



**Be happy
Be successful
Be proud
Be Bankfields**

Bankfields Primary School

Mathematics Policy

**Updated September 2025
Review September 2027**

What is Mathematics?

Mathematics is the development of logical thinking and the ability to make sense of the world. From the earliest stage, children should be provided with a variety of experiences through which they can develop Mathematical skills and concepts. It is a tool for everyday life, and a means of communicating information and solving problems. It is recognised that Mathematics is also studied for its own intrinsic qualities, including creativity – and intellectual challenge and excitement.

The National Curriculum 2013 stated:

‘Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.’

Mathematics Statement of Intent

At Bankfields Primary School, our Maths curriculum is built upon the principles of Maths Mastery and sustaining mastery, ensuring every pupil develops a deep understanding of mathematical concepts. We aim to inspire a love of mathematics by fostering curiosity, critical thinking, and resilience in every learner. Our approach ensures that mathematics is not seen as a series of isolated activities but as a dynamic process that underpins problem-solving and logical reasoning in everyday life.

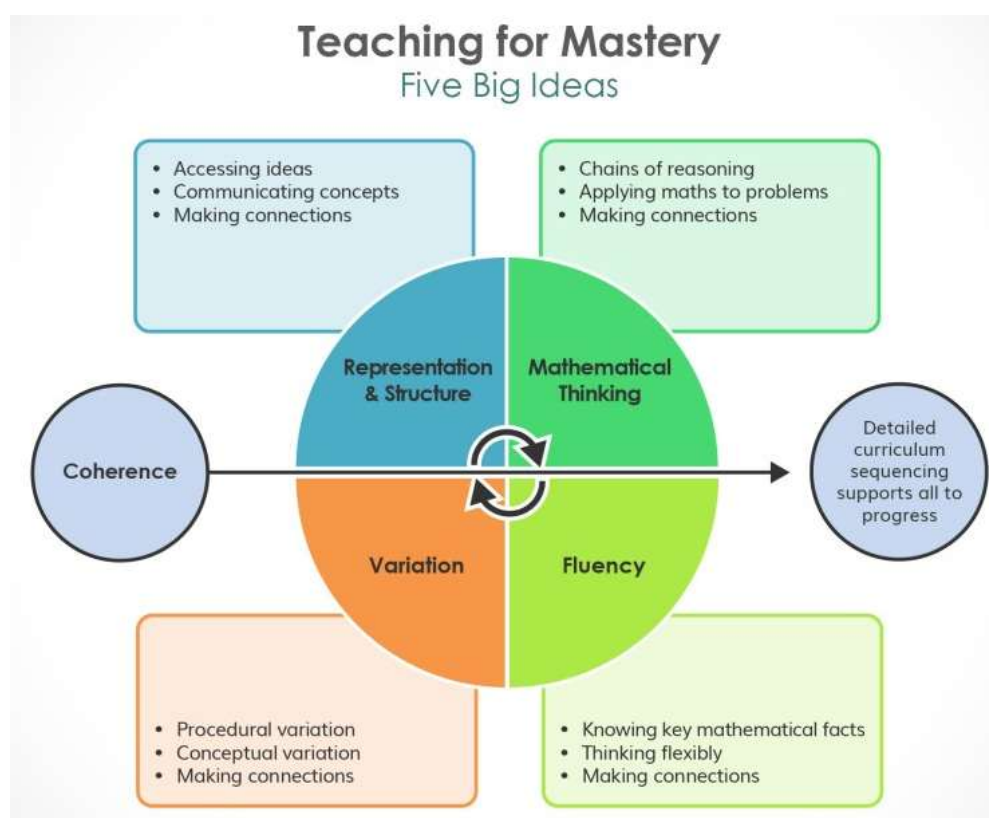
Our Maths curriculum has been carefully designed by the dedicated staff at Bankfields and mapped in accordance with the National Curriculum. This ensures that children receive a high-quality offer in mathematics that is both rigorous and progressive, enabling them to develop the skills and knowledge necessary for success.

