80+ Ideas For Doing Maths At Home Together

Kindergarten - Year 2

Children need lots of experiences in making, counting, writing and talking about numbers. Make connections for your child by explaining how numbers and counting are a part of everyday life. The activities below will help your child develop these skills. You may feel that the maths your child is doing at school is different from how you were taught, but you will still be able to support your child in many ways.

Playing Shop

Collect food and grocery items and label them with prices written on sticky notes or prices cut out of shopping catalogues.

1. Talk about how we pay for items using notes and coins.
2. Make paper money or use play money to buy and sell goods from the shop.
3. Order the food items by height (tallest to the shortest) or by cost (least expensive to most expensive).
4. Introduce kitchen scales to the shop to weigh some foods such as a box of tea bags or a bag of rice and order items by weight.
5. Play I Spy or other games to identify shapes, numbers and patterns.
6. Dice are a great addition to any toy collection. Roll the dice and say, make or write the numbers identified. Roll the dice and add the numbers together to find the total.
7. Play number games online with your child. See website list.

Making Patterns

Recognising and making patterns are important maths skills for exploring numbers, shapes and symmetry.

8. Identify and explain visual patterns on clothing, wrapping paper, crockery, cards and furniture.
9. Use coloured pegs, blocks, beads or cutlery to begin a pattern for your child to continue. For example, red, blue, white, red, blue, white.
10. Encourage your child to draw, create and describe their own patterns. Use them for borders or greeting cards or on material.

Measuring Things

11. Use a wall measuring chart to measure the height of people in your family.
12. Cut a piece of string for your child, any length will do. Use the string to measure the objects in your house to find out what is longer or shorter than your 'string measuring tape'. Ask your child to identify anything that is the same length.
13. Explore other ways of measuring using a cup, jug, teaspoon, icy lolly sticks, foot prints or hand lengths.
14. Build a tower of blocks that is taller than a favourite toy. Ask your child to count the total blocks to measure the height of the tower.

Go On A Number Hunt

15. With your child find numbers around you, for example house numbers, calendars.
16. Look at and say the numbers on car number plates, signs, calendars, newspapers, shopping catalogues, speed signs, house numbers.
17. Use different numbers as the starting point for practising counting, for example start counting from 6 or
18. Ask your child to count forwards and backwards. Ask what number comes before or what number comes after.
19. Identify the numbers on a calculator. Use an online talking calculator.

Turning Maths Into A Story

By presenting mathematics as a story children can make links to their everyday life. Begin by reading books to your child that include numbers and counting. Turn everyday events or objects into a maths story:

20. Count the fruit in the fruit bowl.
21. Cut fruit into six pieces.
22. Count the pieces of toast you cooked at breakfast.
23. Add the total of cutlery at the table.
24. Count the number of people travelling in the car. Encourage your child to draw and talk about the number of things in the pictures they have drawn. Write down your child's ideas as a story. Here are some examples:

There are five pieces of fruit in our bowl. Three are apples and two are bananas.

My lunchbox has four things inside. One sandwich, one orange and two slices of cheese.

Moving With Maths

These ideas use movement of the body, hearing sounds, using eyes and feeling with hands to experience counting.

25. How many throws can we do without dropping the ball?
26. How many jumps does it take to get to…?
27. How many times can you tap the balloon before it touches the ground?
28. How long does it take you to skip to…?

Kindergarten - Year 2

Using Playing Cards

29. Play matching number games with playing cards.
30. Put cards in order from largest to smallest by counting the shapes (hearts, spades) or using the numbers on the cards.

Asking Questions To Investigate

Ask your child questions to encourage them to investigate maths:

31. What shapes can you see?
32. How could we measure the...?
33. How will we find half?
34. What is the best way to share...?

Have You Tried These Counting Ideas At Home?

35. Count the food items as they are placed in the trolley or unpacked at home.
36. Count each toss of the ball as you play a game.
37. Count the steps to the letterbox, front door, clothes line.
38. Collect and count objects such as toys, shells, and flowers from the garden.
39. Count days on a calendar. Count days down to a special event.
40. Read books that involve counting.
41. Search on You Tube for counting songs.

Spotlight On Counting

Counting is one of the first experiences of maths for young children. Learning the counting words often begins with a favourite song or rhyme and the repetition of the number names. Listen for the counting sequence in these songs and rhymes: Five Little Ducks Ten in the Bed 1, 2, 3, 4, 5, Once I Caught a Fish Alive, Ten Green Bottles, Five Little Monkeys, 1, 2, Buckle My Shoe.

