bring it up.

Geometry 2 - Filling Squares with Squares is a puzzle, and the other two are activities.

- 1) Jigsaw Puzzle - Use drawings or printed material (e.g. magazines, cereal boxes). Cut these materials into jigsaw pieces that you can then put back together again.
- 2) Shapes on the Floor - Place pieces around the room or on the floor. Then have a scavenger hunt for shapes that are described.
- 3) Filling Squares with Squares - This is a puzzle for finding different ways of taking apart a big square into smaller squares.

Mixed Operations 1 - These are all two-person games except for Parentheses First.

- 1) Stake Your Claim - Two players practice the order of the numbers from 1 to 100.
- 2) Tax Collector - Two players practice multiplying and identifying factors
- 3) Parentheses First - Puzzles involving general practice with basic number skills
- 4) Counting Neighbors - Two players practice with basic number skills as they attempt to out-manuever each other.

Storybooks 1 - The books are designed for the adults to read to the children. Of course, children can read the books if they are good readers, but that is not the intended purpose and should mostly be avoided.

Strategy 1 - Sudoku is a puzzle. The other two are games.

- 1) Shape Sudoku - The adult should do the puzzle with the child. To avoid overwhelm, for a child who has trouble getting started, start with the 3 by 3's and encourage them to first solve any rows or columns that are missing a single shape.

- 2) Finding Squares - For new players, this should definitely be started using only vertical and horizontal sides.
- 3) Dots and Boxes - This should be straightforward. It's hard to come up with strategies for this, so this is entirely for playing around together.

Strategy 2 - These are three two-person strategy games. No arithmetic involved in any of these.

- 1) Tapatan
- 2) Sim Triangle
- 3) Nine Men's Morris - This is similar to Tapatan but takes longer and is better for an older crowd.