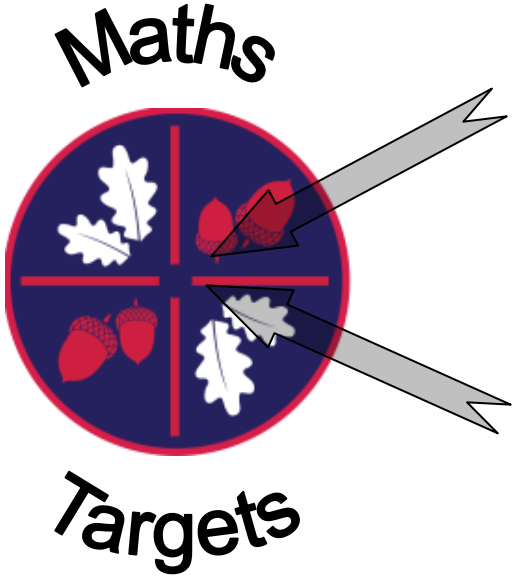
Useful websites

- https://nrich.maths.org – website aimed at provoking mathematical thinking and discussion through problems.
- http://www.mathszone.co.uk - Useful website with hundreds of links to other websites – most resources are for KS2 with some for KS3.
- http://www.supermathsworld.com - Maths games website aimed at mostly KS2 pupils – pupils can log in as a guest or create an account.
- http://www.educationquizzes.com/ks2/ - KS2 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.
- http://www.free-training-tutorial.com/math-games.html - a maths games website (American language) (with some links to typing practice as well) mostly suitable for KS2 pupils with some KS3 suitable games.
- http://www.coolmath4kids.com/ - Maths games website (American language) for pupils with links to lots of other sister websites.
- http://www.woodlands-junior.kent.sch.uk/maths/ - Useful website for KS2 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 3



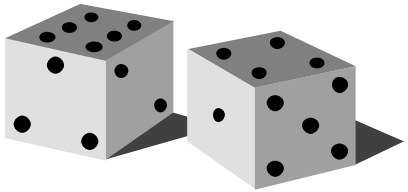
A booklet for parents

Year 3 Objectives

• Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.
• Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).
• Compare and order numbers up to 1000.
• Identify, represent and estimate numbers using different representations.
• Read and write numbers up to 1000 in numerals and in words.
• Solve number problems and practical problems involving these ideas.
• Solve number and practical problems that involve all of the above.
• Add and subtract numbers mentally, including a three-digit number and ones.
• Add and subtract numbers mentally, including a three-digit number and tens.
• Add and subtract numbers mentally, including a three-digit number and hundreds.
• Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.
• Estimate the answer to a calculation and uses inverse operations to check answers.
• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
• Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
• Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.
• Count up and down in tenths; recognising that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.
• Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
• Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.

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.

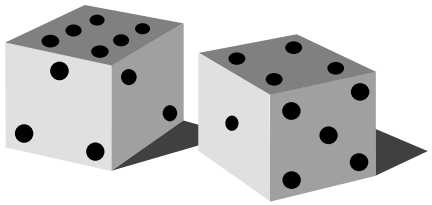


- Count on or back from each number in tens.
- Add 19 to each number in their head. (A quick way is to add 20 then take away 1.)
- Subtract 9 from each number. (A quick way is to take away 10 then add back one.)
- Double each number.

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…

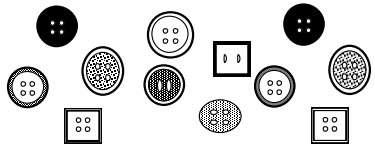
Ask your child to guess in advance how long they think an activity will take. Can they beat their time when they repeat it?

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!

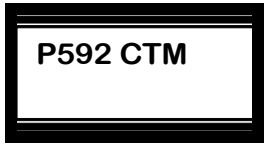
• Recognise and show, using diagrams, equivalent fractions with small denominators.
• Add and subtract fractions with the same denominator within one whole.
• Compare and order unit fractions, and fractions with the same denominators.
• Solve problems that involve all of the above (fractions).
• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).
• Measure the perimeter of simple 2-D shapes.
• Add and subtract amounts of money to give change, using both £ and p in practical contexts.
• Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.
• Estimate and read time with increasing accuracy to the nearest minute.
• Record and compare time in terms of seconds, minutes and hours.
• Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.
• Know the number of seconds in a minute and the number of days in each month, year and leap year.
• Know the number of seconds in a minute and the number of days in each month, year and leap year.
• Draw 2-D shapes and make 3-D shapes using modelling materials.
• Recognise 3-D shapes in different orientations and describes them.
• Recognise angles as a property of shape or a description of a turn.
• Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn.
• Identify whether angles are greater than or less than a right angle.
• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
• Interpret and present data using bar charts, pictograms and tables
• Solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

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 3.

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?

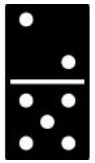
Bean race

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 × 7 = 28 7 × 4 = 28 28÷ 7 = 4 28 ÷ 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 x 2 or 7 x 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.

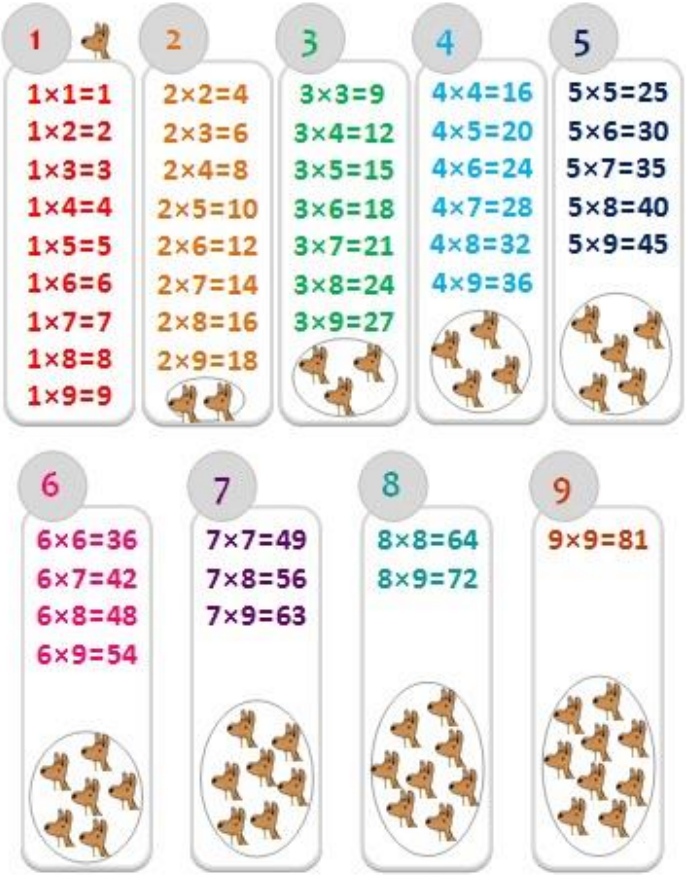
- The first person to get 12 or more points wins.

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

Useful Resources

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



Gattegno Place Value Chart

ten thousands	10 000	20 000	30 000	40 000	50 000	60 000	70 000	80 000	90 000
thousands	1000	2000	3000	4000	5000	6000	7000	8000	9000
hundreds	100	200	300	400	500	600	700	800	900
tens	10	20	30	40	50	60	70	80	90
units	1	2	3	4	5	6	7	8	9
tenths	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
hundredths	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
thousandths	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009