MATHS

How can you help your child with their learning?

How can you help your child in Nursery?

Shape

Talk about and explore 2D and 3D shapes. Encourage your child to use the words below when talking about the shapes.

sides **corners** **straight**
flat **round**

Show me....

Ask your child to show you a number using their fingers.
For example, 'Show me 3'.

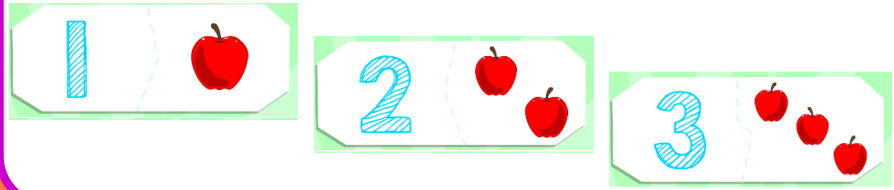
Numbers past 5

Regularly say the counting sequence and encourage your child to practise too. This could be counting the stairs as you climb them, counting down when playing hide and seek.

1, 2, 3, 4, 5 ....

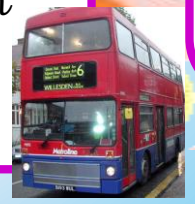
Match numerals to amounts

Encourage your child to find the right amount of objects to match the numeral you show them.



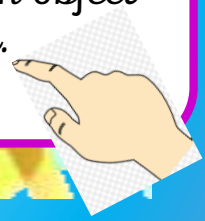
Have fun!

Sing counting songs. Highlight numbers in the world around them. For example, show them the number on the front of a bus. Ask them how old they are- can they recognise this number?



IMPORTANT

Say one number for each item in order to show your child how to count accurately. It is helpful to point to each object as you count it.



How can you help your child in Reception?

Count beyond 10

Verbally counting beyond 10 and encouraging your child to repeat. This could be within every day activities or within songs and games.

Number formation

0 1 2 3 4 5

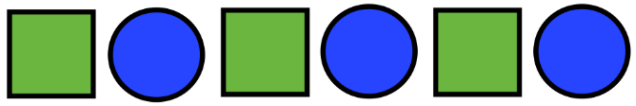
Counting

Say how many there are after counting a set of objects. This helps your child to appreciate that the last number of the count shows the total number in that group. This is the **cardinal counting principle.**

1, 2, 3, 4, 5, 6, 7, 8, 9 , 10 – **there are 10 marbles**

Repeated patterns

Explore, continue and create repeated patterns. Such as....



Length, weight and capacity

Explore length, weight and capacity in the world around. Model vocabulary, such as

heavier than **shorter than**

Discuss which jug will hold more water

Subitising

Subitising is recognising how many things are in a group without having to count them one by one.

You can practise this by showing your child objects and asking how many there are, for example, fingers on your hands. You could arrange objects from around the home and encourage them to tell you how many there are without counting them.

How can you help your child in Year 1?

Telling the time

Practise telling the time to the hour and half past the hour. Encourage your child to become familiar with important times during the day, for example dinner time and bed time.

Number bonds

Explore how to make different numbers **within 20.**

Although they will need to know the bonds that make 20, they should explore the composition of all the numbers from 1-20. Starting off with smaller numbers will help to build your child's confidence and build on their learning from Reception.

Can your child find two numbers that make..... 7?

Talking about time!

Talk to your child about the days of the week, including their usual routines, for example, going to gymnastics on a Friday.

Practise sequencing events in **chronological order** (the order in which things happen) using key language, such as...

before after next first

today yesterday tomorrow

morning afternoon evening

Counting

Practise count from 0 to 100, forwards and backwards, including starting at different numbers, for example, can they count on from 16?

Count in multiples of 2,5 and 10

A **multiple** is a number that occurs in a given times table, for example, 2,4 and 6 are all **multiples of 2**- they can all be **divided by** 2.

Practise counting in 2s-
2..4...6..8..10..12..14..16..18..20..22..24

Practise counting in 5s
5..10..15..20..25..30..35..40..45..50..55..60

Practise counting in 10s
10..20..30..40..50..60..70..80..90..100

How can you help your child in Year 2?

Telling the time

Practise telling the time to the nearest five minutes, including **quarter past** and **quarter to**.

