

Hightown Junior Infant and Nursery School

At Hightown we work together as a school community with pride, respect, rigour and fairness. We celebrate effort, respond enthusiastically to challenges and create positive opportunities that enable everyone to achieve in every way.

Mathematics Policy		
Policy date:	September 2025	
Approved by & date	Full Governing Body	
Link school staff:	Lois Stevenson	
Link governor:	Kay Brennan	
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Hightown JIN School - Mathematics Policy 2025 – 2026

School Vision: At Hightown, we work together as a school community with pride, respect, rigour and fairness. We celebrate effort, respond enthusiastically to challenges and create positive opportunities that enable everyone to achieve in every way.

Rationale:

At Hightown, we aim to inspire **EVERY** child to reach their full potential. Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. **Mathematics is important in everyday life**. It is integral to all aspects of life and with this in mind; we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum for Mathematics (2014) describes in detail what pupils must learn in each year group. We combine this with the DFE's Mathematics guidance: key stages 1 and 2 (Ready to Progress), our Mastering Maths Calculation Policy and the NCETM's spines and prioritisation materials. This ensures progression, continuity of skills and knowledge and high expectations for attainment in mathematics.Early years follow the Statutory Framework for the Early Years Foundation Stage. (2021.)

At Hightown, we use the above-mentioned documents, as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve the end of year expectations and start to master those expectations in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. At Hightown we discuss the success of **EVERY** child. Every child's maths journey is carefully considered in termly pupil progress meetings, to ensure they are on track to achieve the national expectation. Individual pupil context sheets are used, where appropriate, to ensure the best support has been, and is being, identified.

At Hightown, we want every child to be successful, fluent mathematicians, who can freely **'talk maths'** to successfully guide themselves through mathematical procedures such as recalling calculation strategies alongside explaining, reasoning and justifying. Our children need to be fluent in their application of an arithmetic process and be able to relate and apply it to real life situations. Teachers model thinking out loud, sharing the thoughts of an expert to support pupils in their own development of these skills.

Children are encouraged to use a wide range of concrete resources and manipulative's and then visually represent their findings, using a variety of ways, to support their mathematical thinking and processing. We aim to create independent mathematicians who are well equipped to apply their learning to the wider world.

We believe in teaching via a mix of: explicit teaching methods, scaffolding pupils and allowing them to apply strategies and skills in independent situations. We know learning works best when children are active participants.

As a school, we want our children to recall and remember what they have learnt, this directs how we teach. We teach in chunks, regularly recalling and reviewing NC/DFE objectives. Our planning builds upon the children's knowledge. relearning and readdressing concepts. Being encouraged to remember and recall knowledge, supports the long-term memory. Naturally, children forget information, so it is good practice to regularly re teach and build upon mathematical concepts. We have worked alongside Teamwork's TSA, undergoing intensive CPD focusing 'Components of High-Quality Teaching' (EEF the EEF guide to supporting school planning: A tiered approach to

2021- updated December 2020). We have specifically focused in on these 4 key areas - Explicit teaching, Scaffolding, Cognitive and Metacognitive strategies and Flexible Grouping.

Teaching for mastery

Teaching for mastery aims to provide all children with full access to the curriculum enabling them to achieve confidence and competence- 'mastery' in mathematics.
Mastery embeds a deeper understanding of mathematics by utilising a concrete, pictorial and abstract approach so that pupils understand what they are doing rather than just learning to repeat routines without grasping what is happening.

To master something means:

- Deep and sustainable learning is occurring;
- The ability to build on something that has already been sufficiently mastered;
- The ability to reason about a concept and make connections;
- Conceptual and procedural fluency;
- Development of deep mathematical understanding;
- Development of both factual/procedural and conceptual fluency;
- Longer time on key topics, providing time to go deeper and embed learning.

We follow the NCETM's Mastery in Maths approach, with a greater focus on the visual learning process of using: concrete resources, manipulatives and visual learning stimulus's alongside applying maths to a wider range of contexts. Some children do have a bespoke curriculum, staff liaise with SENDCO regarding this.

Mastery involves the development of three forms of knowledge:

Factual – I know that
Procedural – I know how
Conceptual – I know why

All mathematics is abstract and needs to be represented in order to provide access and develop understanding and fluency.

At Hightown, we use a consistent core set of representations: part-part whole grids, five and ten frames, base 10, numicon, double sided counters, bar modelling and arrays to represent our maths. – **see Mastering Maths pack and Bar Modelling Guidance**

Hightown School has a maths non-negotiables list supporting each year group with their use of resources and materials. Every year group uses concrete and pictorial representations to embed their learning.

