



Crossflatts' Math Curriculum

Our Intent-The Why

The Thrill..

Maths is a fundamental corner stone of our curriculum; it is designed to engage and captivate our children. The importance of feeling confident and fluent in maths and understanding its context and relevance to their daily lives is instilled from the beginning, in Early Years, and achieved through a variety of ways: practical investigations, real world projects, role play areas and problem solving across the curriculum. These all play a part in: igniting our children's interest and developing their mathematical fluency, problem solving and reasoning.

The Will..

As a result of the thrill, the children's will is intrinsically motivated. All of our children are eager to acquire and build on their existing knowledge, skills and understanding so that they can know more today than they did yesterday. Our children ask questions, pose ideas, eagerly tackle a tricky problem, and recognise the power of possessing fluent maths skills, which they can apply to their lives. Our children are resilient to mistakes and persevere when the climbing becomes challenging and are unflinching when faced with multi-stepped problems

The Skill..

We have a progressive and challenging curriculum which is sequenced to ensure new knowledge and skills are underpinned by what has been taught before, whilst guiding our children towards clearly defined termly end points. This ultimately ensures our children leave our school having gained the fluency, problem solving and reasoning skills they need to be confident and able mathematicians. Through the assessment of Key Performance Indicators and formal summative assessment on a termly basis, we identify gaps which are swiftly overcome through precise teaching.

...To be Brill

Our children will achieve results which surpass national expectations at each key developmental phase.

Our children enjoy becoming mathematicians and understand that it is crucial for the next steps on their journey. Therefore, they possess highly positive attitudes towards the subject and are aspirational in their goals.

At our school, *every* pupil will:

- Undertake problem solving challenges as part of a targeted teaching sequence.
- Complete a Launchpad which identifies gaps in their understanding so that we are certain about the individual goals of each child. This way, we will endeavour to achieve good, if not outstanding, progress for all.
- Have access to the concrete, practical resources/representations of number necessary to support a deep understanding of concepts.
- Have access to a working wall which reflects the current learning.

| | |
|--------|---|
| EXFS | <ul style="list-style-type: none"> • Use the language of size, weight, position, distance and time and will pattern spot. • They will count throughout each and every day and will have at least 2 weekly inputs. • Be able to add and subtract with single digit numbers. • Understand doubles, halves and sharing whilst also understanding 1 more and 1 less. • Understand the ordinal value of the digits up to 20, or beyond where appropriate. |
| Year 1 | <ul style="list-style-type: none"> • Read, write and count with numbers to 100. • Count in 2's, 5's and 10s whilst understanding the following symbols: + - = • Add and subtract with 1 and 2 digit numbers up to 20. • Recognise, find and name a half as one of two equal parts (shapes, objects, quantities) • Recognise and order money: 1p, 2p, 5p, 10p, 20p, 50p • Know the days of the week, months and year and tell the time (o'clock and half past) • Recognise 2D (circle, square, rectangle, hexagon, pentagon) and 3D shapes (cuboids, cubes, spheres, cylinders). |
| Year 2 | <ul style="list-style-type: none"> • Count in 3s, 4s and therefore 30s and 40s. • Recognise the place value of 2 digit numbers and understand 0 is a place holder. • Recall number bonds to 100 and mentally add and subtract 9 and 11, using their knowledge of 10. • Write simple fractions ($\frac{1}{2}$ of 6 = 3) • Estimate and measure (cm/m, kg/g and l/ml) • Find different combinations of coins with the same value and reason with money. • Identify vertical lines of symmetry. • Undertake simple surveys and construct pictograms, tally charts and block diagrams. |
| Year 3 | <ul style="list-style-type: none"> • Count in multiples of 2, 3, 4, 5, 8, 10, 50 and 100 as well as counting in 1/10ths. • Recognise the place value of 3 digit numbers. • Read and write numbers up to 1000 in numerals and words. • Add and subtract numbers with up to 3 digits. • Know their 3, 4, 6 and 8 times tables by heart. • Know fractions ($\frac{1}{3}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$) of a length, shape or object and mentally quarter. • Add and subtract fractions with same denominators. • Measure the perimeter of 2D shapes in cm and mm. • Read a clock to the nearest minute and compare time (seconds, minutes and hours). • Identify right angles and know that 2 right angles make a half turn. • Identify horizontal, vertical, perpendicular and parallel lines. • Interpret bar charts, pictograms and tables |
| Year 4 | <ul style="list-style-type: none"> • Round any whole, 4 digit number to 10, 100 or 1000. • Count in multiples of 7 and 9. • Know all of their tables to 12×12. • Multiply a 3 digit number by a 1 digit number • Place fractions on a number line and recognise decimal equivalence to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$. • Find the area of shapes by counting squares. • Convert units of measure (km to m, hours to minutes and m to cm) • Identify acute and obtuse angles and compare and order angles up to 180°. • Describe movements between positions as translations (left, right, up and down) • Interpret and present data in line graphs. |
| Year 5 | <ul style="list-style-type: none"> • Read, write, order and compare numbers up to 1,000,000. • Round to the nearest 100,000 • Understand the vocabulary of factors, multiples, prime, composite, square and cube numbers. • Multiply and divide by 10, 100 and 1000 confidently. • Multiply a 4 digit number by a 2 digit number and divide a 4 digit number by a 1 digit number. |