Through a carefully planned and progressive curriculum, we provide opportunities for children to engage in structured, purposeful challenges that develop their procedural fluency, conceptual understanding, and the ability to apply their knowledge across a range of contexts. Pupils are encouraged to make connections across mathematical domains, promoting a cohesive understanding of the subject.

High aspirations are central to our curriculum. We challenge all pupils to think deeply about their mathematics and aim high, cultivating confidence and perseverance in solving increasingly complex problems. We recognise that mathematical success comes not from superficial coverage of topics but from developing a fundamental understanding that enables children to apply their learning independently and effectively.

We value the process of learning mathematics as much as the outcomes. Pupils regularly engage in tasks across a spectrum of cognitive demand, ensuring progression through different Depth of Knowledge (DOK) levels:

1. Level One problems build the essential procedural knowledge necessary for higher-order thinking.
2. Level Two and Three problems challenge pupils to analyse, evaluate, and apply their knowledge in unfamiliar scenarios.
3. Level Four tasks, while less frequent, provide opportunities for extended, in-depth exploration of mathematical concepts, fostering resilience and perseverance.



Our Maths curriculum also supports wellbeing by instilling a sense of achievement and self-belief in pupils as they overcome challenges and experience success in their learning. This foundation equips children with the skills and confidence to approach mathematical problems with determination and creativity.

As a school, we take pride in our rich history of academic excellence in mathematics. Our curriculum is designed to uphold and build upon this legacy, preparing pupils for success in an ever-changing world while nurturing a lifelong appreciation for mathematics.

Aims

Our aims in the teaching of Mathematics are that all children will:

- Enjoy the subject, and study it with confidence and a sense of achievement.
- Work hard to achieve their full potential in maths and a range of other mathematical skills including measure, shape, space and data handling.
- Use and apply these skills with confidence and understanding in practical tasks and in solving real life problems.
- Develop the correct Mathematical vocabulary as a tool, to enable them to think clearly, logically and confidently – and to be able to communicate their ideas fluently and with assurance.
- Assess their own progress and understanding.
- Develop motivation, perseverance and flexibility to carry a task through to completion – and also develop the ability to work in a pair or team so that they become numerate thinkers through child-led learning tasks.
- Become **fluent (achieve mastery)** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language and work towards a **greater depth** of understanding in maths.
- Be able to **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Teaching Timetable

All pupils begin their maths lesson with a daily number challenge designed to revise key areas of mathematics and improve fluency, followed by the main teaching activity (Daily 3 in KS1 and Daily 5 in KS2). Lessons conclude with a reflection on learning, giving teachers a final opportunity to assess pupils' understanding, extend learning, and enable children to make a self-assessment of their progress.

In EYFS and KS1, children also access at least 10 minutes each day of the Mastering Number programme, a research-backed initiative designed to strengthen number sense and secure firm foundations in fluency. Alongside this, pupils recall their 'Maths Dictionary', revisiting key vocabulary and mathematical facts that are essential for understanding and long-term retention. They also complete part of their Schofield and Sims Mental Arithmetic tests each day, supported by Times Tables Rock Stars practice to improve rapid recall of multiplication facts.

This structure forms the typical format of our maths lessons; however, teachers may adapt the organisation of lessons in response to the needs of their pupils. For example, some

children may initially work with a Teaching Assistant to reinforce understanding of a concept taught previously, enabling them to rejoin the main lesson and make secure progress. Equally, pre-learning may highlight pupils who require immediate challenge, in which case they may work independently, with a Teaching Assistant, or with the teacher on greater depth tasks rather than completing the initial whole-class input.

Teaching and Learning

Early Years Foundation Stage

Early years learning concentrates on 7 areas split between prime and specific areas of learning. Mathematics is one of the specific areas.

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.

To support this, teachers across EYFS and KS1 have added a mastering number session to their lesson which aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number.

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. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

Key Stage 1

The principal focus of mathematics teaching in Key Stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects such as cubes, Numicon and place value resources and measuring tools].

To support this, teachers across EYFS and KS1 have added a mastering number session to their lesson which aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number.