As a result of their learning in mathematics and problem solving across the curriculum children will:

* Be prepared for applying their skills effectively in everyday life situations, in their future learning and in the work place.
* Have the building blocks in place and to provide a solid foundation to lead onto secondary, further and higher education.

To provide adequate time for developing mathematics, maths is taught discretely, However the application of skills is linked across the curriculum where appropriate. Staff are flexible with their curriculum time knowing they can work to the children's needs. They can block or continue a unit of work if they feel that is most beneficial to the children's learning.

Our Aims

- To foster a positive attitude to mathematics as an interesting and attractive part of the curriculum.
- To develop the ability to think clearly and logically, with confidence, flexibility and independence of thought.
- To develop a deeper understanding of mathematics through a process of enquiry and investigation.
- To develop an understanding of the connectivity of patterns and relationships within mathematics.
- To develop the ability to apply knowledge, skills and ideas in real life contexts outside the classroom, and become aware of the uses of mathematics in the wider world.
- To develop the ability to use mathematics as a means of communicating ideas.
- To develop an ability and inclination to work both alone and cooperatively to solve mathematical problems.
- To develop an appreciation of the creative aspects of mathematics and an awareness of its aesthetic appeal.
- To develop personal qualities such as perseverance, independent thinking, cooperation and self-confidence through a sense of achievement and success

Principles of Teaching and learning

Planning

Planning begins from a thorough understanding of children's needs, gleaned through effective and rigorous assessment and tracking, combined with high expectations and ambition for all children to achieve.
Summative assessment, alongside day to day formative teacher assessment, informs teachers on their next planning steps.

Long-term and Medium-term planning will outline the areas of mathematics that will be taught during the term to ensure coverage of the National Curriculum. Teachers use the adapted NCETM prioritisation medium term planning format and the DFE's Mathematics guidance: Key Stages 1 and 2 -Non-statutory guidance for the national curriculum in England, to support our progression and teaching sequences. All content taught, is marked off the NC overview for that class.

Number, fractions and calculations have a priority over other mathematical areas of geometry, position and direction, statistics and measurement.

Within short term planning, clear Learning Intentions and Success Criteria's for each learning objective taught should be created – demonstrating the progression needed to reach and exceed the objective.

Where children are working significantly above or below the objective the majority of the class need to work towards, and where extending this by expanding the success criteria seems inappropriate, objectives from higher or lower age-groups will need to be planned and taught.

Planning, where possible, should involve real life contexts for maths, where children are problem solving with a purpose in mind. - setting up shops, solving class or school-based problems, designing chicken runs, redesigning the playground etc.

Whole class investigations are planned from NRICH, I see reasoning, Rising Stars or Head Start schemes. These allow children to practice different elements of problem solving, including: finding all possibilities, logic problems, finding rules and describing patterns, diagram/visual problems and exploring different aspects of number.

Class teachers should regularly plan for creative opportunities for children to apply their maths skills outside of the classroom. These opportunities need to be caught via photographs or videos and shared in class scrapbooks/class assemblies.
At Hightown teachers plan and deliver a responsive curriculum, linking maths to the real world and current issues that are arising.

Resources

The school uses the NCETM progression materials, the DFE maths guidance materials as well as the Abacus scheme of work, as its backbone to maths delivery and planning.

Other resources and schemes are used to supplement this: Rising Star resources, Head start resources, I see reasoning and I see problem solving materials.

School uses Numicon, part-part whole grids, tens frames, bar modelling, counting sticks, number lines, number rods, base 10 equipment as well as a wide range of subject specific equipment. Every class has equipment on hand, as well as on display, for children to use alongside their visual representations.

Teaching

Children need to become competent 'counters' so that their fluency with the number system provides a foundation for mathematical understanding. Counting forwards and backwards in many different sized steps as well as from different starting and ending points is essential.

Maths learning builds from a **concrete** understanding of concepts where children are manipulating objects. When children are able to see concepts this way, they then need to understand the same concepts represented **pictorially.** Children are then ready for **abstract** representation before being able to apply their knowledge to different situations.

Children are encouraged at all times to communicate their understanding of maths so that it clarifies their thoughts. **Talk Maths** is encouraged throughout school; this allows children to explain what the process/ strategy they are using.

Though the nature of lessons will be very different depending on the needs of the class, children should be: active; practising skills they haven't yet fully achieved, learning something new OR learning to apply their knowledge to different contexts. They should be: 'doing' very quickly;

working at a good pace and being productive; sharing their thoughts and methods and being successful.