| | |
|--------|--|
| | <ul style="list-style-type: none"> Recognise mixed numbers and improper fractions and convert from one to another. Know that 1% = 1/100, 50% = 50/100 and 25% = 25/100 Calculate the area of rectangles and estimate the area of irregular shapes and volume of cuboids. Draw angles using a protractor. Calculate missing angles in rectangles and along 180° |
| Year 6 | <ul style="list-style-type: none"> Round any number including numbers with 1, 2 or 3 decimal places. Confidently add and subtract with negative numbers. Apply their knowledge of multiplication tables ($13 \times 1.5 = 19.5$) Add and subtract fractions with different denominators and multiply and divide fractions by whole numbers. Find percentages of a number and apply their understanding (money, measures, area, angles) Calculate the area of compound shapes, triangles and parallelograms. Confidently draw 2D shapes using given dimensions and angles. Calculate missing angles in and along 180°, quadrilaterals, triangles and around a point. Name and illustrate the parts of a circle. Describe positions within 4 quadrants. Interpret pie charts, line graphs and know how to calculate (and the purpose of) the mean. Express missing number questions algebraically whilst understanding that $a \times b = b \times a$ Generate linear number sequences and find numbers to satisfy equations ($a + a + a = c$) |

Maths – The Crossflatts Way

Implementation – How do we do it?

Learning Journey – throughout the class (and year group) a progressive thread of learning – underpinned by our termly KPIs – will be taught to all abilities. This will begin with a 'Launchpad' assessment, where gaps will be identified and entry points will be defined resulting in the children being placed on a continuum of learning appropriate to the unit, based upon our agreed KPIs and end of year expectations. Following the acquisition of the necessary fluency, ALL children will demonstrate 'mastery' of the skills via the completion of problem solving and reasoning challenges, which directly link to the real-world. Evidence of this journey will appear on working walls, under clear headings and within maths books.

The Journey/teaching sequence

1. Launchpad to assess and inform the starting points linked directly to previous learning.
2. Children are flexibly and transiently grouped.
3. Teaching of skills including a demonstration of WAGOLLs.
(The above will include: clear use of pictures, models and concrete resources to ensure a deep understanding of concepts that are transferable to abstract scenarios.)
4. Children will be provided with the opportunity to practise the skill independently and grapple with mistakes to ensure that we continue to build resilience.
5. Mastery challenges will then be completed to demonstrate deeper and clearer understanding, thus demonstrating secure knowledge acquisition.
6. Children will complete a Showcase, where appropriate, which then informs the new learning during the next spiral and also allows the children to self-assess.