



Bierton CE Combined School
Maths Curriculum Map: Addition and Subtraction

Progression of knowledge & skills

Year 1	Year 2	Year 3
<u>N.C. Link</u>	<u>N.C. Link</u>	<u>N.C. Link</u>
<ul style="list-style-type: none"> • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one-digit and two-digit numbers to 20, including 0 • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$ 	<ul style="list-style-type: none"> • Solve problems with addition and subtraction: <ul style="list-style-type: none"> ○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ○ applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> ○ a two-digit number and 1s ○ a two-digit number and 10s ○ 2 two-digit numbers ○ adding 3 one-digit numbers • Show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<ul style="list-style-type: none"> • Add and subtract numbers mentally, including: <ul style="list-style-type: none"> ○ a three-digit number and 1s ○ a three-digit number and 10s ○ a three-digit number and 100s • Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction • Estimate the answer to a calculation and use inverse operations to check answers • Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
<p><u>When is this topic taught in our school?</u> Autumn: Weeks 3 – 7 (total five weeks) Autumn: Weeks 11 – 12 (total one and a half weeks) Spring: Week 1 (total one week) Spring : Weeks 9 – 11 (total two and a half weeks)</p>	<p><u>When is this topic taught in our school?</u> Autumn: Weeks 2 – 4 (total two and a half weeks)</p>	<p><u>When is this topic taught in our school?</u> Autumn : Weeks 3 – 7 (total five weeks)</p>



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<p>Curriculum Prioritisation:</p> <ul style="list-style-type: none"> ○ Numbers: 0 to 20 ○ Additive Structures ○ Part–whole relationships ○ Addition and subtraction facts within 10 ● 1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. ● 1AS–2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. ● 1NF–1 Develop fluency in addition and subtraction facts within 10. 	<p>Curriculum Prioritisation:</p> <ul style="list-style-type: none"> ○ Calculations within 20 ○ Addition and subtraction of two-digit numbers ○ Numbers 10 to 100 ○ Fluently add and subtract within 10 ● 2AS–1 Add and subtract across 10. ● 2AS–2 Recognise the subtraction structure of ‘difference’ and answer questions of the form, “How many more...?”. ● 2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. ● 2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. ● 2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning. ● 2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice. 	<p>Curriculum Prioritisation:</p> <ul style="list-style-type: none"> ○ Adding and subtracting across 10 ○ Numbers to 1000 ○ Manipulating the additive relationship and securing mental calculation ○ Column addition ○ Column subtraction ● 2AS–1 Add and subtract across 10. ● 3AS–1 Calculate complements to 100. ● 3AS–2 Add and subtract up to three-digit numbers using columnar methods. ● 3AS–3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction. ● 3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. ● 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).
Year 4	Year 5	Year 6
<p style="text-align: center;"><u>N.C. Link</u></p> <ul style="list-style-type: none"> ● Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate ● Estimate and use inverse operations to check answers to a calculation ● Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	<p style="text-align: center;"><u>N.C. Link</u></p> <ul style="list-style-type: none"> ● Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) ● Add and subtract numbers mentally with increasingly large numbers ● Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy ● Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. 	<p style="text-align: center;"><u>N.C. Link</u></p> <ul style="list-style-type: none"> ● perform mental calculations, including with mixed operations and large numbers ● use their knowledge of the order of operations to carry out calculations involving the 4 operations ● solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why ● solve problems involving addition, subtraction, multiplication and division



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		<ul style="list-style-type: none"> • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
<p>When is this topic taught in our school? Autumn: Weeks 4 – 7 (total four weeks)</p>	<p>When is this topic taught in our school? Autumn: Weeks 4 and 5 (total two weeks)</p>	<p>When is this topic taught in our school? Autumn: Weeks 2 – 5 (total 4 weeks)</p>
<p>Curriculum Prioritisation:</p> <ul style="list-style-type: none"> ○ Review of column addition and subtraction • 3AS–2 Add and subtract up to three-digit numbers using columnar methods. • 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100). 	<p>Curriculum Prioritisation:</p> <ul style="list-style-type: none"> ○ Decimal fractions • 5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). 	<p>Curriculum Prioritisation:</p> <ul style="list-style-type: none"> ○ Calculating using knowledge of structures • 6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). • 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.

Cultural Capital opportunities

Year 5 – Space – Hidden Figures (Black Mathematicians)
Year 6 – WW2 – Alan Turing and the enigma code

Achievement for All

As stated in our vision and pedagogy, at Bierton CE Combined School, we aspire for all children to achieve and ‘keep up’ rather than ‘catch up’. In order to promote this, we implement a range of strategies throughout the school.

Strategies:

- Live marking and feedback within each lesson identifies children who require support and clarification of misconceptions
- Pre-teaching interventions at the start of the school day
- Interventions during the school day
- Focused support in class
- Additional opportunities provided to help children make connections and consolidate their learning
- Continued use of concrete manipulatives to embed core facts

Opportunities beyond the National Curriculum

- Children in Early Years and Key Stage 1 have access to Numbots.
- Children in Year 2 begin to use Times Table Rock Stars in the Spring Term.



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- Children in Key Stage 2 have access to Numbots and Times Table Rock Stars.
- Maths Medley / Fun with Numbers after school clubs offer enrichment activities.
- Maths No Problem provides 'white space' days to explore topics in further detail.
- Cross-curricular opportunities provided in other subjects (e.g. statistics in Science and topic).
- Children throughout the school celebrate Number Day
- Challenges provided throughout the year to promote enthusiasm and engagement.
- Year 6 children participate in Young Enterprise.

Please refer to our long term plan for reference to possible alterations for when certain objectives will be taught.