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a

range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency.

Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1. (National Curriculum 2014)

Lower Key Stage 2

The principal focus of mathematics teaching in lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication tables and show precision and fluency in their work. This is assessed through the Multiplication Tables Check at the end of Year 4.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Upper Key Stage 2

The principal focus of mathematics teaching in upper Key Stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Pupils should read, spell, pronounce and apply mathematical vocabulary correctly.

Mastery and Greater Depth

At Bankfields, we view mastery as the secure level of understanding that all pupils are expected to achieve within their year group. Mastery means that children develop a deep, connected understanding of key concepts, enabling them to recall and apply knowledge with confidence and accuracy.

Greater depth goes beyond this. Pupils working at greater depth can take the knowledge and skills they have mastered and apply them flexibly across a wide range of contexts. They are able to reason with precision, make generalisations, and communicate their thinking clearly using appropriate mathematical language. To support this, pupils are regularly exposed to carefully chosen tasks and questions that require them to explain, justify, and explore mathematics at a higher level of complexity.

Greater depth activities are drawn from a wide range of high-quality resources including Testbase, Focus Education, the NCETM Mastery Documents, White Rose Maths, and Pearson's Power Maths materials. These tasks are designed to extend and challenge pupils while ensuring that the underlying curriculum remains accessible to all.

Maths Mastery Approach

Our school has embedded a teaching for mastery approach through sustained engagement with the North East Maths Hub and support from a Maths Mastery Specialist (2019–2023). This long-term partnership has enabled us to establish a consistent, whole-school approach where staff share a clear understanding of the principles of mastery and how these translate into daily classroom practice.

High-quality professional development has been central to this journey. Teachers and teaching assistants have engaged in ongoing CPD to develop the pedagogical skills needed to support all learners in achieving mastery. This ensures that teaching strategies are consistent across year groups and that progression is carefully built into every stage of learning.

What is Teaching for Mastery?

Teaching for mastery involves approaches that enable pupils to secure a deep and connected understanding of mathematics at each stage of learning. Lessons are designed to provide opportunities for all children to:

- develop fluency through varied and intelligent practice;

- demonstrate and articulate their understanding through reasoning;
- apply knowledge to unfamiliar situations and rich problem-solving contexts.

By the end of each year and key stage, pupils are expected to have mastered the facts, concepts, and procedures they have been taught, equipping them to move forward with confidence to more advanced material.

Level 1 – Recall	Level 2 – Skills and Concepts	Level 3 – Strategic Thinking	Level 4 – Extended Thinking
<u>Mild</u>  (Practice and consolidation)	<u>Mild</u>  (Practice and consolidation)	<u>Medium</u>  (Mastery)	<u>Spicy</u>  (Greater depth)

Mental Mathematics

At Bankfields we use the mental maths programme published by Schofield & Simms, as mental maths is an essential prerequisite to successful achievements in Mathematics. These exercises are given at appropriate levels of age and ability in numeration, in manipulation of numbers and coins, and in simple problem solving involving measure and money. The correct interpretation of the signs and associated language and process is developed. Each book is compiled on a similar plan and contains 36 weekly tests and 4 checking up tests in number, money, measure and shape. The weekly tests are presented in 3 parts A, B, C. Children spend approximately 60 minutes across the week completing the test. The tests are then marked by the class teacher or with the children as a class where teaching points can be made.

A **jottings sheet or book** is used so that the children can show the different strategies they have used to solve some or all of the questions. If children are seen to be doing very well, then they can be moved onto the next book and slotted in at the appropriate test, and vice versa.

The teaching of mental maths methods is supported by the *Rising Stars Mental Arithmetic Practice Tests* for years 3-6 and Twinkl Arithmetic Practice Papers which are photocopiable tests that reflect the end of KS2 Arithmetic paper. These tests are used on a weekly basis throughout KS2 to support children with their mental arithmetic skills and pace of working.

All children from Y1 – Y6 also access TT Rockstars; a programme designed to develop rapid recall of times tables in a fun and interactive way. This can be used both in school and at home.

