

Family Math Adventures!

Grades 1-6



Number Sense & Numeration

Ninja Cards (Grades 1-6)

Grades 1-2: Split the deck of cards in half. Each player flips over two cards. Add the two cards together. Whichever player has the higher sum of the two cards wins (keep score by colouring in grids on a paper). Whoever wins 10 rounds first wins the game!

Grades 3-4: Split the deck of cards in half. Each player flips over two cards. Multiply the flipped cards. Whichever player has the higher total of the two cards wins (keep score in a T-chart, results can be graphed afterwards...eventually, an additional graph can be constructed showing the total number of wins per player over a longer period of time).

Grades 5: Split the deck of cards in half. Each player flips over three cards. Combine two of the cards together (5, 4, 3 could become 53, 45, etc.). Subtract the THIRD card from the sum of the combined number (e.g., 54-3). Whichever player has the highest total wins (keep score in a T-chart). This will take some strategizing!

Grade 6: Split the deck of cards in half. Determine a fraction in advance (e.g., $\frac{1}{2}$) Each player flips over two cards. Whichever player gets closest to that fraction wins (e.g., 6/10 beats 2/8...why?)

RULES: Jack = 11, Queen = 12, King = 13, Ace = 1

OPTIONS: Once your child has the knack of the game, do a speed round ... see how long it will take you to play ten rounds, then try to beat that time next time around!

Measurement

Kitchen Wizardry

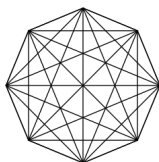


Grades 1-2: Use spoons to measure distances and heights around the house. How many spoons long is the kitchen table? How many spoons long is the cat? (may require a patient cat!) How can you determine how many spoons tall a chair is? (Have your child use their finger to keep track...precision isn't necessary!)

Grades 3-4: Have your child become the "head chef," and act as their staff. Have them direct you or help you to make the recipe. Ensure that they are reading out the ingredients and hand you the correct measurement size to match the ingredient. Have them determine at what time the baking will be finished on based on the recipe (if the cake is put in the oven at 1:10pm, and has to bake for 40 minutes, when will it be finished?)

Grades 5-6: Same as above, but have the child translate from cups, tablespoons, etc. to millilitres. Encourage your child to attempt a more complex recipe.

Geometry & Spatial Sense



Shape Detective

Grades 1: Find five shapes around the house (square, circle, triangle) and draw a picture of those shapes. Make sure your child can explain why it is a square, triangle, etc. (it has three sides, or it has four equal sides)

Grade 2: Try the above activity, but see if you can locate octagons (stop signs), hexagons, etc.

Grades 3-4: Challenge your child to locate a symmetrical shape around the house or in the community. Once they have found one, work with them to draw lines to create a symmetrical pattern within the shape (see the lines in the shape art beside the Shape Detective title). Then colour it in using specific patterns to ensure that it is symmetrical on both sides (like a mirror image).

Grades 5-6: Using recycled materials (cans, cardboard, cartons), try to construct a model of shapes using nets. Try to only use three-dimensional pieces to construct your design. Try building a house, or community buildings, and decorate afterwards with paper mâché (watered down glue + toilet paper) and paint.

HOLIDAY EDITION (all grades): Build a gingerbread house together, but specifically ask your child to describe the shapes involved and take a lead in the construction. Ask them to talk through their choices.

Patterning & Algebra



Rhythm 'n' Blues

Grade 1-2: Work with your child to create a clapping rhythm or dance that follows a pattern (AABB, ABAB, AABA, etc.) Clapping once could be A, stomping could be B. Make sure you set up a special performance!

Grade 3-4: Try the same activity as above, but make it slightly more difficult. Throw in leaps, turns, whistles, silly noises, animal impersonations. Try using a metronome so you keep the same rhythm... once you get the pattern, increase the speed of the metronome for an additional challenge.

Number Detective

Grade 5-6: The numbers are missing! The numbers are missing! Call in your detective squad! "Hire" your child to be a special detective to solve problems involving unknown variables (e.g., every day the family eats three bowls of cereal. How many days will have passed if 18 bowls of cereal have been eaten? How many bowls of cereal will have been eaten after 15 days?)



Data Management & Probability



Master of the Cutlery Drawer

Grade 1-2: Ask your child to perform a very important task: organize and group together cooking utensils. Emphasize that you are at a complete loss and you need their help. Use colour, texture, function, size, to create different categories (e.g., both the spatula and the ladle are black plastic, they go together). See how many different groups you can create.

Grade 3-4: Take an inventory of the family cutlery drawer (make sure this activity is being supervised by an older family member!). Build a chart to count the number of forks, knives and spoons. Graph the number of knives, forks and spoons using the graph of your choice (bar graph, pictograph, stem-and-leaf).

Movers and Shakers!

Grade 5-6: Get ready to sweat! Take two dice and assign different exercises to each number (1, 3 and 5 = 10 jumping jacks, 2 and 4 = 10 arm circles). Talk about probability: if three of the numbers out of a possible twelve have the same activity, what are the chances that you'll have to do that exercise? (Answer: 25%). Family members – if you would prefer to be the referee and record keeper, you can keep track as your child rolls the dice, and graph the number of times each activity was performed in a 10 minute time span.

