Maths Policy
Princefield First School

Policy Information

Date of last review:	May 2026	**Review period:**	Annually
Date ratified by Local Givernors:		**Policy owner:**	Miss C McTegart

Reviews/revisions

Review date	Changes made	By whom
May 2026 May 2027	Policy updated to reflect Power Maths changes.	Miss C McTegart

Princefield First School Maths Policy

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle

a range of practical tasks and real-life problems. It also provides the materials and means for creating new imaginative worlds to explore.

The National Curriculum for Mathematics aims to ensure that all pupils:

- become **fluent** 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

- can **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.

Using the Programmes of Study from the New National Curriculum we aim to develop:

- An enjoyment and curiosity of mathematics and for children to feel confident to become successful;
- Children's abilities to use and apply mathematics to solve problems in both the classroom and in 'real life' contexts;
- A confidence to communicate ideas in written form and orally;
- Independent and collaborative ways of working, encouraging children to share ideas and solve problems together;
- A wide range of mathematical vocabulary to be modelled and used in the classroom environment;
- The children's ability to recall mental facts accurately and quickly and using effective written calculation methods;
- Children's logical thinking, reasoning and ability to problem solve as transferable life skills.

Implementing the maths curriculum

At Princefield First School we use the Pearson White Rose Power Maths scheme which follows the mastery approach to learning and has been recommended by the Department for Education. Power Maths has been designed for UK schools based on research and extensive experience of teaching and learning around the world and here in the UK. It has been designed to support and challenge all pupils and is built on the belief that all children can achieve. Power Maths is structured around a whole class interactive teaching model that focuses on helping all children to build a deep understanding of concepts. The philosophy behind Power Maths is that being successful is not just about rote-learning procedures and methods, but is instead about problem solving, thinking and discussing. Power Maths includes practice questions to help children develop fluent recall and develop their conceptual understanding. For each year group the curriculum strands are broken down into core concepts. These are taught in blocks of lessons giving sufficient time to develop a deep and sustainable understanding of core maths concepts. Each concept is broken down into lessons. Each lesson and concept builds on prior knowledge to help children build a robust and deep understanding of the concept before moving on.

Each lesson is divided up into:

· Flashback 4 (retrieval activity) to support fluency in all key number facts.

· Discover and Share activity where children can share, reason and learn. This is often a real-life example, sometimes a puzzle or a game. These are engaging and fun and designed to get all children thinking. The class shares their ideas and compares different ways to solve the problem, explaining their reasoning with hands-on resources and drawings to make their ideas clear.

· Think together. In this section Power Maths takes the approach "I do, we do, you do", as children apply the knowledge they have just learned in a series of problems that continue to encourage thinking throughout.

· Practice where the skills learnt and used to build fluency and develop deeper understanding of concepts. Challenge questions link to other units encourage children to take their understanding to a greater level of depth.

· Reflect which allows children to review their learning while reasoning.

High quality resources are used in conjunction with Power Maths, such as NRich, NCETM and White Rose, to support, stretch and challenge all children within the classroom. In addition, the school's calculation policy is used to ensure a coherent approach to teaching the operations across our school.

Our curriculum builds on the concrete, pictorial, abstract approach. By using all three, the children can explore and demonstrate their mathematical learning. Together, these elements help to cement knowledge so children truly understand what they have learnt. All children have access to a wide range of concrete Mathematical resources to help them build on their concrete understanding of Mathematical concepts. All children when introduced to a new concept for the first time are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols. Throughout Princefield First School, you will see these three methods being used:

- Concrete – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.
- Pictorial – children then build on this concrete approach by using these pictorial representations, which can then be used to reason and solve problems.
- Abstract – with the foundations firmly laid by using the concrete and pictorial methods the children can move onto an abstract approach using numbers and key concepts with confidence.

Times Tables Rockstars (TTRS)

We are committed to raising the standard of Mathematics across the whole school and develop a rapid recall of times tables facts. We have a whole school subscription to TTRockstars (TTRS) and children from year 2- year 4 have user accounts. Children have a weekly slot in school to focus on improving their recall as well as the opportunity to access the resources at home as well.

Working wall and Resources

Maths working walls are a place to support current learning in maths. The working wall should be purposeful, helpful, relevant and above all useful. In the classrooms there should be, either on display or easily accessible to children, appropriate resources, particularly concrete and pictorial apparatus to support children to grasp concepts. Mathematical vocabulary should be displayed so that children use this in the communication of their understanding. Resources for the delivery of the maths curriculum are mainly stored in the classroom, shared resources for Measures and Geometry are stored in the hall cupboards. The mathematic Co-coordinator should be informed when equipment needs replacing or supplementing. The children are shown how to take care of equipment and resources and progressively encouraged to select materials suitable for the task in which they are engaged.

Calculations Policy

At Princefield First School we have adopted the Power Maths policies for both written and mental calculations. The calculation policy shows the Power Maths progression in calculation (addition, subtraction, multiplication and division) This policy shows how the consistent use of the CPA (concrete, pictorial, abstract) approach across Power Maths helps children develop mastery in both written and mental methods across all the operations in an efficient and reliable way

CURRICULUM OUTLINE FOR EACH KEY STAGE

EYFS

Pupils are encouraged to develop their Problem Solving, Reasoning and Numeracy in a broad range of contexts in which they can explore, learn, enjoy, practise, discuss and extend their skills. Pupils are encouraged to exploit their mathematical potential in both indoor and outdoor enabling environments. They are provided with a wide range of activities that promote regular active participation, exploration of real-life problems, development of imaginative play and early experience of mathematical language. All pupils are supported positively and encouraged to gain confidence and competence in their skills. By the end of the Foundation Stage pupils should be able to count reliably with numbers from 1 to 10, place them in order and say which number is one more or one less than a given number, using quantities and objects, add and subtract two single-digit numbers and count on or back to find the answer. Solve problems, including doubling, halving and sharing. The children should be able to use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. Recognise, create and describe patterns. Explore characteristics of everything objects and shapes and use mathematical language to describe.