Planning for Mathematics

Long Term

Planning for the teaching of Mathematics is provided by the National Curriculum 2014 for each year group. Foundation stage planning is based on the EYFS Framework. As a school, we have created a Long Term Planning document which sets down the term in which we will teach each of the objectives in the National Curriculum. This has been carefully planned so that we can ensure there is a clear progression of skills each term as well as a balance between number and other aspects of maths.

Key Concepts Progression Document

This document sits alongside the LTP and shows the progression of skills in each mathematical concept across each year group. For example, we can clearly see from this document how learning in fractions develops in each year group, building on the skills and knowledge acquired in the previous year. This ensures that teachers fully understand the knowledge and skills that came before their current objective and where it will go next.

The Bankfields Progression in the Four Rules of Calculation document and the scheme of work for the 'other aspects of maths' sets out the progression of skills in maths from the Foundation Stage to Year 6.

Short-Term Planning

Daily planning sets out clearly how objectives from across the mathematics curriculum will be delivered and is supported by the use of Smart Notebook documents, which are amended regularly to meet the needs of each class. Teachers also follow an agreed planning document format, ensuring consistency of approach and clarity across the school. Planning demonstrates progression, coherence, and adaptive teaching, with adjustments made to address the needs of individual pupils.

As far as possible, teachers plan from the age-appropriate objectives for their year group. Where necessary, they will backtrack to earlier objectives to close gaps in understanding and then accelerate pupils towards age-related expectations. For example, if a Year 5 pupil has significant gaps, the teacher may draw on Year 3 or 4 objectives to secure firm foundations before moving them forward into Year 5 content.

Planning is reviewed and refined on a daily basis. Teachers respond to misconceptions identified during lessons and adapt future sessions in line with pupils' emerging needs, ensuring teaching remains responsive and targeted.

Children may be taught in mixed-ability or set year groups where appropriate, with grouping decisions made according to the needs of the cohort and in line with our mastery approach.

Small Steps Document

Short term planning is informed by our 'Small Steps Document' which shows all of the key skills that the children need to be secure with in order to achieve an objective and the steps that the teacher will need to go through to secure that objective. This is particularly helpful for newer members of staff who may not have taught that particular year group previously.

Pre-learning, Post-learning and Pre-teaching

Before the start of a new unit or objective, pupils complete a Pre-Learning Grid to establish their prior knowledge and understanding. Pre-assessments may also take place through practical tasks, teacher questioning, or ongoing assessment of children's work. Teachers use this information to inform planning, identify misconceptions, and target pupils for pre-teaching where appropriate.

Pre-teaching sessions are designed to secure the essential skills and vocabulary children will need in order to access forthcoming lessons confidently. These sessions build fluency, reduce cognitive load, and ensure pupils are able to engage fully with age-appropriate content.

Some pupils may demonstrate strong prior knowledge in a given area. For these children, it is essential that challenge is provided from the very first lesson to secure effective and sustained progress. This may involve working independently on greater depth investigations, or engaging in higher-level reasoning tasks with the teacher while others consolidate core skills.

Following a sequence of lessons, pupils revisit their Post-Learning Grid, enabling both teacher and child to reflect on progress made and skills acquired. This process supports responsive teaching, highlights next steps, and promotes pupil ownership of learning.

Cross Curricular Opportunities

Links are made between Mathematics and other subjects where appropriate in order to deepen children's understanding and reinforce areas of weakness. These opportunities allow pupils to apply their mathematical knowledge and understanding in a variety of contexts. For example statistics and measures work in Science. These links will be indicated on short term lesson plans.

Links with computing

At Bankfields computing is considered to be an important tool for teaching and learning. Staff at the school use a wide range of software and resources, including iPads, to teach maths through computing in order to enhance their teaching. This includes the use of various online resources such as Espresso, TT Rockstars, RM Easimaths, Purple Mash and Testbase. The online resources that the staff use are exciting and motivating for children of all ages, and the importance of this is recognised by all staff. Interactive whiteboards and large screen computers are an integral part of maths teaching. Children in Key Stage 2 have access to the RM Easimaths programme online to reinforce their knowledge and understanding of the concepts that have been taught and also to 'plug gaps' in their knowledge.

