



Prior Park Schools
**THE PARAGON
SCHOOL**

How can I help
my child with
mathematics in
Year 3?



At The Paragon, we make Maths come alive by showing how important it is in everyday life - a vital tool in working out how long it's going to take to save up for that new computer game or measuring the ingredients for a chocolate cake.

We strive to develop a positive attitude to Mathematics as an interesting and purposeful subject in which all children can gain a degree of success and pleasure.

An important role of any parent is to support this positive attitude towards Maths. In this way, pupils at The Paragon can develop a secure understanding of Mathematical concepts and processes, combined with a genuine procedural fluency and joy in the subject.

“We need to help learners shift from thinking ‘I can’t do this’ to ‘I can’t do this yet’; to encourage, in all learners, a ‘can do’ attitude. Developing an ‘I can’t do this yet’ disposition means being comfortable with getting stuck on some mathematics.” - Mike Askew

Always begin by asking your child what they already know. It is important that children are learning with consistency whether at home or in school. If you are unsure of how to best support your child’s understanding of a mathematical concept, class teachers are more than willing to answer any questions.

Addition

Using place value

Partitioning

e.g. £8.50 + £3.70 as £8 + £3 and 50p + 70p and combine the totals: £11 + £1.20

Record addition using the column method:

$$\begin{array}{r} 423 \\ + 134 \\ \hline 557 \end{array}$$

Subtraction

Using place value

Partitioning

e.g. 68 - 42 as 60 - 40 and 8 - 2
e.g. £6.84 - £2.40 as £6 - £2 and 80p - 40p

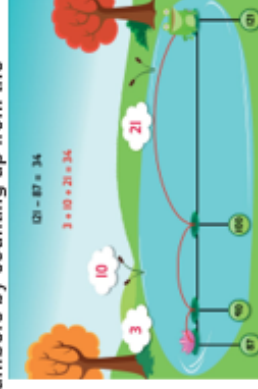
Counting up

Find a difference between two numbers by counting up from the smaller to the larger

e.g. 121 - 87

Record subtraction using the column method:

$$\begin{array}{r} 557 \\ - 134 \\ \hline 423 \end{array}$$



Multiplication

Using number facts

Know x2, x3, x4, x5, x8, x10 tables facts

Record multiplication using the grid method: 15x13=195

x	10	5	
10	100	50	
3	30	15	
			100
			50
			30
			+ 15
			<u>195</u>

Division

Using number facts

Know x2, x3, x4, x5, x8, x10 division facts

Record division using the 'bus stop' method: 79÷3=26 r 1

$$\begin{array}{r} 26 \text{ r } 1 \\ 3 \overline{) 79} \end{array}$$

Practise multiplication regularly at home: you could have a go at 'The '55' Club'

First aim- get as many as possible correct

Second aim-time how long this takes and try to beat time

The '55' Club

$10 \times 10 =$

$2 \times 10 =$

$1 \times 2 =$

$5 \times 10 =$

$9 \times 10 =$

$2 \times 2 =$

$3 \times 8 =$

$8 \times 10 =$

$1 \times 4 =$

$1 \times 5 =$

$9 \times 9 =$

$1 \times 10 =$

$2 \times 6 =$

$1 \times 6 =$

$1 \times 1 =$

$4 \times 8 =$

$5 \times 9 =$

$7 \times 9 =$

$6 \times 8 =$

$1 \times 3 =$

$4 \times 10 =$

$7 \times 8 =$

$5 \times 6 =$

$4 \times 7 =$

$3 \times 7 =$

$2 \times 8 =$

$3 \times 4 =$

$2 \times 4 =$

$2 \times 7 =$

$5 \times 5 =$

$4 \times 6 =$

$8 \times 8 =$

$3 \times 5 =$

$5 \times 8 =$

$2 \times 9 =$

$4 \times 5 =$

$4 \times 9 =$

$8 \times 9 =$

$2 \times 5 =$

$6 \times 10 =$

$1 \times 8 =$

$3 \times 9 =$

$1 \times 9 =$

$3 \times 3 =$

$4 \times 4 =$

$6 \times 7 =$

$2 \times 3 =$

$7 \times 7 =$

$6 \times 6 =$

$3 \times 6 =$

$7 \times 10 =$

$9 \times 6 =$

$3 \times 10 =$

$1 \times 7 =$

$5 \times 7 =$

By the end of Year 3 most children will be able to:

- Understand the place value in 2- and 3-digit numbers
- Understand that 3-digit numbers are made up of 100s, 10s and 1s
- Compare 2- and 3-digit numbers using $<$ and $>$
- Recognise odd and even numbers
- Locate 2-digit numbers on a number line
- Locate 3-digit numbers on a number line
- Find numbers between two 3-digit numbers
- Round 3-digit numbers to the nearest 10
- Think about the number system, make generalizations
- Round 3-digit numbers to the nearest 100
- Use $>$ and $<$ between number sentences
- Place 3-digit numbers on 0-1000 number line
- Round 3-digit numbers to the nearest 10
- Read and write 3-digit numbers
- Order 3-digit numbers
- Know number bonds to 15 and multiples of 10 bonds to 100
- Work out multiples of 5 bonds to 100
- Use number bond knowledge to solve add problems 1 digit to 2 digits
- Use number bonds to solve subtract problems 1 digit from 2 digit
- Count on and back in 10s and 1s (up to 3-digit numbers)
- Add near multiples of 10 and multiples of 10
- Subtract multiples of 10 and near multiples of 10
- Find the difference (gaps < 12) by counting on
- Use money to $+$ and $-$
- Add 2-digit numbers using partitioning
- Subtract 2-digit numbers using partitioning
- Add three 2-digit numbers using partitioning and recombining
- Derive all bonds to 100
- Use counting up to do mental subtraction (ans up to 30)
- Subtract pairs of numbers either side of 100 by counting up
- Identify the calculation ($+$ or $-$) needed to solve a word problem
- Add and subtract multiples of 10 and 100
- Count in steps of 10, 50 and 100
- Add pairs of 3-digit numbers
- Solve 2- and 3-digit mental subtractions by counting up
- Decide whether counting back for subtraction might be better
- Mentally subtract pounds and pence from £5 and £10 by counting up
- Add 2-digit numbers using vertical addition
- Add 3-digit numbers using vertical addition
- Add 2- and 3-digit numbers mentally using rounding and adjustment

- Read and solve simple addition word problems
- Select appropriate methods for + and - (mental or written)
- Add 3 or more 2- and 3-digit numbers together using column addition
- Subtract 3-digit numbers using counting on along a number line
- Solve + and - word problems
- Know doubles to 20
- Halve even numbers up to 40
- Know multiplication and division facts for 2x,5x,10x tables
- Know multiplication and division facts for 3x and 4x tables
- Use doubling 3x table to find 6x table facts
- Double numbers to 50 using partitioning
- Halve even numbers to 100 using partitioning
- Understand the relationship between doubling and halving
- Understand that a remainder is the amount left over after division
- Perform division with remainders
- Understand the relationship between \times and \div
- Understand the pattern of remainders
- Multiply and divide by 10
- Recognise multiples of 2,3,4,5,10
- Understand that some numbers are multiples of several numbers
- \times and \div two-digit numbers by 4 by doubling and halving twice
- Discover the 8x table by doubling 4x
- Double numbers up to 100 using partitioning
- Use the grid method to \times numbers 10-25 by single digit numbers
- Solve probs with 3-digit multiples of 10 \div single digit no using \times table facts
- Use function machines \times by 2,3,4,5,8 and see the inverse
- Use scaling to \times heights and weights by 2,4,5,8,10
- \times multiples of 10 by 2,3,4,5
- \times any 2-digit number by 2,3,4,5,8 using the grid method
- Use rounding to estimate products
- Carry out simple division using written method
- Solve word problems using \times and \div methods
- Recognise and name the basic 3D shapes
- Classify 3D shapes in terms of faces, vertices and edges
- Describe the properties of 3D shapes
- Name and describe 2D shapes
- Identify properties of 2D shapes- no of sides straight/curved, angles/corners
- Understand and use the term polygon
- Identify regular and irregular shapes
- Recognise angles in 2D shapes: right angles, more/less than a right angle
- Draw and recognise lines: horizontal, vertical, diagonal, parallel,

