

“The Wheeler Way”
Approach to Teaching Maths

Our Intent: Maths lessons at Wheeler should inspire children to confidently calculate, reason and problem solve whilst seeing relationships and making connections between concepts. Children should be inquisitive and see the application to real-life.

Mathematic Progression	
Whole School	<ul style="list-style-type: none"> Lessons will follow a 3-part structure: <div style="display: flex; justify-content: space-around; align-items: center; margin: 10px 0;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #fff9c4; text-align: center;"> CLIC Starter (mental and oral) including counting and/or times tables </div> <div style="font-size: 2em;">➔</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #c8e6c9; text-align: center;"> Main body (teacher model, input, mini-plenaries and independent task) </div> <div style="font-size: 2em;">➔</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #bbdefb; text-align: center;"> Plenary - to draw out generalisations. Metacognition opportunities </div> </div> Lessons will include an element of meta-cognition, giving children opportunities to ‘think about their thinking’; Pupils will experience practical maths lessons, taking advantage of the school environment (e.g. using the playground to investigate area and perimeter); Children will have quick recall of number/calculation facts relevant to their stage of development; Teaching sequences will follow the journey of CPA in all year groups; <div style="display: flex; justify-content: space-around; align-items: center; margin: 10px 0;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #fff9c4; text-align: center;"> Concrete representation The actual thing (e.g. an apple) </div> <div style="font-size: 2em;">➔</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #c8e6c9; text-align: center;"> Pictorial Representation A picture of the thing (e.g. a picture of an apple) </div> <div style="font-size: 2em;">➔</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; background-color: #bbdefb; text-align: center;"> Abstract Representation A number to represent the thing (e.g. 1) </div> </div> <ul style="list-style-type: none"> Resources will be readily available for any pupils who require them; <p>Planning sequence</p> <ul style="list-style-type: none"> Pre assessments are used to guide the journey of the unit; <ul style="list-style-type: none"> S-plans are displayed in every classroom and, where possible, are done in collaboration with partner class; Each unit of learning will develop fluency, reasoning and problem solving; Both conceptual and procedural variation will be evident in the tasks and questions set; Stem sentences being used to support and scaffold learning; Have opportunities to answer open-ended questions and conduct mathematical investigations; Post-assessments are used to measure progress across the unit of work. Linked to real-life scenarios that are pertinent to the children’s interests and experiences – through cross-curricular opportunities.
EYFS	<ul style="list-style-type: none"> In-depth teaching of a single number (one number per week) and all previous learning is revisited when each new number is studied; Use of ‘Number Blocks’ resources to support teaching and learning; Partitioning numbers in different ways (e.g. the ‘twoness’ of two); Working with numbers up to 20 – place value; Maths activities available in the outdoor environment.
KS1	<ul style="list-style-type: none"> Consolidation using numbers up to 20; Working with numbers up to 100; Number sentences written in abstract form, supported by concrete or pictorial representations; In Y2, children will begin to record using formal methods for addition and subtraction; Pupils work within whole numbers only; Pupils will begin to reason and justify with mathematics verbally; Pupils will have fluent recall of the 2, 5 and 10 times tables.
LKS2	<ul style="list-style-type: none"> By the end of Year 4, pupils will have fluent recall of all times tables up to 12 x 12; Pupils will use formal methods for columnar addition and subtraction; Pupils will use formal methods for short multiplication and division; Pupils in Year 3 will work within whole numbers, whilst pupils in Year 4 will move onto decimals (up to 2dp); Pupils will calculate with fractions (add and subtract with the same denominator); Pupils will work with numbers up to 1,000; Pupils will begin to recognise Roman numerals up to 100; Pupils will solve 1 and 2 step problems using all four operations; Pupils will be expected to provide written responses in Maths books for reasoning and justification of their answers; Children to recognise errors in their work and the work of others (error analysis).
UKS2	<ul style="list-style-type: none"> Pupils will use formal methods for addition and subtraction; and short and long multiplication and division; Pupils will calculate with whole numbers, decimals, fractions and percentages; Pupils will express remainders, in division, as whole numbers (rounded according to the context), fractions and decimals; Pupils will solve multi-step problems (beyond 2 steps); Pupils will be expected to provide written responses in Maths books to reason, justify and explain mathematical thinking; Children to recognise errors in their work and the work of others (error analysis).