Assessment and Record Keeping

Assessment is used by teachers to guide the progress of individual pupils and to inform target setting. At Bankfields, we have developed a robust and effective assessment system which enables staff to closely monitor and track the progress of their pupils. Each teacher has a booklet for their maths group, where daily notes are made of any children who did not secure a specific objective and require further support or consolidation. This provides an effective *assessment for learning* tool, allowing teachers to target support and adapt planning accordingly.

In addition to this daily formative assessment, teachers are encouraged to use live marking within lessons to provide immediate feedback, address misconceptions as they arise, and ensure children receive timely support or challenge. At the end of each unit, pupils also engage with the school's Maths Marking Policy, using ABC marking codes to reflect on their level of understanding:

- A – Mastery challenge or greater depth challenge required
- B – Further practice and consolidation required
- C – Further teaching or support required

This approach provides teachers with an accurate gauge of pupil progress while also encouraging pupil reflection and ownership of learning.

Each year group completes Testbase statutory assessments at the end of each term. These are used in conjunction with the mathematical statement assessment sheet to form an overall judgement of each child's attainment and progress in mathematics. For Year 6 pupils, Rising Stars materials and past SATs papers are also used termly to provide additional evidence of progress and readiness for statutory assessments.

Teachers assign each pupil a termly grade as follows:

- – (minus): achieved up to 35–41% of the year group statements
- = (equals): achieved 41–59% of the year group statements
- + (plus): achieved 60–84% of the year group statements
- Mastery: achieved 85% or more of the year group statements

For pupils unable to access age-related content securely, teachers will *step back* to earlier objectives in order to close gaps before moving forward. Additional interventions are used to support both the least and most able pupils in making effective progress.

All assessment data is recorded in Arbor on a termly basis. This allows staff to:

- monitor individual pupil progress and identify misconceptions;
- track groups of children, including Pupil Premium and SEND;
- evaluate the effectiveness of interventions;
- analyse trends across year groups and the whole school;
- inform planning, INSET priorities, and the School Improvement Plan.
-

In the Foundation Stage, children are assessed against the Foundation Stage Profile on entry to Nursery and again on exit. In Reception, a baseline is recorded and progress tracked towards the Early Learning Goals, with evidence collected through observational assessment, children's learning journeys, and workbooks.

At the end of Year 6, pupils complete the statutory national assessments.

Equal opportunities/inclusion.

(Reference should also be made to the whole school Inclusion policy.)

No child should be excluded or disadvantaged because of ethnicity, culture or religion, home language, family background, special educational needs, gender or ability. Every opportunity should be taken to engage the interest of the child by use of practical and achievable activities as well as interactive techniques to reduce barriers to learning.

Teachers employ a variety of strategies in order to teach different mathematical skills and to encourage confidence and enthusiasm. These strategies will involve Visual, Auditory and Kinaesthetic activities so that they meet the learning needs of abilities of children.

The following is a list of some suggestions:

- Direct teaching by demonstrating, explaining, discussing and summarising.
- Use of the CPA (Concrete – Pictorial – Abstract) approach to develop mastery of understanding.
- Full class or group interaction to give children the opportunity to explain, write on the board, offer alternative methods etc.
- Use of response partners to discuss methods and strategies.
- Use different types of questioning, including those that need rapid response and higher-level questions which require the children to use and apply their knowledge.
- Check mathematical vocabulary and notation, and make sure children understand how to interpret questions.
- Teach strategies for problem solving following the problem solving steps, using effective number sentences and calculation strategies.
- Teach test techniques using examples from Test Base and previous year's SATs papers to practise timings and develop pace.
- Use errors from all work to identify misconceptions and thus plan new objectives and any additional intervention that is required.
- Give children the opportunity to work in pairs or small groups, discussing and explaining their own ideas and methods.
- Provide child-led learning opportunities which allow the children to develop resilience and determination as well as a deepening understanding of mathematical concepts.
- Share objectives with the children and use Success Criteria to break down the objective into simple steps and allow children to review their learning.
- Use practical, hands-on experiences wherever possible – counters, number squares, solid shapes etc., as well as appropriate computer software to reinforce the objective.

