

 Clover Hill Primary School Maths policy



**Clover Hill Maths Ethos**

We have a whole school consistent approach to maths. Our teaching is based on the National Curriculum with White Rose Maths used as a main resource. Our teaching based on a mastery approach with daily recapping and revisiting previously taught content.

**Intent**

At Clover Hill Primary School, we view mathematics as 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 and a sense of enjoyment and curiosity about the subject.

Our intent is to provide children with a mathematics curriculum that will allow them to become confident individuals through developing their mathematical skills to their full potential. We also aim to present maths as a challenging, exciting, creative and relevant subject in order to promote a positive and confident attitude.

In line with the National Curriculum (2014), our overall intent focuses on all pupils being able to:

* use and understand a wide range of appropriate mathematical language to discuss, explain and justify their mathematical thinking and reasoning.
* explore and deepen their mathematical understanding through a C-P-A approach, allowing exploration, acquisition of fluency skills and application of skills to a range of problems and lines of enquiry.
* become fluent in the fundamentals of mathematics, including through varied and frequent practice Recap & Revisit with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
* move fluently between different representations of mathematical ideas.
* reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
* 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.
* make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
* apply mathematical knowledge across the curriculum in science and other subjects relating mathematical knowledge and skills to real life situations.
* access challenges of rich and sophisticated problems when they grasp fluency concepts rapidly rather than progressing to new content.
* consolidate learning and concepts through repetition and intervention to acquire sound foundations for fluency of mathematics.



**Implementation**

At Clover Hill Primary School, we are committed to providing a motivating, challenging and comprehensive maths curriculum that is accessible to all and links the use of mathematics across a range of subjects, adding meaning to the learning of maths. Our whole school approach to the teaching and learning of maths involves the following;

* Our maths planning is based on the National Curriculum and supported by White Rose Maths (WRM) materials. This ensures a progressive and thorough curriculum in every year group. Teachers know which objectives must be taught and assessed in each year group and can follow progressive small steps to ensure pupils have a comprehensive understanding of maths. In Reception, they follow their own curriculum which is supported by BBC’s Number Blocks and resources created by NCETM.
* WRM promotes kinesthetic learning to ensure children acquire fluency of skills by introducing concepts in a practical/concrete way to progress to pictorial then abstract (C-P-A).



* Teachers deliver one curriculum for all, providing opportunities to stay together and to work through new content as a whole group (mastery approach). Teachers teach the whole class, allow pupils time to practise and bring the class back together to move on. Differentiated learning is provided through a selection of tasks to consolidate fluency. Children use this knowledge and their skills to solve problems. Teachers should use their professional judgement to determine the activities, timing and organisation in each lesson in order to suit the teaching objectives and ensure children understand each small step.
* For pupils who may struggle or possibly ‘fall behind’ with parts of the curriculum, in class support is provided on a daily basis. Additionally, intervention and consolidation is provided to ensure they are ready for the next lesson. For SEND pupils (extreme) an individualised may be more appropriate.
* Throughout KS1 and KS2, pupils have daily maths lessons. In Early Years, pupils are involved in a daily whole class maths session and are encouraged to explore, develop and apply new concepts by accessing resources in the indoor and outdoor environment.
* The teaching of mathematics at Clover Hill Primary School promotes the use of mathematical vocabulary through encouraging children to explain their thinking, strategies and mistakes during lessons to embed understanding . The national curriculum for mathematics reflects the importance of spoken language in pupils’ development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. Children need to learn to explain their thinking clearly and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.
* During lessons, we encourage children to self-mark. After activities, the whole class discuss answers, strategies and mistakes. This provides children with immediate feedback and time to reflect on their learning. Mistakes are discussed and correction time given as part of a lesson. We see assessment as an integral part of the teaching process and strive to make our assessment purposeful, allowing us to match the correct level of work to the needs of the pupils, thus benefiting the pupils and ensuring confidence and progress.

