

Weekly Maths Home Activities Ideas

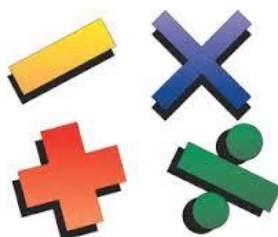
To help your child develop their maths skills, I have come up with a selection of activities for **adults** and **children** to do together at home. They will help develop an understanding of maths and enable you to have **fun** with maths **together**.

These activities are intended to promote investigative and enquiry skills, and the discussions you have will be **invaluable** to your child.

Parental Involvement matters!

There are many sources of evidence which tell us that parental involvement in learning has the potential to have a big impact on children's learning. That evidence also tells us that effective parental involvement matters more than who those parents are or where they are from.

The focus is on family engagement - out with formal schooling and to build a stronger bridge between home and school



Time



Diary

Keep a diary of the times you do different things this week. E.g. when you get up, visit a friend, eat breakfast, play, go to school, read, go to bed etc.

Convert Clocks

If you have a digital clock, try to write the time in an analogue way, if you have an analogue clock, write the time digitally or on the 24 hour clock.
Check the time together at regular intervals.

TV Times

If you watch TV, when are your favourite programmes on? What time do they finish? How long are they on for? Who spends the most time watching TV in your house? On which day do you watch tv the most/least?

Time Yourself

How long does it take you to do different things? Brush your teeth/eat breakfast/get to school/have a shower/clean your room/do 10 star jumps/ hop around the garden etc. What can you do in two minutes?
Try lots of different things!

Birthdays

Look at a calendar. Find out how many days there are in a week, in each month, in a year. How many weeks are in a year? How many months are there in a year? Name them. Which is the sixth/last/third month etc?
When are the birthdays or important dates in your family's year? Put them in order. Make your own calendar showing these special dates. What are the different seasons and when do they start?

Telling the time on both analogue and digital clocks accurately is a vital life skill.



Mass

Kitchen

Record the weight of different foods you have in your kitchen. Which are in kilograms (kg) and which are in grams (g)? Choose 5 packs and order them from lightest to heaviest. Are the big packs always heaviest? Are the small packs always lightest? Are there any units that you are not familiar with?

Recipe

Look at a recipe for something you like. In what units are the ingredients measured? Follow the recipe reading the scales accurately, then enjoy sharing what you have made together!

If you decide to make 6 portions instead of 4 portions, could you use your knowledge of ratios to measure the correct amount of each ingredient?

Scales

Weigh different items around your home using any scales you have (kitchen, bathroom etc). Focus on accuracy. What items added together make 2Kg, 100g, etc.

Fruit and Veg

Find a variety of fruit and vegetables. Estimate how much they weigh then weigh them accurately. Put the items in order of mass. Can you add any together to make 300g, 50g, 2Kg etc. Perhaps make a fruit salad or vegetable stir fry. How much did the peelings weigh?

Accurate measuring is essential when making yummy chocolate cakes! Remember that 1 kg = 1000g.

Capacity



Water

In the bath/kitchen sink/ paddling pool/bucket etc, pour water from different sized containers. How many little ones does it take to fill the largest one? Put the containers in order of capacity. Does the tallest/shortest container have the biggest/smallest capacity? (Use familiar objects like yoghurt pots, bowls, plastic bottles etc).

Coloured Water

(A few drops of food colouring in the water makes reading scales much easier). Use a measuring jug of coloured water to measure the capacity (in litres and/or millilitres) of known items. Order them from smallest to greatest capacity.

Units

In shops, look at and discuss any products that are sold by capacity, eg. Paint, lemonade, soup, squash, milk. Estimate then calculate, how much liquid you drink each day.



Length

Kilometres (km)

In a car/bus/atlas, discuss the distance between places. Walk a kilometre from your home. Where does it take you? Record the distance (in Km) of any journeys taken. (We work in kilometres (km) but do discuss miles.

Metres (m)

At home find items shorter/longer than a metre. Order objects according to length. (I have paper metre tapes that you are welcome to have).

Centimetres and m

Who has the longest jump/shortest hair/shortest leg/longest throw etc. Estimate first then measure accurately. Record as 142cm, 1.42m or 1m 42cm.

Millimetres and cm

Measure plants and monitor their growth, perhaps recording weekly. Snail race - measure how far a snail travels in 10 minutes (wash your hands!). Find a leaf that is 10cm, 43mm, etc. Record as 43mm or 4.3cm or 4cm 3mm.

Look really carefully at the scales on measuring jugs, they can be quite tricky. Remember that 1L = 1000ml. Remember 1km = 1000metres, 1 metre = 100 centimetres, 1cm = 10 millimetres.

Money



Receipts

When shopping, find things more expensive/cheaper than 50p, £1.00 etc. Which two items can be bought for £3.00. Find the cheapest bag of flour, rice etc.