SEND pupils

(Reference should be made to the school policy on Special Educational Needs.)

When a child has been identified as having SEND in mathematics, progress is monitored by the SEND Co-ordinator. The SENDco identifies additional resources that are appropriate to support pupils and has an overview of the provision that is provided

For pupils who are working have specific barriers to learning in mathematics, additional intervention and support is provided to ensure that the pupils achieve success and reach their potential. Across the school, Teaching Assistants are used to provide support and intervention which enables SEND pupils to access the lessons and to secure progress. Across the school additional resources, including a high level of support staff, are used to address their needs; overcome their individual barriers to learning; and to accelerate progress. As well as this, teachers ensure that SEND Support Plans are fully implemented and that all lessons are effectively differentiated.

Gifted and Talented Pupils

(Reference should also be made to the whole school Gifted and Talented policy.)

Gifted and Talented pupils are identified by assessment and set targets at their own level. Progress is monitored by the Gifted and Talented Lead Teacher. The Lead Teacher identifies additional resources that are appropriate to support pupils who are gifted in mathematics and has an overview of the provision that is provided.

Pupils who are gifted in mathematics have many opportunities to succeed and reach their full potential both within and outside of school. The G & T Lead Teacher maintains records of all pupils and their progress and all the staff are aware of who is gifted in maths and some of the characteristics for identifying gifted pupils. Teaching strategies in maths allow for gifted pupils to explore open-ended investigations. Staff identify on their planning how they cater for gifted pupils and the more able through a range of strategies such as questioning, differentiated activities and using specific resources. (See Gifted and Talented policy for a range of suggestions). This differentiation is also extended to the Mental Maths Scheme, as Gifted and Talented pupils complete a more challenging series of tests that provide additional opportunities to develop reasoning. In addition, individual teachers work with Gifted and Talented pupils in Mathematics on a one to one and small group basis, to provide feedback on their work and to support any specific weaknesses that may be preventing them from making further progress. Outside of the daily maths lessons, Gifted and Talented children receive additional intervention to further their knowledge of the curriculum.

The Role of the Maths Subject Leader

The role of the Maths Subject Leader is to:

- Take the lead in policy development and schemes of work to ensure progression and continuity in Maths throughout the school.
- Support colleagues in their development of short-term plans and the implementation of assessment and record keeping.

- To support staff identifying target children and monitor these target children so that there is no slippage year on year.
- Identify why these children are not making the appropriate progress and help to develop strategies to overcome the problem.
- Monitor progress in Maths from Nursery to Y6, by analysing assessment data on a termly basis from Abror identifying groups or individuals who may be underachieving. Following this, the Subject Leader will support teachers in identifying why these children are underachieving and develop strategies to enable them to make more progress.
- Keep up to date with developments in maths and disseminate information to colleagues as appropriate.
- Plan and deliver INSET when the need arises.
- Identify areas for development from termly and end of year assessments and contribute to the whole school improvement plan.
- Take responsibility for the purchase of resources.
- To ensure a thorough coverage of maths is delivered throughout the school through discussions with staff, observations and scrutiny of work.

Parental and Community Involvement

All parents are given a copy of our 'Progression in the Four Rules of Number' booklet which explains and gives examples of how we teach each of the four operations in each year group. The booklet shows the progression in skills throughout the school and is a useful tool for parents to use when supporting their children with their learning at home.

Reporting to parents

- On a termly basis through invitation to attend Open Evenings to discuss and share their child's work (2 formal and 1 informal)
- Annually through a written report
- Through an open door policy, which welcomes parents to discuss their child's progress and development informally, when the need arises.
- Shared targets.