Ordering & Comparing

Practise comparing and ordering numbers from 0 to 100. Give your child two numbers to compare.

12  20 = 12 is less than 20

15  8 = 15 is greater than 8

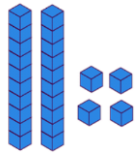
16  16 = 16 is equal to 16

Give your child a selection of 2-digit numbers to order from smallest to largest.

Place value in 2-digit numbers

Practise reading and representing 2-digit numbers to show their value.

For example, 24 has two **tens** and four **ones**



Fractions

Numerator – the number of parts you have out of the whole

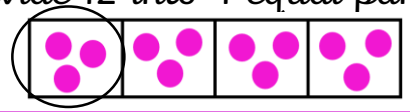
$\frac{1}{3}$

Denominator – the number of equal parts the whole has been divided into

Practise finding fractions of number.

$\frac{1}{4}$ of 12 =

Divide 12 into 4 equal parts



= 3

Times tables

Practise their 2, 5 and 10 times tables with them. Encourage your child to identify the **inverse**- this is the opposite calculation.

If they know that 5 x 10 = 50, they also know that 10 x 5 = 50 and ...

50 ÷ 5 = 10

Addition & Subtraction

Your child will be learning strategies to add numbers and subtract numbers. They will need to understand that addition is **commutative** but subtraction is not. This means that they can add numbers in any order and still get the same answer.

For example, 6 + 8 = 14 and 8 + 6 = 14

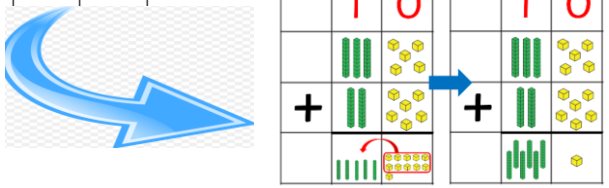
How can you help your child in Year 3?

Addition & Subtraction

Your child will practise adding and subtracting number with up to three digits.

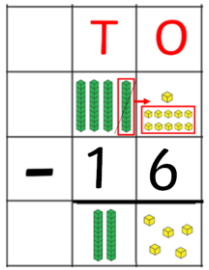
	T	O
	3	5
+	2	6

When adding the ones, the total is 11 ones so we need to **exchange** 10 ones for one ten



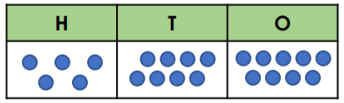
	T	O
	4	1
-	1	6

When subtracting, the children need to remember that they cannot subtract a larger number from a smaller number. In this example, they would need to **exchange**- 1 ten for 10 ones.



Finding 10 or 100 more or less

Your child will practise finding 10 more, 10 less, 100 more and 100 less than any 3-digit number. Practise on the number below-



Fractions

Unit fraction
The numerator is 1

$\frac{1}{4}$

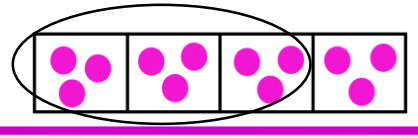
$\frac{3}{4}$

Non-unit fraction
The numerator is more than 1

Your child will practise finding non-unit fractions of shapes, objects and numbers.

Find $\frac{1}{4}$ by dividing 12 into 4 equal parts

Finding $\frac{3}{4}$ of 12 = 9



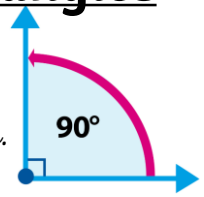
Multiply the answer by 3 (the numerator)

Times tables

Along with knowing their 2, 5 and 10 times tables, the children in Year 3 should learn their 3, 4 and 8 times tables. Practising these times tables at home will really help speed up their recall and allow them to apply it to other areas of learning in maths.

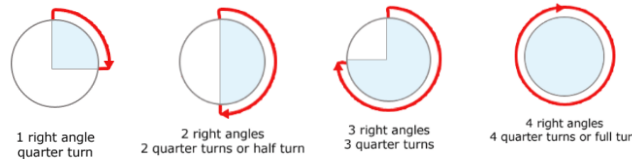
Shape – right angles

Finding right angles within shapes and using this to describe different shapes.



Can your child identify whether an angle is bigger or smaller than a right angle?