Look at the receipt together and order some items from least to most expensive.

Shops

Use real money to play shops. Label toys/food etc with prices (up to 50p) and role play paying and giving change accurately. Items can cost multiples of 5, 10 or 1 pence, depending on your child's confidence.

Banks

Give piles of 2, 5 and 10ps to count. If I give you 6, 2ps how much is that? 5 5ps, 8 10ps + 3 2ps etc. How many 2ps can you give me for 16p? I've got 10 5ps, how many 10ps will you swap me for them? Which is best to have, 3 5ps, or 8 2ps. etc. Initially work with just one value of coin, then add more, depending on your child's confidence.

Piggy bank

Give a selection of coins to count i.e. 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2. (perhaps empty a piggy bank). What is the best way to count all the money? Big coins first? Make 10s? Put all the same values together? Randomly? Start with a few coins then add more, depending on your child's confidence.

Decimals

Loads of Money

Have piles of £1, 10p and 1p coins. Put into piles to show £4.32, £5.07. £5.70 etc. Make sure that your child knows that £5.70 is more than £5.07. Transfer values onto cards and put into order.

Prices

Using receipts, order the prices, focusing on their decimal values.

Coin Swap

With piles of £1, 10p and 1p coins, convert pounds to pence and vice versa. E.g. £1.62 = 162p, then swap roles. Write the values on cards and use to play snap to match equivalences.

Using money is a vital life skill. We need to be able to pay for things and make sure we get the right change! Remember that £1.00 = 100p.

Shape



2D ID

On walks, drives or at home, spot and name any 2D shapes that you see (e.g. road signs = triangle, window = square). Draw or photograph them, then label them with any properties that you know.

2D Cutting

From newspapers/magazines, cut out pictures of 2D shapes (e.g. a circular clock etc) to make colourful pictures.

Shape Make

Use an old food box or greetings card to make a range of 2D shapes.

Quadrilaterals and triangles should be easy, as should irregular pentagons, hexagons, heptagons and octagons. You can draw around cans, coins, etc for different circles. Cut out the shapes and use them as templates to create interesting pictures. Can you use them to draw a robot?

2D Drawing

Use accurate ruler skills (or shapes made above) to make a picture using 2D shapes. E.g. a house with square windows, rectangular door, circular door handle etc).

Right Angle Hunt

Look around you to find lots of right angles (90degrees). You could play an eye-spy type game ("I spy with my little eye a right angle on something blue/metal/over there etc." Use a known right angle (like the corner of a ruler or book or set square) to find other angles that are smaller, same as, greater than a right angle.

3D ID

Draw and name any 3D shapes that you see at home or on your travels. Eg Beans can = a cylinder, ball = sphere etc. Have a go at naming them and identifying some of their properties.

3D Model

Make a model with 'junk' using mathematical names for the shapes. Discuss their properties e.g. vertices (corners), edges, faces etc.

Nets

Carefully unfold a small box (cereal box etc) and discuss its net. Use as a template to make nets for your own boxes. Discuss the purpose of the tabs. You could use your boxes for presents or for storage.

Symmetry 1

Adults draw half a shape/picture/pattern, then your child can draw the other so that it is symmetrical (the same on both sides). Swap roles.

Symmetry 2

Fold paper in half and cut out shapes across the fold so that they are symmetrical shapes. Children decorate them so that they are still symmetrical. (Butterflies and faces are always good).

Symmetry 3

Children write words upside-down under the normal writing. (This can make good greetings cards). Children could draw or write when looking in a mirror too.

Battleships

Play battleships on paper using coordinates e.g. (7,3). We remember this by going along the corridor and up the stairs.

Maps

Use the grid references on maps to find different locations. You could then use points on the compass (year 3 N, S, E, W and year 4 NE, SE, NW, SW too) to move around the map. More confident mathematicians may be interested in the scale of different maps.

There are many shapes around us everywhere. Remember that 2D shapes have height and width (like a square) and 3D shapes have height, width and depth (like a cube). Remember that right angles have 90degrees, just like the internal corner of a square. Remember regular polygons have all sides and angles equal and that irregular ones don't. Remember that you cannot draw an accurate circle freehand.

Multiplication Tables



Most children join in when we chant tables and can probably recite the multiples of tables, but the skill is in picking facts from the tables. I like to use certain objects to represent each multiplication table. These visual prompts are really effective and help children to 'see' the numbers and any patterns. They can be displayed and recited as children walk up and down the stairs, displayed in the bathroom, bedroom or kitchen. Also use them to write the matching number sentences from $1 \times$ to $10 \times$. (e.g. $1 \times 3 = 3$, $2 \times 3 = 6$ etc.)

Please do the same activities for each multiplication table, using the relevant objects.