Reporting to governors

- The Subject Leader produces an analysis of the strengths and weaknesses in maths across the school and subsequently produces an Action Plan which is reported to governors through the School Improvement Plan.
- The Subject Leader works with the Mathematics Link Governor by meeting with them when required to discuss standards in maths, actions for improvement and also to model effective teaching and learning in maths by teaching lessons that are observed by the Link Governor.
- The Subject Leader will also provide maths training to governors as and when it is required.

Family Learning opportunities

- Parents are encouraged to come into school to engage with their children's learning in maths through Family Learning opportunities. These opportunities help us to raise the parent's aspirations as the staff show them how they can effectively support their children in their maths learning. Furthermore, it helps to develop the children's confidence in maths as they have the chance to learn alongside their parents and feel a sense of pride in their maths achievements.
- When appropriate, at Bankfields we also utilise the support of external agencies, such as the Adult Learning Service, to provide family learning opportunities.

Revised September 2025
Mr P Bennett.

Appendix.

Depth of Knowledge (DOK) – Explanations and examples.

Depth of Knowledge (DOK) Levels

Level One - Recall	Level Three - Strategic Thinking
This level involves the recall of information (<i>fact, definition, term, property</i>), the use of a procedure, or applying an algorithm or formula. It also includes one-step problems.	This level of complexity involves reasoning, planning and using evidence to solve a problem or algorithm. Pupils would be expected to make and test conjectures, interpret information from a complex graph, solve complex (multi-step) problems, explain concepts, use concepts to solve non-routine problems and provide mathematical justifications.
Level Two – Skills and Concepts	Level Four – Extended Thinking
The skills and concepts level involves demonstrating conceptual understanding through models and explanations, comparing and classifying information, and estimating and interpreting data from a simple graph. At Level Two, pupils would be expected to make some decisions such as how to approach the problem.	Task require the most complex cognitive effort. Extended thinking, requiring reasoning, planning and thinking generally over periods of time (<i>not on repetitive tasks</i>). Pupils would relate concepts to other content areas or real-world applications or situations.

L.O = Read Roman numerals to 100. (Level 1)

Write down the Roman Numeral equivalent to these numbers:

6	16	26	36	46	56	66	76
4	14	24	34	44	54	64	74

Complete the table.

Number	Roman Numerals
LX	60
LXXVI	
XCIII	

Mild



(Practice and consolidation)

L.O = Read Roman numerals to 100. (Level 2)

Put these Roman Numerals in order with the lowest value first.

1	XXXIII	LX	XXIV	XXXV	II
2	VIII	IX	III	XX	XXII
3	LXXXII	LXXIII	LXXIV	LXX	
4	XXVIII	XXVI	XXXIII	XL	

Mild



(Practice and consolidation)

True or false?

IV = 15

XIX = 21

XII = 12

IV = 4

Write the answers in Roman Numerals and in TU:

- What is XII more than XXII?
- What XX less than L?
- What is XVII more than LX?
- What is twice XXII?

L.O = Read Roman numerals to 100. (Level 4)

Create a new numeral system. You will need to have symbols for the following:

1	
5	
10	
50	
100	
500	

Explain your system to your friends and make sure it stands up to the scrutiny of your friends.

When are you satisfied it works set a few problems for your friends.

Look at the following Roman Numerals:

XXV L I I I X X

Make the largest number you can using as many of these Roman Numerals as you can.

Now make the smallest number you can using at least 5 of the symbols shown.

Spicy

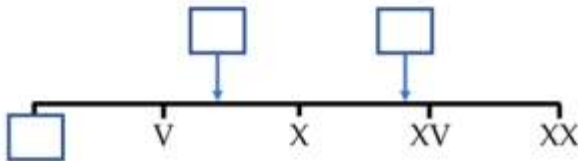


(Greater depth)

L.O = Read Roman numerals to 100. (Level 3)

Estimate

Estimate the value of the missing numbers.
Complete using Roman Numerals.



Rank by difficulty

Write these numbers in Roman Numerals:

44

33

51

Always, sometimes or never?

'In Roman Numerals, bigger numbers have more symbols than smaller numbers.'

Medium

(Mastery)

