

Mathematics Policy

MATHEMATICS POLICY

It is intended that this document will provide information and guidelines for a uniform, crosspathway approach to teaching mathematics across the whole curriculum and our five pathways: EYFS, Engage, Explore, Enquire and Sixth Form.

Intent

Mathematics at Meadowfield is much more than just knowing about numbers and number operations. It requires practical and conceptual understanding and encourages the inclination to problem solve. Mathematics develops and enhances an analytical approach in dealing with elements in the real world, such as measurement and the use of statistics.

Our intention is to support all in increasing every pupil's access to outstanding teaching, leading to exciting and successful learning, through the following:

- To establish an entitlement for all pupils.
- To provide a clear and agreed framework for the teaching of mathematics in our school that builds on pupils' prior learning.
- To promote continuity and coherence across the school.
- To prepare pupils with functional mathematical skills necessary for increased independence post-education and prepare them for adulthood.
- To secure high standards in mathematics across the school.
- To ensure that pupils and students receive positive messages about mathematics when used across the curriculum.
- To provide a framework to enable teachers to meet their statutory obligations within existing Special Educational Needs and Disability Code of Practice, dated June 2014.
- To provide a consistent approach throughout the school to mathematics, setting out the school's agreed approach to the teaching of numeracy skills. This is by teaching mathematics by moving through a concrete-pictorial-abstract approach, alongside teaching for mastery where pupils consistently build on previous knowledge to foster a deep, long term, secure and adaptable understanding of mathematics, enabling them to develop reasoning skills and access higher level material.
- To foster effective learning by advocating appropriate ways of organising mathematics experiences in the classroom whilst promoting agreed methodology, vocabulary and notation.
- To provide procedures for planning and record keeping ensuring continuity and progression throughout the school, providing a basis against which progress can be judged.
- To meet current National Curriculum requirements, anticipate future requirements and fulfil current OFSTED requirement for such a policy.
- To assist the transfer of pupil's knowledge, skills and understanding between subjects, encouraging areas for collaboration between subjects and processes for facilitating such collaboration.

• To ensure mathematics is supported through cross-curricular links including Reading, Writing, Spoken Language Scientific Enquiry, PSHE and Creative Arts.

Statutory Requirements / Guidance

EYFS

The 2020 Early Years Guidance aims to ensure that children in the Early Years:

- Develop a strong understanding of number as the foundation for future mathematical understanding
- Experience rich opportunities to develop spatial reasoning skills across all areas of mathematics, including shape, space and measures
- Develop positive attitudes and interests in mathematics, can look for patterns and relationships, spot connections and explore freely

National Curriculum

The Mathematics Programmes of Study from the National Curriculum (September 2014) aims to ensure that pupils:

- **become fluent** in the fundamentals of mathematics so that pupils develop conceptual understanding and an ability to recall and apply knowledge
- **reason mathematically** making relationships and generalisations to develop an argument using mathematical vocabulary
- **solve problems** to a variety of routine and non-routine problems including the breaking down of problems into smaller manageable steps

The 2014 National Curriculum embodies rigour and high standards and creates coherence in what is taught in schools, ensuring that all children are taught the essential knowledge in the key subject disciplines.

6th Form

Within Meadowfield Sixth Form, pupils access a bespoke curriculum relating to the four Preparing for Adulthood outcomes: Employment, Good Health, Independent Lives and Friends, Relationships and Community Inclusion. Core subjects are taught discreetly alongside ASDAN accredited programmes appropriate to the pathway of the student. Mathematics within this curriculum is personalised, meaningful and appropriate for all students and is delivered to be applied in a functional way.

Beyond these core curriculums, teachers have greater freedom to use their professionalism and expertise to help all children realise their potential.