perpendicular

- Know that a right angle is 90°
- Identify simple lines of symmetry
- Draw and interpret pictograms where 1 symbol rep 2 units
- Draw up tally charts
- Draw and interpret bar charts where 1 square rep 2 units
- Draw and interpret bar charts where 1 square rep 100 units
- Know that a right angle is $\frac{1}{4}$ turn and measures 90°
- Identify angles as more or less than a right angle
- Know that 360° is a full turn
- Tell the time to the quarter hour on analogue clocks
- Tell the time to quarter hours on digital clocks
- Read a simple calendar
- Know the relationship between days, weeks, months years and leap years.
- Find time intervals in days weeks and months
- Convert analogue/digital time to quarter hour
- Tell the time in intervals of 5 mins (analogue)
- Tell the time in intervals of 5 mins (digital)
- Identify and use all coins to make amounts
- Use the correct £p notation
- Make amounts of money using minimum coins
- Convert pounds to pence
- Add amounts of money using place value knowledge
- Subtract amounts of money using place value knowledge
- Use ruler, metre stick, tape measure to measure length
- Use a ruler to measure to the nearest cm and nearest $\frac{1}{2}$ cm
- Estimate lengths in cm
- Understand the relationship between m and cm
- Understand the relationship between cm and mm
- Draw lines accurately in cm, $\frac{1}{2}$ cm and in mm
- Know that 1 litre = 1000ml
- Estimate and measure capacity to nearest 100ml
- Estimate and measure capacity to the nearest 50ml
- Understand that perimeter is the distance round the edge of a shape
- Calculate the perimeter of simple polygons by counting and using a ruler
- Tell the time to the nearest minute on analogue clocks
- Tell the time to the nearest minute on digital clocks
- Time events in mins and secs
- Find the time after a given interval
- Find intervals of time (not crossing the hour)
- Solve word problems involving time
- Know that $1\text{kg}=1000\text{g}$

- Compare and measure weights in multiples of 50g
- Estimate weights in multiples of 100g
- Solve word problems involving measures
- Find the perimeter of simple shapes by counting and measuring
- Use am and pm for telling the time
- Find the time 5,10,20 mins later
- Recognise 24-hour clock times
- Understand that fractions are parts of a whole
- Understand that each fractional part must be equal
- Write unit fractions
- Know that larger the denominator smaller the fraction for unit fractions
- Use fraction strips to find $\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ of multiples of 2,3,4
- Investigate which numbers can be split into thirds and quarters
- Find $\frac{3}{4}$ of amounts
- Find $\frac{2}{3}$ of amounts
- See the relationship between finding fractions of amounts and division
- Identify $\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{1}{6}$ and $\frac{1}{8}$ and know how many make a whole
- Visually identify equivalent fractions
- Place fractions on a 0-1 number line
- Find fractions of amounts using arrays
- Compare and order fractions with the same denominator
- Add and subtract fractions with the same denominator (within a whole)
- Recognise equivalence to $\frac{1}{2}$
- Recognise tenths, find several tenths of multiples of 10
- Find $\frac{1}{10}$ of single digit numbers
- Show logical reasoning skills
- Apply deduction
- Discuss and share work
- Look for patterns and relationships
- Spot patterns in numbers
- Explain ideas verbally
- Explain ideas on paper
- Make predictions
- Solve mathematical problems
- Use systematic approach to testing predictions
- Understand what a palindromic number is
- Use mathematical reasoning
- Use trial and error systematically

In Prep, pupils have access to 'DoodleMaths', a Maths app which develops a tailor made programme for each child. Independent studies with schools have shown that students using 'DoodleMaths' for 10-15 minutes daily over the course of 4 weeks make an average improvement of 3.5 months in their Maths age.

Your child will be given a username and password which they can use to log in to the DoodleMaths app. We recommend that this is used regularly throughout the year to support their Maths learning at home and it will be set as homework every other week.

You can record your child's log in details here:



Username: _____

Password: _____