

Math in the Summer

SUMMER LEARNING SLIDE

There are a number of studies that link summer vacation with a slide in academic achievement. In mathematics-related subjects this is even more so because few students are practicing their math skills. There are a number of different things that can be done over the summer vacation to keep their minds mathematically active and still have fun! Here are a few of them...

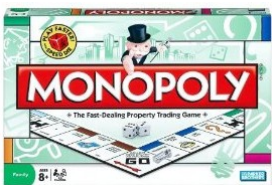


SPORTS

Summertime means baseball. The next time you take your child to a game, incorporate a few math games while you cheer on your favorite team.

Have your child play umpire and ask them to keep count of each batter's balls and strikes. Additionally, they can also keep track of the outs every inning, and how many innings are left before the game is over. Ask them questions, such as what inning marks the halfway point in the game, and how many runs the losing team needs to catch up.

What about the geometry of sports? Playing fields and balls are geometric shapes. Take a look at how a baseball or a football is formed from several flat shapes. Can you make an indoor softball or football or soccer ball by cutting and sewing together pieces of cloth and filling with a soft material?



GAMES

Naturally, any game that requires keeping score uses math. You and your family might also enjoy inventing some new card, dice, or outdoor games, or devising scoring variations for familiar games.

Remember that math is not just about numbers, especially at higher levels. **Checkers** promote thinking ahead and anticipating outcomes. The classic game **Battleship** encourages logical thinking, while **Yahtzee** works on grouping skills. **Chess** – Play this ultimate logic game on a traditional board, or try the various versions available online, and on smartphones.

Traditional card games are full of logic and arithmetic. Bring along that **crib** board on camping trips and you will see math ability improve. Play your favourite board game and let your child be the banker.



Games that involve math games come in all shapes and sizes, so choose your favourite!

MATH TRAVELS

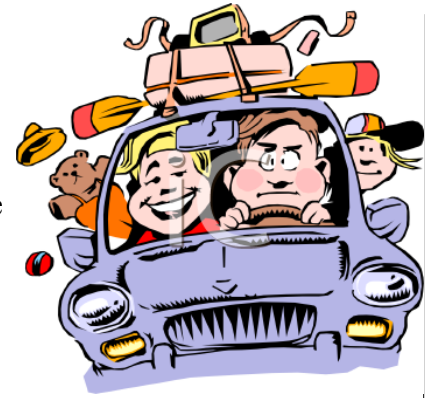
Are you planning a road trip? Use those long car journeys or endless airport delays to play some games with your captive audience.

Calculating time and mileage is a fun way for your child to pass the time in the car. For example, if the grocery store is three kilometers away, how long does he think it will take you to get there?

If you have several errands to run, ask you child how far away they think each destination is from the other, and then clock it to see how close their guess is.

Another fun car game is to use the numbers on license plates as an addition and subtraction lesson. Ask your child to add or subtract all the numbers they see on the license plates you pass.

Use a maps scale of kilometers to estimate distances and travel times. Use [Google maps](#) to help you and your child investigate journey distances and travel times to make sure your family arrives at that important destination on time!



LEMONADE STAND

A lemonade stand is the quintessential summertime activity for kids, and math is needed to keep it up and running! Younger kids can work on their measuring and money-counting by mixing the lemonade and making change for customers. Older kids can be in charge of setting the price by determining the cost per serving and setting a profit margin. By using these math skills, your kids will have a successful business serving thirsty consumers all summer long!

KITCHEN FUN

If you've got a little sous chef on your hands, there is no better place than the kitchen to turn cooking and baking into a math lesson.

Give your younger child tasks like sorting your ingredients or counting how many eggs you need for a certain recipe.



Your older kids can work on number recognition and fractions by helping to measure ingredients, turning the oven to the correct temperature (with adult supervision), and dividing up the servings.

After you've finished your cooking, you'll have a tasty little reward to enjoy together.

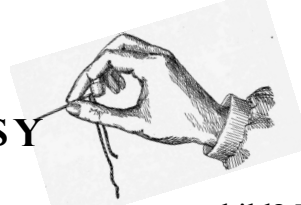
FAMILY GARDENING

Avid gardeners know a little something about math, like how far apart your vegetable rows need to be, or how deep a seed needs to be planted. The next time you're sowing some seeds, ask your child to help. When harvest time rolls around, they'll be proud to show off the fruits of their labour.

