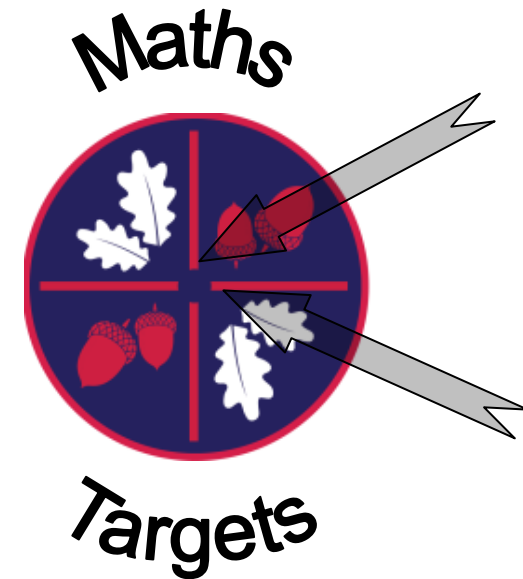


## Useful websites

- <https://nrich.maths.org> – website aimed at provoking mathematical thinking and discussion through problems.
- <http://www.topmarks.co.uk> - Useful website (not maths specific) with resources, games and articles for most age groups.
- <http://www.mathszone.co.uk> - Useful website with hundreds of links to other websites – most resources are for KS2 but use the tag search option for KS1.
- <http://www.adaptedmind.com> – American website that you register for (free sign up) that has a wealth of 'lessons' for all ages. As a general guide, Grade 1 (US) is equivalent to Year 2 (UK).
- <http://www.mathplayground.com/> - a maths games website (American). Remember Grade 1 (US) is equivalent to Year 2 (UK).
- <http://www.coolmath4kids.com/> - Maths games website (American language) for pupils with links to lots of other sister websites.
- <http://resources.woodlands.kent.sch.uk/maths/index.html> - Useful website for all pupils to practice some key skills in maths.
- <http://www.sumdog.com> – Game website that requires login (school can provide) good for basic maths skills practice.

# Helping your child with maths in Year 2



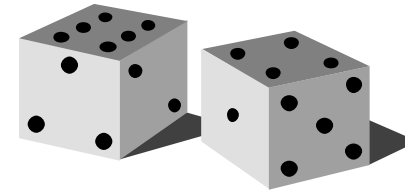
**A booklet for parents**

## Year 2 Objectives

• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.
• Recognise the place value of each digit in a two-digit number (tens, ones).
• Identify, represent and estimate numbers using different representations, including the number line.
• Compare and order numbers from 0 up to 100; use $<$ , $>$ and $=$ .
• Read and write numbers to at least 100 in numerals and words.
• Use reasoning about place value and number facts to solve problems.
• Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.
• Solve problems with addition and subtraction applying their increasing knowledge of mental and written methods.
• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including a 2-digit number and 1's.
• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including a 2-digit number and 10's.
• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including two 2-digit numbers.
• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including adding 3 single-digit numbers.
• Show that addition of two numbers can be done in any order and subtraction of one number from another cannot.
• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
• Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.
• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals ( $=$ ) signs.
• Show that multiplication of two numbers can be done in any order and division of one number by another cannot.

## Number games

Roll two dice. Make two-digit numbers, e.g. if you roll a 6 and 4, this could be 64 or 46. If you haven't got two dice, roll one dice twice. Ask your child to do one or more of the activities below.

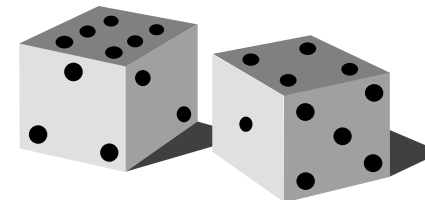


- ◆ Count on or back from each number in tens.
- ◆ Add 19 to each number in their head. (A quick way is to add 20 then take away 1.)
- ◆ Subtract 9 from each number. (A quick way is to take away 10 then add back one.)
- ◆ Double each number.