Pupils at Meadowfield School:

- have a right to be set appropriate, individualised learning challenges
- have a right to be taught well and be given the opportunity to learn in ways that maximise their chances of success
- have a right to have to have adults working with them to tackle the specific barriers they face

• will develop a positive attitude to mathematics as an interesting and attractive subject in which they will gain some success and pleasure

Implementation

The National Curriculum for 2014 provides a template for the teaching of mathematics – Programmes of Study – to which we are obliged to adhere to in some measure.

Our Mathematics Curriculum Lead has also developed our new Long Term Planning documents that enables sequential, purposeful and building of skills from EYFS, right through to 6th Form.

In this way, we may cater to the needs of all pupils working within the broad spectrum of our pathways; EYFS, Engage, Explore, Enquire and 6th Form.

As a school, we support and implement all learning styles, including Kinaesthetic, Auditory and Visual, and this is embedded throughout the teaching of mathematics. We aim to ensure that all pupils have the opportunity to develop a love for mathematics, to break down perceived barriers to the subject and find that mathematics is FUN. When taught using these styles as a foundation, all pupils can be drawn into this fun world of mathematical magic.

Targeted interventions are implemented to support pupils that require more focused and intense learning and teachers can work together with the mathematics lead for support if interventions are required.

Engage Pathway

Engage classes follow the IMPACTS Curriculum and it offers a therapeutic and multisensory approach to learning with Wellbeing and Engagement central to learning. The Curriculum is designed to meet the individual needs of our pupils. Each pupil has their own set of learning targets with each class following a topic-based approach which is age appropriate for the class group. This ensures that there are many opportunities for group work creating a cohesive class unit working on common activity while each pupil is working towards their own individualised targets.

EYFS Pathway

Within the Early Years department, pupils follow the Early Years Foundation Stage Development Matters framework and experience mathematics as one of the seven areas of learning. As part of their provision, pupils have access to planned, free flow activities in order to gain independence alongside the development of mathematical understanding. Mathematical knowledge is also developed through specific and targeted teacher directed learning. Mathematical understanding within our EYFS can be found in the teaching of all the EYFS areas and can be accessed through stories, songs, games, sorting, matching, filling, emptying etc. Outdoor Learning is fundamental to the learning in Early Years and staff provide engaging opportunities to explore mathematical concepts in the collaborative EYFS outdoor areas and the wider school grounds. Pupils are assessed through the EYFS Framework Statements, EHCP targets and Early Learning Goals. The mathematical skills and understanding learnt in the EYFS are the foundation for future learning and feed into our mathematics curriculum for Key Stage One and Key Stage Two.

Explore Pathway

Explore combines the content of the National Curriculum whilst embedding an Early Years ethos and approach to the teaching and learning of mathematics. Within mathematics, we keep our learning practical, applicable and relatable to pupils and their lives. Pupils develop mathematical skills in KS1 that deepen the knowledge obtained in Early Years and begin to master aspects of the National Curriculum. As pupils develop their conceptual understanding and mastery of mathematics, alongside developing more formal behaviours for learning, pupils can move from Explore to Enquire in KS2. Pupils that remain in Explore further develop their understanding of mathematical concepts in practical and applicable settings, developing skills to support their independence and readying them for adulthood. Pupils in KS4, are able to access WJEC Accreditation.

Enquire Pathway

Our Enquire curriculum has been designed to meet the needs of our students who have already have well-developed behaviours for learning and are able to access greater levels of academic challenge in mathematics. With a strong focus on developing key skills for adulthood, our programme of learning follows a curriculum where everything is made relevant and meaningful to the young people and their futures. Pupils that are KS4, are able to work towards WJEC Accreditation. Opportunities to extend these qualifications to GCSE are available should pupils successfully complete all three Entry Levels.

Sixth Form

Within the Sixth Form, functional mathematics is taught through discreet lessons, and is developed and embedded through application within students' other learning experiences. Mathematics is learned and applied in a functional way through accreditation in maths-focused ASDAN programme modules; engaging in Preparing for Adulthood topics; and through activities designed to develop independence and life skills. Understanding and application of mathematics skills is planned across the curriculum to meet the different learning needs and abilities of our students. For example, students may learn about using timetables when they plan a journey, or plan and cost a shopping list; through cooking activities; art and creative activities and everyday life skills.