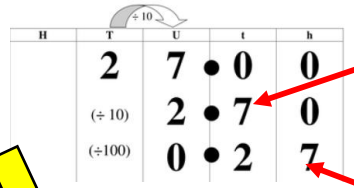
Recognising right angles as a description of a turn.



How can you help your child in Year 4?

Multiplying and dividing by 10 and 100

This is always a tricky concept for the children to learn. They will learn that when multiplying by 10 the number gets 10 times bigger. Each digit moves one place to the left and the place value of each digit changes. When dividing by 10, the number gets ten times smaller and each digit moves one place to the right. The value of each digit changes and it is important for your child to recognise the value of each digit.



The 7 ones become 7 **tenths** and the 2 tens become 2 ones

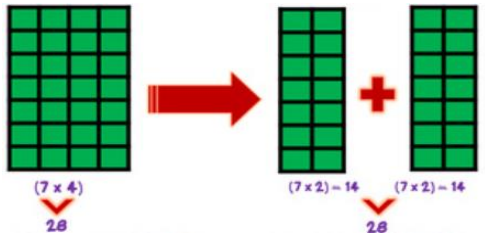
The 7 ones become 7 **hundredths** and the 2 tens become 2 **tenths**

Converting measures

Your child will get the opportunity to practise this skill when converting measures. Knowing how many grams are in a kilogram would be a useful fact to learn.

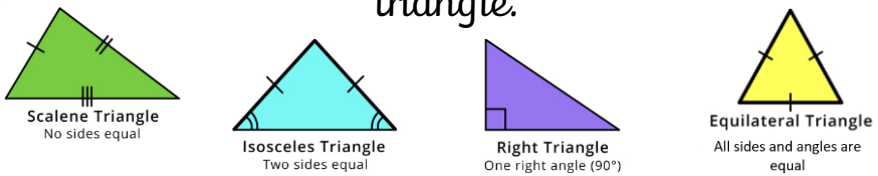
Distributive Law

This is a useful strategy that your child will learn to help when multiplying larger numbers. It includes partitioning (splitting a number into smaller chunks), multiplying them and adding the answers together.



Triangles

A triangle has three sides. Your child will learn the names and properties of the different types of triangle.



Times tables

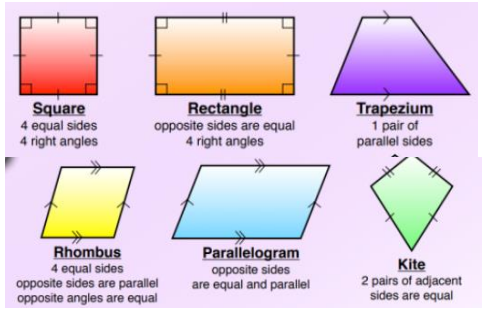
Your child will need to learn their times tables up to 12 x 12.

Having a good recall of their times tables will help with the other areas of learning. The children will also sit a Multiplication Tables Check in Year 4.

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Quadrilaterals

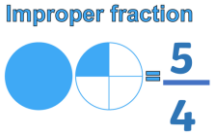
A **quadrilateral** is a shape with 4 sides. Your child will learn the names and properties of these shapes.

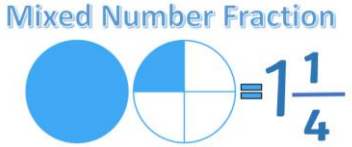


How can you help your child in Year 5?

Improper and Mixed Number Fractions

The numerator (top number) is larger than the denominator (the bottom number) in an **improper fraction**.





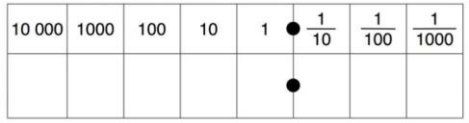
A **mixed number fraction** contains a whole number and a fraction.

Fractions, Decimals and Percentages

Your child will be working with percentages throughout the year. They will need to understand that percentage means **'number of parts per hundred'.** They will need to know the fraction and decimal equivalents of some common percentages.