## Make 20

For this game you need to write out numbers 0 to 20 on a piece of paper. Make them big enough to put counters or coins on.

- ◆ Take turns. Roll a dice. Put a coin on the number that goes with the dice number to make 20, e.g. throw a '4' and put a coin on 16.
- ◆ If someone else's counter is there already, replace it with yours!
- ◆ The first person to have counters on 6 different numbers wins.
- ◆ Now roll two dice, add the numbers together and look for a number to make 20. The first with coins on 10 different numbers wins.



## Can you tell the time?

Whenever possible, ask your child to tell you the time to the nearest 5 minutes. Use a clock with hands as well as a digital watch or clock.

Also ask:

- ◆ What time will it be one hour from now?
- ◆ What time was it one hour ago?

Time your child doing various tasks, e.g.

- ◆ getting ready for school;
- ◆ tidying a bedroom;
- ◆ saying the 5 times, 10 times or 2 times table...

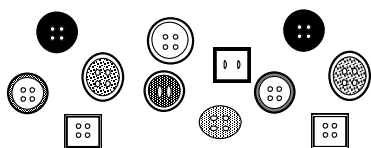
Ask your child to guess in advance how long they think an activity will take. Can they beat their time when they repeat it?

## Fractions

Use 12 buttons, or paper clips or dried beans or...

- ◆ Ask your child to find **half** of the 12 things.
- ◆ Now find one **quarter** of the same group.
- ◆ Find one **third** of the whole group.

Repeat with other numbers.



## Order, order!

- ◆ Each of you should draw 6 circles in a row.
- ◆ Take turns.
- ◆ Roll two dice and make a two-digit number (see Number games).
- ◆ Write the number in one of your circles. Once the number is written in a circle you cannot change it or move it!

<ul style="list-style-type: none"> <li>• Solve problems involving multiplication/division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</li> </ul>
<ul style="list-style-type: none"> <li>• Recognise odd and even numbers and explain how you know a particular number is odd or even.</li> </ul>
<ul style="list-style-type: none"> <li>• Make connections between multiplication and division by 2 and doubling and halving, using these to reason about problems and calculations.</li> </ul>
<ul style="list-style-type: none"> <li>• Recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity.</li> </ul>
<ul style="list-style-type: none"> <li>• Write simple fractions for example, <math>\frac{1}{2}</math> of <math>6 = 3</math> and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</li> </ul>
<ul style="list-style-type: none"> <li>• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (<math>^{\circ}\text{C}</math>); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.</li> </ul>
<ul style="list-style-type: none"> <li>• Compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math>.</li> </ul>
<ul style="list-style-type: none"> <li>• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.</li> </ul>
<ul style="list-style-type: none"> <li>• Find different combinations of coins that equal the same amount.</li> </ul>
<ul style="list-style-type: none"> <li>• Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</li> </ul>
<ul style="list-style-type: none"> <li>• Compare and sequence intervals of time.</li> </ul>
<ul style="list-style-type: none"> <li>• Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.</li> </ul>
<ul style="list-style-type: none"> <li>• Know the number of minutes in an hour and the number of hours in a day.</li> </ul>
<ul style="list-style-type: none"> <li>• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.</li> </ul>
<ul style="list-style-type: none"> <li>• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.</li> </ul>
<ul style="list-style-type: none"> <li>• Identify 2-D shapes on the surface of 3-D shapes.</li> </ul>
<ul style="list-style-type: none"> <li>• Compare/sort common 2-D and 3-D shapes and everyday objects.</li> </ul>
<ul style="list-style-type: none"> <li>• Order/arrange combinations of mathematical objects in patterns and sequences.</li> </ul>
<ul style="list-style-type: none"> <li>• Use mathematical vocabulary to describe position, direction and movement</li> </ul>
<ul style="list-style-type: none"> <li>• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.</li> </ul>
<ul style="list-style-type: none"> <li>• Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</li> </ul>
<ul style="list-style-type: none"> <li>• Ask and answer questions about totalling/comparing categorical data.</li> </ul>

## Fun activities to do at home

The activities given will all help your child towards achieving some of the maths objectives by the end of Year 2.