When teaching problem solving skills across the curriculum, time (and sometimes whole lessons) should be given to each aspect of problem-solving ensuring children get thorough practice at: 'preparing for problem solving', 'thinking through problems to establish what they know and don't know so far'; actually 'doing the problem solving' effectively AND 'communicating the answer effectively'. They should evaluate the process too. Over time children will improve at each aspect.

Arithmetic

Rising star and/or CGP/ Head start arithmetic tests, occur weekly and are used to diagnostically assess pupil and cohort areas of strength and areas to further develop.
Results are put on to spreadsheets so trends and patterns can be identified. These are addressed with pupils and the class, as well as used to support future planning.

Times tables/ KIRF

Children's mental recall is of great importance, with number bonds, times tables facts, square numbers, decimal number bonds, divisions, prime numbers and various strategies for calculation taught and practised at school with support sought from parents through homework activities.
Every class from Y1 to Y6 have half termly KIRF- **Key Instant Recall Facts**. These are handed out half termly and are used in class as well as encouraged to be used at home.

School uses **Times table rock stars age appropriately,** from Y2 to Y6. Every child has their own log on details and they are encouraged to access the site and to engage with it at home. This is backed up by regular sessions in school. Knowing times tables is a government expectation by the end of Y4. The DFE have issued a statutory multiplication checker test, for schools to test all children in Y4 on their times table recall.

Progression towards efficient written multiplication calculations should be developed and applied consistently in each year-group. **The school Mastering Mathematics Policy should be followed.**

Assessing

Assessment for learning should occur throughout the entire maths lesson, enabling teachers/teaching assistants to adapt their teaching/input to meet the children's needs. This feedback should be incisive and regular. Work is placed under the visualiser in class to allow immediate feedback and discussion.

Pupil's work should be marked in line with the Marking Policy and should model how corrections should be made, giving children a chance to learn from their misconceptions or incorrect methods. Children self-mark in green and peer mark in purple.
Future lesson design should depend on class success evaluated through marking and observations made during the lesson.

The National Curriculum has been transferred on to an overview for each year group, which is found in the front of each child's book from Y1 to Y6. These sheets are annotated and updated regularly with content pertinent to that individual.

This allows teachers to assess children's progress in mathematics, gathering evidence over the course of the year. Teachers use this information to inform planning for groups and individual pupils.
3 X a year pupils from Y1 to Y6 will be assessed using the N T S Assessments- in line with LAMAT.

Monitoring:

Monitoring of children's progress begins with pupil progress meetings but continues with the phase leader and subject leader evaluating further evidence to ensure children are making progress. This monitoring happens through time spent in classes absorbing maths lessons with the children, examination of work in books, pupil interviews, analysis of assessment results and the assessments used.
Following monitoring activities, feedback is given to staff about how they can strengthen their practice and CPD (professional development) opportunities built in where it would be deemed valuable.

Teacher meetings with TA's are planned for and occur weekly during assembly time.
We identify from tracking any gender issues that exist and plan initiatives that would address these as part of teacher pupil progress meetings where children's performance is evaluated on an individual basis with class teachers, phase leaders and the HT.
We also examine the progress of ability groups and those with English as an Additional Language, those entitled to the Pupil Premium and those with an Additional Need. Where data indicates a whole school issue, it will form part of the School development Plan.

Display and Resources
* In classrooms there should be, either on display or easily accessible to children, level appropriate resources, particularly concrete and pictorial apparatus to support children to grasp concepts.
* KIRFS.

EYFS

In the Early Years Foundation Stage, Mathematics is guided by the requirements and recommendations set out in the Statutory framework for the early year's foundation stage, setting the standards for learning, development and care for children from birth to five. This document is effective from September 2021.

This document states - Mathematics
Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make

mistakes.

All children are given ample opportunity to develop their understanding of Mathematics. We aim to do this through varied activities that allow them to use, enjoy, explore, practice and talk confidently about Mathematics. Child initiated learning opportunities are cross-curricular and children experience a wide range of open-ended problems and resources, both indoors and out. In reception, all children access a daily math's input session.

By the end of the EYFS children should:

ELG: Number
Children at the expected level of development will:
- Have a deep understanding of number to 10, including the composition of each number; 14
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts

ELG: Numerical Patterns
Children at the expected level of development will:
- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Other documents to be read in conjunction with the Maths Policy:
Mastery in Maths calculation policy
National Curriculum 2014
Teaching and Learning Policy
Marking Policy
SEN Policy and Single Equality Scheme
KIRFS
Times Table Rock Star - TTRS information
NTS Assessments

September 2025 to review September 2026