Fraction	Decimal	Percentage	Image
$\frac{1}{2}$	0.5	50%	
$\frac{1}{4}$	0.25	25%	
$\frac{3}{4}$	0.75	75%	

Multiplying and dividing by 10,100 and 1000



Multiplying

X 10 digits move LEFT 1 space
X 100 digits move LEFT 2 spaces
X 1000 digits move LEFT 3 spaces

Dividing

÷ 10 digits move RIGHT 1 space
÷ 100 digits move RIGHT 2 spaces
÷ 1000 digits move RIGHT 3 spaces

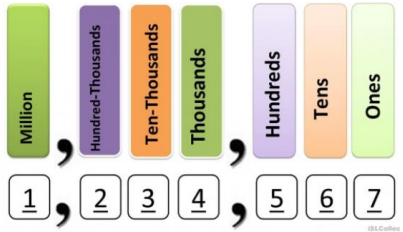
It is important for your child to recognise that the place value of each digit changes as a result.

Adding and subtracting fractions

Something children usually find tricky is adding and subtracting fractions with different denominators -the bottom number in the fraction that tells us how many parts there are in the whole. The children will need to find a **common denominator**- this is a number that both of the denominators will divide into. This can be achieved by multiplying them by each other. The **golden rule** when adding and subtracting fractions is- whatever you do to the bottom number you must do to the top number- the numerator.

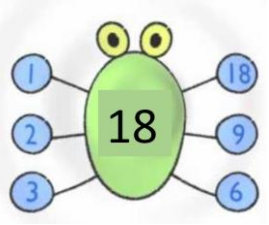
Place Value

Your child will need to develop a secure understanding of place value in numbers up to 1,000,000



Factors

A **factor** is a number that is divisible by a given number
e.g. 5 is a factor of 15 because 15 ÷ 5 = 3

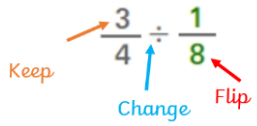


Numbers with only 2 factors (1 and itself) are called **prime numbers** non-prime numbers are **composite numbers.**

How can you help your child in Year 6?

Dividing Fractions

Your child will be taught a simple strategy to divide fractions.
When dividing by a whole number, they should express the whole as a fraction by making the denominator 1.



$$\frac{3}{4} \times \frac{8}{1} = \frac{24}{4}$$

They will be taught to convert the answer and will recognise that 4 can be divided into 24 six times. Therefore, the answer is 6.

Calculating Percentages

Your child should know some of the fraction equivalents as this will help to calculate percentages.

34% of 1200=408

Find 10% by calculating 1/10 (divide the whole by 10)
10% = 120
20%= 240
30% = 360

Find 4% by finding 1/100 (divide the whole by 100)
1% = 12
2%= 24
3%=36
4%=48

Then add them together
360 + 48 = 408

Multiplying Fractions

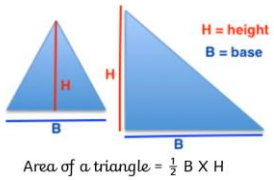
When multiplying fractions by whole numbers, for example $\frac{1}{4}$ x 3 your child will learn that this is $\frac{1}{4}$ three times (3 lots of $\frac{1}{4}$).

When multiplying two fractions, they need to know that you multiply the numerators (top number) together and the denominators (bottom number) together.

$$\frac{2}{4} \times \frac{3}{6} = \frac{6}{24}$$

Area

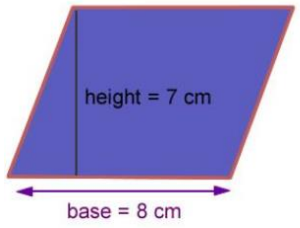
Area of a triangle



Area of a triangle = $\frac{1}{2}$ B X H

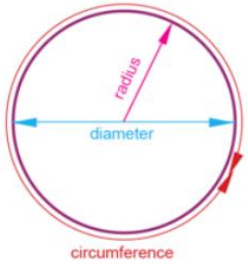
Multiply the base by the height and halve it.

Area of a parallelogram



A = b x h
A = 8 x 7
A = 56 cm^2

Circles



Your child will learn about the parts of a circle. They will need to know that the diameter is double the radius.

Simplifying Fractions

Find a **common factor** (a number both the numerator and denominator can be divided by. Divide both by the common factor.

$$\frac{6}{24} = \frac{1}{4}$$

Both 6 and 24 have 6 as a common factor. We need to divide 6 and 24 by 6.