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 (e.g. concrete objects).

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.

Lower Key Stage 2 – Years 3-4

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 table and show precision and fluency in their work.

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

Assessment

At Princefield First School we recognise that assessment for learning lies at the heart of promoting learning and raising standards of attainment.

The formative assessment procedures within our school consist of:

- Making ongoing assessments through questioning, discussion and observations
- Fast feedback through verbal feedback in books is in response to the achievement of the learning or to correct any difficulties encountered.
- Use of a teacher's own test or activity designed to check understanding, including Flash Back 4.

The summative assessment procedures consist of:

- A termly teacher assessment –NFER
- Use of SATs and optional SATs papers in Year 2
- White Rose end of unit tests after each unit, linked to the coverage of the unit.

Maths Curriculum Planning

Mathematics is a core subject in the National Curriculum and we use the objectives from this to support planning and to assess children's progress.

Staff use long term planning to ensure coverage of all areas of the National Curriculum and medium term planning to differentiate objectives according to the set which they teach. It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught. The class teacher keeps these individual plans, which they annotate according to the success of the lesson.

Lessons

In lessons, the emphasis is to make teaching interactive and lively, to engage all children encouraging them to talk about mathematics. Lessons involve elements of:

- Instruction – giving information and structuring it well;
- Demonstrating – showing, describing and modelling mathematics using appropriate resources and visual displays;
- Explaining and illustrating – giving accurate and well-paced explanations; Questioning and discussing;
- Consolidating;
- Reflecting and evaluating responses – identifying mistakes and using them as positive teaching points; Summarising – reviewing mathematics that has been taught enabling children to focus on next steps

Enable maths talk daily through:

o open-ended questioning o What do you notice? o What's the same? What's different? o Which is the odd one out? o Is it always true, sometimes true or never true?

o Encourage pupil questioning

Pupils' Records of work

Children are taught a variety of methods for recording their work and are encouraged and helped to use the most appropriate and convenient. Children are encouraged to use mental strategies and their own jottings before resorting to more formal written methods. Children's own jottings & pictorial representations to support their work is encouraged throughout all year groups.

Mathematical Language

The 2014 National Curriculum is explicit in articulating the importance of children using the correct mathematical language as a central part of their learning (*reasoning*). Indeed, in certain year groups, the non-statutory guidance highlights the requirement for children to extend their language around certain concepts. New vocabulary should be introduced in a suitable context (for example, with relevant real objects, apparatus, pictures or diagrams) and explained carefully. High expectations of the mathematical language used are essential, with teachers only accepting what is correct.

Mathematical Language

High expectations of the mathematical language used are essential, with staff only accepting what is correct. Consistency across the school is key:

Correct Terminology	Incorrect Terminology
ones	units
is equal to (is the same as)	equals
zero	oh (the letter o)
exchange exchanging regrouping	stealing borrowing
calculation equation	generic term of 'sum' or 'number sentence'

Cross curricular

Opportunities are used to draw mathematical experiences out of a range of activities in other subjects, such as in PE, Science, STEM and Geography, to enable children to apply and use Mathematics in both real life and academic contexts and make links.

Parental/carer Involvement

We recognise that parental/carer involvement is an important factor in helping children achieve their best and actively encourage parents to become involved with their children's development in Mathematics through: Parents/carers meetings

- Interim reports and end of year report;
- Attending open mornings or drop-in sessions;
- Supporting homework and practice of mental maths targets and multiplication tables; Encouraging the use of TTS Rock Stars for online learning

Inclusion & Equal Opportunities

We aim to provide for all children so that they achieve as highly as they can in Mathematics according to their individual abilities. All children have equal access to the Mathematics curriculum and to suitable learning opportunities regardless of gender, disability, ethnicity or home background. All children regardless of ability have their progress reviewed and ‘additional to’ and ‘different from’ provision is planned accordingly.

Special educational needs & disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's APDR's incorporate suitable objectives from the National Curriculum for Mathematics or development Matters and teachers keep these in mind when planning work. These targets may be worked upon within the lesson as well as on a 1:1 basis outside the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by trained support staff and overseen by the SENCO and/or the class teacher.
Within the daily mathematics lesson teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability.

Equal Opportunities
Positive attitudes towards mathematics are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is a second language, develop an enjoyment and confidence with mathematics. This policy is in line with the school's 'Racial Equality' policy.
The aim is to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons. Lessons involving lots of visual, aural and kinaesthetic elements will benefit all children including those for whom English is an additional language (EAL).
Differentiated questions are used in lessons to help children and planned support from Teaching Assistants and other adults.

Role of the Maths Co-ordinator
The subject leader will be responsible for improving standards of teaching and learning in Mathematics through:

- Regular reviews of pupils' progress
- Provision of Maths including specific interventions and additional support
- The quality of the learning environment for maths
- Taking the lead in policy development
- Auditing and supporting colleagues in their CPD
- Purchasing and organising resources
- Keeping up to date with developments in the assessing, teaching and learning in Maths
- Challenging staff to achieve the best standards possible at all key stages

Miss C McTegart (Maths Co-ordinator) (May 2026)

To be reviewed May 2027 (or as necessary)

Additional Related Polices

Calculation Policy