

A guide to what's useful to know in Maths

For those parents who would find it useful, below are some selected key areas (core concepts) that it would be useful for your child to have an understanding of before they start their next year group.

Whilst it is unlikely you could cover everything – and this list is not designed to be exhaustive – elements such as times tables practice, quick calculations (such as addition/ subtraction when shopping) all help to support Mathematical fluency.

We hope you find this useful.

By the start of Year 1

- Numbers: children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number.
- Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.
- They solve problems, including doubling, halving and sharing.
- Shape, space and measures: children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.

By the start of Year 2

- Count forwards and backwards within 100, starting from any number
- Use greater than, less than, equal to
- Count forwards and backwards in multiples of 2, 5, and 10
- Be able to use plus and minus to solve calculations
- Recognise that numbers can be split into different parts, e.g., 10 can be made up of 7 and 3; 8 and 2, etc.

By the start of Year 3

- Recognise the place value of 2 digit numbers, e.g., 23 is 2 tens and 3 ones
- To accurately order any 2 digit number
- To be confident in addition and subtraction within 10
- Add and subtract within 100, particularly in adding and subtracting 1s or 10s from a two digit number, e.g., $90 - 10$; $100 - 1$, etc
- Add and subtract within 100, add and subtract any two digit numbers
- To work confidently within multiples of 2, 5 and 10

By the start of Year 4

- Recognise the 10 tens are the same as 100 and that 100 is ten times the size of 10; use this to understand how many 10s there are in other 3 digit multiples of 10

- Recognise the value of digits in three digit numbers, e.g., 296 is 2 hundreds, 9 tens and 6 ones
- To be able to order any 3 digit number and count-on in 10s or 100s
- To be able to divide 100 into 2, 5 and 10 equal parts.
- Read scales marked in multiples of 100 with 2, 5 or 10 equal parts
- Recall multiplication (and corresponding division) facts in the 2, 5, 8 and 10 times tables
- Add and subtract 3 digit numbers using a column
- Understand the inverse relationship between plus and minus
- Recognise fractions as part of a whole
- Recognise right-angles as a property within some shapes

By the start of Year 5

- Know that 10 hundreds is equivalent to 1000 and that 1000 is 10 times 100; use this to work out how many 100s in other 3 digit multiples of one hundred.
- Recognise the place value of each digit in 4 digit numbers, e.g., 2856 is 2 thousands, 8 hundreds, 5 tens and 6 ones
- Order any four digit number and count on in 100s or 1000s
- To divide 1000 into 2, 4, 5 or 10 equal parts
- Recall multiplication facts up to 12 x 12
- To divide 2 digits by one digits, correctly recording any remainders
- Multiply and divide whole numbers by 10 and 100
- To convert mixed numbers to improper fractions and visa-versa
- To locate coordinates within the single quadrant coordinate grid (like battleships!)

By the start of Year 6

- Know that 10 tenths is equivalent to 1, and that 1 is 10 times the size of 0.1; know that 100 hundredths is equivalent to 1 and that 1 is 100 times greater than 0.01
- Recognise the value of numbers with up to 2 decimal places, e.g., 2754.34 is 2 thousands, 7 hundreds, 5 tens, 4 ones, 3 tenths and 4 hundredths
- To order numbers up to 2 d.p. and to be able to count on by 1 and by 0.1
- To divide 1 into 2, 4, 5 and 10 different parts and to read scales
- Convert between decimals and fractions, e.g., $1/5 = 0.2$
- Secure fluent recall of times tables up to 12 x 12
- Find factors and multiples of whole numbers
- Multiply up to 4 digits by 1 digit using the formal written method
- Divide a number of up to 4 digits by 1 digit
- Find equivalent fractions, e.g., $1/5 = 2/10$ and understand why they are the same
- Recall common fraction and decimal equivalents, such as, $1/2$, $1/4$, $1/5$ and $1/10$ as 0.5, 0.25, 0.2 and 0.1
- Estimate and measure angles