## Impact

Our successful approach to the teaching and learning of maths, results in a fun and engaging curriculum that embeds understanding and knowledge through hands on, practical activities. Introductions to concepts using concrete materials and practical activities supports learning. Our policy of self-marking within lessons supports children in recognising their strengths and areas for development. Children are encouraged to share their misconceptions and misunderstandings and become adept in using appropriate vocabulary in doing so. The inclusion of open dialogue to discuss and explain mathematical thinking also strengthens the use and understanding of mathematical language along with ensuring children can explain, justify and evidence their work. Connecting maths across the curriculum highlights how maths relates to life.

**Teaching and Learning**

# *See Early Years Mathematics Policy and Maths Curriculum Map*

# Organisation, Planning and Resources.

* Each class has a maths station of manipulatives for day-to-day maths lessons. The Reception classroom has a wide range of mathematical equipment for children to explore and use in their learning and play (both indoors and outdoors).
* Each classroom has a maths ‘working wall’ showing examples of the topic currently being covered and a permanent display of mathematical symbols, numbers, times tables and vocabulary appropriate to the age range.
* Additional resources are available in school to support children’s learning further, e.g specific teaching programmes, (Plus 1, Power of 2, Depth Learning Times Table Intervention)
* Online programmes (TTRS, Doodle Maths, Espresso, Education City, Purple Mash) are used to enhance learning and provide motivational tasks and homework activities.



# Assessment

Children’s progress against each maths unit are assessed individually using Gateshead GMAPs.

Each term, children in Years 1-6 complete Puma Maths assessments. This assesses long-term progress and enables teachers to assess the children against age related expectations. These termly assessments are analysed and we can assess whether children are working at, above or below age related expectations. This information is discussed with the headteacher and information is given to the Maths lead. Approriate individual / group interventions are identified as are whole class needs.

In Early Years, pupils are assessed against the the Early Learning Goals and are awarded levels of Emerging or Expected matched to their achievement of the assessed statements.



# Performance Indicators

Performance Indicators, which are the criteria for success of the school’s mathematics policy at Clover Hill Primary School, are:

* Early Years Foundation Profile (Statutory Assessment)
* KS1 results (Statutory Assessment)
* KS2 results (Statutory Assessment)
* Puma data analysis (using end of term assessments)
* GMAPs & PAT trackers from Education Gateshead

# Equal opportunities.

All children have equal access to the curriculum regardless of race, social circumstance or gender. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

Teachers ensure that VAK (Visual, Auditory and Kinesthetic) learning styles are acknowledged and opportunities for all learners to use their preferred style are provided. TA support is given to groups of identified children both in and out of class. Learning Support Plans are used to address specific areas of weakness and achievable targets are set in order to help the child make progress.

We are committed to giving all our children every opportunity to achieve the highest of standards. We do this by taking account of pupils’ varied life experiences and needs. We offer a broad and balanced curriculum and have high expectations for all children. The Inclusion Policy helps to ensure that this school promotes the individuality of all of our children, irrespective of ethnicity, attainment, age, disability, gender or background.

Our school aims to be an inclusive school. We actively seek to remove the barriers to learning and participation that can hinder or exclude pupils. We make this a reality through the attention we pay to the different individual and groups of children within our school to ensure minimal risk of underachievement.

# Role of Subject Leader

The Mathematics Subject Leaders monitor standards of planning and teaching and carry out scrutinies of children’s work, teachers’ planning and interviews with teachers. Support is given, if necessary, to ensure all staff are adhering to the agreed policy and planning format. Findings from monitoring are discussed with the Senior Leadership Team and shared with teaching staff as appropriate.

 **Parental Involvement**

At Clover Hill Primary School we encourage parents to be involved by:

* Having an open door policy where parents can discuss their child with the class teacher as needs arise.
* Inviting them to parents’ evening each term to discuss the progress of their child.
* Providing weekly homework to consolidate classroom learning to inform parents of their children’s learning.

# The Governing Body

A governor responsible for mathematics is identified from the governing body. The subject leaders and the nominated governor meet annually for a monitoring meeting.



**Policy Review**

This policy will be reviewed annually.

Written June 2022 by Andrea Scrafton and Faye Robson (Maths leads)

To be reviewed June 2023