As children move on to counting a collection of objects they begin to link each object with one number name. In the beginning, encourage your child to touch each object as they say the matching number's name. Children will begin by counting all objects in a group, for example, fingers and toes, the buttons on their clothes, steps to the house or their toys. When beginning to count a group of objects, children may arrange the objects in an order to help them. Later they will be able to start counting at any object to find the total. Some children will need to repeat the count of the objects if the arrangement has been changed, such as the blocks were in a row and now they are in a group. This can be a good way to explore the idea that the last number counted says how many there are in the group.

Year 3 - Year 6

Exploring Maths With Your Child

You may feel that the maths your child is doing at school is different from how you were taught, but you will still be able to support your child in many ways. There are lots of activities you can do at home, using everyday items to help explore maths with your child.

Sports Scores

42. How does your favourite sport tally the score? What maths is presented on the tally?
43. How do other sports tally the score, for example, tennis, golf, cricket, netball, football?
44. What maths do you use to find the total of the scores?
45. Are there other ways to record the score?
46. How long do your favourite sport games go for in minutes and seconds? Are they divided into halves, quarters or something else?
47. What are the shapes of different playing fields and courts? Talk about edges and angles.
48. How can you estimate the perimeter and area of a playing field?

Weather Maps

49. Visit online websites or look at the weather maps in the newspaper.
50. What is the difference between the minimum and maximum temperature for each day?
51. Find a seven-day forecast then record the actual temperature for each day and compare. Was the forecast accurate? What were the similarities and differences?
52. Use the information on the weather website to explore differences in weather from your area to others. How much rain do you get compared to others? Are there differences in temperature?

Recipes

53. Collect and read recipes and discuss the use of fractions, millimetres and grams. Encourage your child to make accurate measurements using measuring cups and spoons.
54. Discuss how you would double a recipe. Encourage your child to record the new measurements for the recipe.
55. Identify the temperature and cooking time on the recipe.
56. Estimate the cost to buy all the ingredients to make the recipe.
57. Make a list of the abbreviations used in the recipe and then write them in full, for example, L for litre, mL for millilitre, tsp for teaspoon, tbs for tablespoon.

Year 3 - Year 6

Catalogues

58. How would you spend 40 rials from a catalogue? How many products can you buy for 40 rials?
59. Select five products from the catalogue then calculate what the cost be if there was a 50% sale. Does it make a difference if you add up the items, and then deduct 50%, or if each item is reduced by 50% then totalled?
60. What is the best value sale item in the catalogue? Can you explain your reasoning?
61. What are the cheapest and most expensive items in your catalogue?
62. Compare the cost of a product across different stores using different catalogues. What did you find?

Travel Timetables

63. Can you identify your starting point on the timetable?
64. What is the earliest and latest time to travel on this route? What is the difference?
65. How long does it take to travel the entire route?
66. How many stops are there on this route?
67. What is the difference in the time travelled when not making all stops?
68. What is the cost? Is it good value compared to other travel options?

Money

Encouraging children to think about money, saving money and considering how they spend money are important skills for all children to develop.

69. Encourage your child to work out how much change you will get after buying something.
70. Investigate costs for family trips together. For example, a visit to a theme park may include transport costs, entry ticket costs and food costs.
71. Discuss saving money for presents or something your child may want to buy. Work out how long it will take to save this much if they get a small amount of money each week.
72. Negotiate increases in pocket money as percentages. For example, a 5% increase would be how much money per week?
73. Encourage your child to save a percentage of their pocket money or birthday money, and work out how much this would be. For example, how much money would you have if you saved 40% each week?
74. Calculate together how much a mobile phone costs per month. How much is spent on messages and how much on phone calls?

Newspapers

75. On the front page, estimate the percentage of picture and text. Does this vary over the first four pages?
76. Research the cost per word/line to put a classified advertisement in the newspaper. Calculate how much it would cost to put an advertisement in the classified section.
77. Find numbers in the newspaper, in digits and in words. Cut the numbers out and put them in order from smallest number to largest number.
78. Visit the section that advertises entertainment. Select an event or movie. Find out how much the tickets are. How much would it cost for your family to attend?
79. Try the number puzzles such as Sudoku, in the puzzle section of the newspaper or online.