For the:

2 times table - use ten 2p coins

3 times table - cut out 10 triangles and count the sides

4 times table - cut out 10 squares and count the sides

5 times table - use ten 5p coins

6 times table - cut out hexagons and count the sides

7 times table - draw around a 20p to give ten heptagons and count the sides

8 times table - draw or make ten octopi and count the tentacles

9 times table - draw or make ten 9 spotted ladybirds and count the spots

10 times table - use the 10p coins

Tables activities/questions (using example of 2 times table).

Count each coin up and down " $1 \times 2 = 2$, $2 \times 2 = 4$ etc then $10 \times 2 = 20$, $9 \times 2 = 18$ etc". If I have seven 2ps, how much have I got? Nine 2ps. etc. I have 16 p, how many 2ps is that? I have 20p, how many 2ps is that? What is 3×2 , 7×2 , 14 divided by 2, 20 divided by 2 etc. Please see the vocabulary link.

(Tables in italics are for confident mathematicians).

Focus on one multiplication table each week until your child is confident. By the end of year 3 children are expected to know the 2, 3, 4, 5, 6 and 10 times tables. By the end of year 4 children are expected to know all tables to 10×10 .

Mrs Macleod says "When you know your tables inside out and back to front, other bits of maths will be so much easier for you (like fractions, percentages etc). You are the only one that can learn them for you!"

Travel

From S1 onwards, children will learn about speed distance and time. When on a car journey, look for road signs.

e.g the sign says 20 miles to Glasgow. If the average speed of the car is 20mph, how long will it take us to get there?

If we increased the speed of the car to 40mph, how long would the journey take us.

General Skills Games



These activities help your child in all areas of development and are separate to the weekly maths home activities.

Car plates

Using number plates, children can create and order numbers, add and multiply, identify odd and even numbers and patterns.

Card Games

- playing pontoon, rummy and whist are good card games to promote addition.

Dice

- great to generate numbers for addition and multiplication.

Jigsaw Puzzles

- are good for developing spatial awareness.

Board Games

- like connect4, snakes and ladders, mastermind, ludo, chess, darts etc are good for thinking skills.

Bingo and Guess my Number

promote awareness of numbers.

Conclusion

*Most children love maths but as with everything, there are those that don't. Helping your child to have **fun** with maths will help them to become more confident and willing to have a go at maths. I hope you enjoy working though these activities with your child. "*

A list of useful Mathematics based websites for parents and Pupils

- www.bbc.co.uk/bitesize/ - follow the links to the correct Key stage: Years 5 and 6 are KS2, Years 7 and 8 are KS3 - this website is very useful for revision
- www.woodlands-junior.kent.sch.uk/maths/ - Useful website for KS2 pupils to practice some key skills in maths
- www.mathszone.co.uk - Useful website with hundreds of links to other websites - most resources are for KS2 with some for KS3
- www.coolmath.com - Maths games website for pupils with links to lots of other sister websites such as coolmaths4kids.com
- www.crickweb.co.uk/ks2numeracy.html - Free online maths games resources for KS2 pupils
- www.educationquizzes.com/ks3/ - KS3 revision website - there is a parents as well as a pupil info section - click on the maths link on the left hand side - some resources are free but a login and password need to be set up to access the majority of resources
- www.educationquizzes.com/ks2/ - Similar to the KS3 version above - there is also a parents info section as well
- <http://www.free-training-tutorial.com/ordering-numbersgames.html> - A maths games website (with some links to typing practice as well) mostly suitable for KS2 pupils and perhaps some KS3 pupils

List of Maths Websites for Parents and Carers

- National Numeracy Parent Toolkit has a wealth of tips and advice for parents.
<http://www.nnparenttoolkit.org.uk/>
- Oxford Owl includes a range of activities, top tips and eBooks to help your child with their maths at home.
<http://www.oxfordowl.co.uk/maths-owl/maths>
- Maths 4 Mums and Dads explains some of the milestones children make between the ages of 3-and-11-years-old.
<http://www.maths4mumsanddads.co.uk/index.php>

□ Nrich. A range of maths games, problems and articles on all areas of maths. Parents of Key Stage 1 children should select 'stage 1' and parents of Key Stage 2 children should select 'stage 2'.

<http://nrich.maths.org/frontpage>

List of Maths Websites for Children

<http://amathsdictionaryforkids.com/>

<http://www.bbc.co.uk/bitesize/ks1/maths/>

<http://www.bbc.co.uk/bitesize/ks2/maths/>

<http://www.ictgames.com/resources.html>

<http://www.ilovemathsgames.com/>

<http://www.mathsisfun.com/index.htm>

<http://www.mathszone.co.uk/>

<http://www.multiplication.com/>

<http://www.primarygames.co.uk/>

<http://resources.woodlands-junior.kent.sch.uk/maths>

<http://www.topmarks.co.uk/>