Gardening as a family is a great way to spend time together, learn about nature, and eat nutritiously. The math part is a bonus!



SEW EASY



Is sewing a favourite pastime of yours that you would like to pass on to your child? The dog days of summer are a great time to teach your child this hobby, and math plays a big part in it!

Sewing, knitting, and crocheting all use many kinds of math to create pieces of clothing, quilts, or wall hangings: counting rows on a sock, adding yarn to make a piece bigger, multiplying to figure out how many times a certain color will fit across a motif. The possibilities are endless!

Not only does sewing make a great math lesson, you'll also be teaching your child a life-long skill that they will be able use for years to come.



NEIGHBOURHOOD WALK

Take a walk around your neighbourhood or local park, and look for different shapes and patterns in nature.

For example, how far apart are the telephones from each other in your neighbourhood? Are they all the same distance, or do they vary? Is there a pattern? This lesson can also be done with trees, fire hydrants, or even flowers in a garden. Ask your child to point out all the patterns he sees, and point out the ones you see, as well.

Additionally, take note of all the shapes that can be found in nature. Ask your child to find a living thing that is a square, rectangle, or circle. With so much to see and find, he'll never know you're working on his geometry skills!

CONSTRUCTION KIDS

If your child loves being a little carpenter, it's easy to turn their next summertime project into a math lesson. Whether you are building a tree house, a bird house, or simply have some extra wood and nails to play around with, break out the tape measure and let your child go to town.

Your child can help figure out square footage, measure angles, and determine how much wood is needed to cover a certain area. Older kids can help measure and cut wood to fit in a certain spot. They won't even know they're working on algebra and geometry skills.



SHOPPING

Which is a better deal: 29 cents each or 3 cans for 79 cents?

The local **grocery store** is a great place to apply math skills at all age levels: Use estimation skills to predict how much the grocery bill will be. Comparison shopping: How much do you save per ounce (or another unit) by buying in bulk? Look at expiration dates: Which products have short shelf lives? long shelf lives? Why? How much can you save by buying products on sale?

Math at the mall:

Compare clothing prices at two or more stores. Dream-shop without spending: What if you had \$1,000 to spend? Take some time to look around your favourite stores and make a wish list. How close can you come to spending exactly \$1,000?



Math scavenger hunt:

What is the most expensive item you can find in the entire mall? What is the cheapest item? What is the biggest item? (How large is it?) What is the smallest item? What is the size and cost of the largest TV? the smallest TV? Make up your own questions and keep exploring.

Once you get started, you'll soon realize there's no limit to the math challenges you can create for yourself on a routine or just-for-fun shopping trip.

READING

Read a math story!

Kill two birds with one stone and combine math with reading to improve both numeracy and literacy skills. Do you love curling up with a good book or hearing a good bedtime story at home?

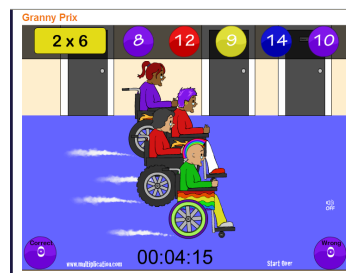
How about a math story?



MATH + COMPUTERS = A GREAT EQUATION

The Web is full of wonderful math resources to reinforce skills and stimulate creative thinking.

- Registered players on Calculation Nation, can practice fractions, factors and many other math topics against other students online, using this website run by the National Council of Teachers of Mathematics.
- Check out: <http://hzsd.ca/Learningcenter/library/> this site is from a School Board in Saskatchewan. They have links from the math curriculum at every grade level to online interactive games. What kid wouldn't love to race Grandma down the hallway to practice their times tables.
- www.coolmath4kids.com, is another site with lots of engaging games for kids (and parents) of all ages!



Information in this handout was gathered from the following sites:

<http://school.familyeducation.com/summer-learning/math/70200.html?page=1>

<http://www.mathsinsider.com/math-summer-slide/>

http://www.educationworld.com/a_curr/mathchat/mathchat006.shtml