Spotlight On Fractions

Fractions are a maths topic that is very relevant to everyday life. We use our knowledge of fractions to solve problems and make decisions all the time. Support your child by using mathematical language to talk about fractions. Here are some maths language terms that your child will be using at school:

Fraction – any part of a whole, a group or a number.
Numerator – showing the number of parts of the whole.
Denominator – the number of parts the whole is divided into.
Proper fraction – numerator is less than the denominator.
Improper fraction – numerator is greater than or equal to the denominator.
Equivalent fraction – fractions that have the same value or amount.
Mixed numbers – a whole number and a fraction.

As children learn about fractions, they gain new mathematical skills: Children begin by learning that there are many numbers between whole numbers. A number line is an effective model to start with.

In the beginning, children are able to recognise and make models of familiar fractions, for example 1/2 (half) or 1/4 (quarter). Everyday examples include sharing an apple or cutting a piece of toast. When children begin to add, subtract and multiply fractions they use models to help.

Talk positively about how you use fractions in everyday life. Making models of fractions for your child will support their understanding of fractions. Try some of these ideas making use of everyday objects:

80. Can you cut up the apple to make six equal pieces?
81. What fraction of the glass is filled with water?
82. How do the hands on the clock face show the time quarter past?
83. Can you show me halves and quarters as you cut the orange?
84. If you fold a towel three times equally, what fraction does it show?

Some Useful Websites to Try

www.mathletics.co.uk
- subscription necessary

www.bbc.co.uk/bitesize/
- follow the links to the correct Key stage: Years 5 and 6 are KS2

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

www.supermathsworld.com
- Maths games website aimed at mostly KS2 pupils
– pupils can log in as a guest or create an account

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/ks2/

http://www.free-training-tutorial.com/ordering-numbersgames.html
- A maths games website mostly suitable for KS2 pupils

http://www.educationworld.com
- free pintable activities on a wide range of topics KS1 & KS2.

http://www.oxfordowl.co.uk/home/maths-owl/maths
-Games and printable acivities, KS1 & KS2.

http://www.educationworld.com
- free pintables

http://www.mathschamps.co.uk/
- Online games.

http://www.arcademics.com/
- Online games.

https://www.mathsisfun.com/
- Online games.

http://nrich.maths.org/students
- Online games.

http://pbskids.org/cyberchase/find-it/
- Online games.

Some Jargon Busters

inverse operations

We say that addition and subtraction are inverse operations; this means that we can use one operation to undo the other, e.g. you can undo adding 5 by taking away 5. Multiplication and division are also inverse operations. If you multiply a number by 10, you can undo this by dividing by 10.
Children are taught to use inverse operations to check their answers to a question. If they work out that 15 + 35 = 50, they might check this by subtracting 35 from 50 to see if they get 15.

number square

A number square is a visual image used in almost all classrooms to help children grasp the concept of number and place value.

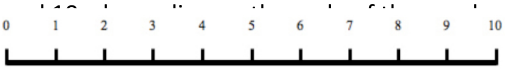
0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

number bonds

Number bonds are pairs which make up a total. The number bonds for seven, for example, are 3 + 4, 2 + 5, 1 + 6 and 0 + 7. Children will practise remembering these at schools. Help them practise at home.

number line

A number line is a visual image used in almost all classrooms to help children grasp the basic number relationships. Children will use a number line to count forwards and backwards, in, for example, 1s, 2s



line.

mental maths

Mental maths is essentially the ability to calculate mentally, i.e. in your head without writing anything down. Learning things such as number bonds, number patterns, doubles and multiplication tables facts are important mental maths skills.

missing number problems

A missing number problem is a calculation where one of the numbers has been taken out. The missing number could be represented by a space, question mark or shape, e.g.
4 + ___ = 9
Children have to use related number facts to work out the answer, for instance they may know that 9 – 4 = 5, and therefore deduce that 4 + 5 = 9. This type of question helps to prepare children for algebra, where unknown numbers are represented by letters.

partitioning

Partitioning a number means to expand the number. For example, 58 is partitioned into 50 and 8. It is often used to break down numbers when multiplying or dividing larger numbers to make the calculation easier. For example, 58 × 2 can be broken down into 50 × 2 = 100 and 8 × 2 = 16, giving an answer of 116.

word problems

A word problem is a problem written in everyday language that requires maths to find the answer. Children will work with word problems frequently. For example, oranges cost 69p a kilo. I pay for a kilo of oranges with a £1 coin. How much change will I get?