### Guess my number

Choose a car number you can see, e.g. 592.



- ◆ Add 10 to the number in your head. Say the answer aloud.
- ◆ Can your child guess which car you were looking at? If so she or he can have a turn next.

### Secret sums

- ◆ Ask your child to say a number, e.g. 43.
- ◆ Secretly do something to it (e.g. add 30). Say the answer, e.g. 73.
- ◆ The child then says another number to you, e.g. 61.
- ◆ Do the same to that number and say the answer.
- ◆ The child has to guess what you are doing to the number each time!
- ◆ Then they can have a turn at secretly adding or subtracting something to each number that you say to them.

### Cupboard maths

Ask your child to look at the weights printed on jars, tins and packets in the food cupboard, e.g.

tinned tuna 185g

tinned tomatoes 400g

jam 454g

Choose six items. Ask your child to put them in order. Is the largest item the heaviest?

## Board games

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	100

For these games you need to sketch a board like this. Notice how the numbers are arranged.

- ◆ Start on 1. Toss a coin. If it lands heads, move 1 place along. If it lands tails, add 10, saying the total correctly before moving. First person to reach the bottom row wins.
- ◆ Start anywhere on the board. Roll a dice. Even numbers move you forwards and odd numbers move you backwards. If you land on a multiple of five, you can move either 10 forwards or 10 backwards. The first person to reach either the top or bottom of the board wins.

### Up and down the scales

- ◆ Guess with your child the weights of people in your home.
- ◆ Then weigh them (if they agree!). Help your child to read the scales.
- ◆ Record each weight, then write all the weights in order.

Repeat after two weeks. What, if any, is the difference in the weights?

### Bean race

You need two dice and a pile of dried beans.

- ◆ Take turns to roll the two dice.
- ◆ Multiply the two numbers and call out the answer.
- ◆ If you are right, you win a bean.
- ◆ The first to get 10 beans wins.

## Dominoes

- To practice any multiplication table, pick a domino and add the dots. Ask your child to multiply the total by the table they are working on. Also ask for the associated facts.

$$4 \times 7 = 28 \quad 7 \times 4 = 28 \quad 28 \div 7 = 4 \quad 28 \div 4 = 7$$



- Pick a domino  
This domino could represent 25 or 52. Use either of these numbers to find 10, or 100, more or less than the number.

## How much?

- While shopping, point out an item and the price in pence.
- Ask your child to work out in their head the cost of 2 items.
- Ask them to guess first. See how close they come.
- If you see any items labelled, for example, '2 for £3.50 (350p)', ask them to work out the cost of 1 item for you, and to explain how they got the answer.

## Number High Game (for 2 or more people)

You need the ace to 9 cards from a pack of shuffled playing cards.

- Deal out 3 cards.
- Make the highest total you can by using the numbers however you like.
- The person who gets the highest total wins the 3 cards.
- Then deal out 3 more cards and have another go.
- When you decide to stop playing, add up the numbers on the cards.
- Whoever has the highest score is the winner.

## Bingo!

One person has the 2x table and the other has the 5x table. Write six numbers in that table on your piece of paper, e.g.

4    8    10    16    18    20

- Roll one or two dice. If you choose to roll two dice, add the numbers, e.g. roll two dice, get 3 and 4, add these to make 7.
- Multiply that number by 2 or by 5 (that is, by your table number, e.g.  $7 \times 2$  or  $7 \times 5$ ).
- If the answer is on your paper, cross it out.
- The first to cross out all six of their numbers wins.

## Left overs

- Take turns to choose a two-digit number less than 50.
- Write it down. Now count up to it in fours. What number is left over?
- The number left is the number of points you score, e.g.

Choose 27.

Count: 4, 8, 12, 16, 20, 24.

3 left over to get to 27.

So you score 3 points.

- The first person to get 12 or more points wins.

Now try the same game counting in threes, or in eights.  
Can you spot which numbers will score you points?

4    8    12    16    20    24    28    32    36    40