<u>Coverage</u>

Here at Meadowfield we ensure the statutory requirements from the EYFS and National Curriculum for Key Stages 1-4 are embedded within teaching and delivered in an accessible, widely differentiated way to all pupils to ensure teaching is vast in variety and adheres to government guidance.

Coverage within the mathematics curriculum is broken down into the following topic areas:

| 1. Number | 2. Measurement | 3. Geometry |
|---------------|----------------|-------------------------|
| 4. Statistics | 5. Algebra | 6. Ratio and Proportion |

These topic areas are broken down in to smaller strands, each with stepping stone statements that allow teachers to tailor learning to suit the pupils and enable them to meet the larger objective. Pupils in Sixth Form continue their mathematical development via Functional Skills accreditation. Functional Skills enable older learners to deepen their understanding and positive attitude to mathematics through practical application and gaining confidence and fluency through the following areas of mathematics: number and the number system; common measures, shape and space; and information and data, which will support them in their adult lives.

The Role of ICT in this curriculum area

The effective implementation of ICT will enhance the teaching and learning of mathematics when used appropriately. When planning its use, we consider the following points:

- ICT should enhance good mathematics teaching. It should be used in lessons only if it supports good practice in teaching mathematics;
- Any decision about using ICT in a particular lesson or sequence of lessons must be directly linked to the teaching and learning objectives for those lessons;

- ICT should be used if the teacher and/or the children can achieve something more effectively with it than without it;
- It is understood that ICT particularly the use of laptops or iPads will augment learning for pupils for whom difficulties with social communication may make interface with others problematic;
- The school has a policy on responsible and safe use of ICT by which all staff and pupils must abide.
- Use of calculators:
 - Use of calculators allows freedom from repetitive difficult calculations. Pupils should have open access to calculators (preferably their own) but be encouraged to use them sensibly i.e. not for working out simple calculations.
 - It is good practice to estimate answers before using a calculator.
 - Sensible rounding is expected and is a key mathematical skill.
 - Pupils should be encouraged to set down method working, whether using a calculator or not. Answers alone are sometimes not acceptable.

Home / school links

The school's relationship with parents and carers is pivotal in supporting their children's mathematics skills. We involve the parents in their children's learning through:

- Providing parental consultation evenings which give parents and carers verbal and written information on their child's progress and targets as well as a forum for wider discussion.
- Providing termly newsletters informing the parents on areas of the curriculum being covered.
- Providing an end of year report which outlines progress and attainment.
- Providing Home Learning documents each term, via the school website, with activities that can be done at home to support in class teaching.
- Sending home mathematics games or homework when appropriate.
- Providing links to relevant mathematics websites through our school website.
- Providing learning activities via online opportunities such as; 123 Maths and Education City.
- Scheduling visits to class and pupil showcases for parents and carers to attend that allow them to immerse themselves into their child's classroom and learning environment.

Impact

Mathematics is assessed through formative and summative assessment. Short term planning provides targeted success criteria, tailored to each pupil, which are assessed against and pupil's achievements are uploaded on Evidence for Leaning. Pupils also complete accreditation in Key Stages 4 and 5 to ensure they receive formal recognition for their achievements.

Through their mathematics education, pupils leave Meadowfield with fundamental mathematical understanding, enhanced reasoning skills, increased confidence and positivity in the subject alongside fluency, persistence and logical thinking skills. As a result, pupils enter adulthood able

to apply a range of mathematical tools and approaches to enrich their independence, both at home and in the local community.

Through gaining accreditation for their efforts, pupils are provided with a foundation for progression into further supported learning or employment opportunities.

| School Policy Approved by Leadership | | |
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| Policy Adopted | Date: March 2024 | |
| Policy Approved | Date: 14 March 2024 | |
| Next Review | Date: Academic year 2024/25 | |