

## MATHEMATICS POLICY

### **Purpose**

The purpose of this policy is to set out how Maths is taught at Montem Academy, and to ensuring that all staff are able to implement the teaching of maths to a high standard in order for all pupils to achieve to the best of their abilities.

Our objectives are:

- To provide children with consistently good and outstanding teaching;
- To enable children of all abilities to achieve well and make good progress.
- To help children to enjoy and understand maths, using and applying maths to a wide range of interesting, stimulating and challenging problems.
- To develop confidence and competence with numbers and the number system.
- To help children understand the importance of mathematics in everyday life.

### **Context**

Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It is a core subject with a range of cross-curricular links but most often, is best taught discretely, using opportunities from other subjects to rehearse skills in a context.

Numeracy involves developing confidence and competence in number work, measurement, geometry and statistics, ratio/proportion, algebra along with the using and applying of these skills.

We aim to support children by equipping them with a range of computational skills and the ability to solve problems in a variety of contexts using the Age and Stage Bands for Early Year's Outcomes for Mathematics in Foundation Stage, and the Mathematics Programmes of Study to guide planning, teaching and assessment in Key Stages 1 and 2.

### **Pupil Achievement**

It is our aim to ensure that all pupils achieve well in maths and make good progress within their Bands. Achievement is defined as what level the children achieve at the end of each Band, whilst progress is defined as how far they've come from their starting point. Our target is for at least 85% of all pupils to reach age related expectations in each and every year group.

We recognise that children come to maths with different starting points, different strengths and different attitudes. However, it is important that all children are helped to make good progress. It is therefore the children's maths teacher and the subject leader's role to identify challenging targets for children, enabling them to progress and achieve well throughout their time here. Children who are below age related expectations will be identified and provided with extra support in order to achieve well. This extra support may be targeted group work in lessons delivered by a teacher or a teaching assistant. It may be that children are taken in small groups out of class with children of similar abilities, to give them targeted support. This support also applies to children who are above where they would be expected to be. These children will be identified and provided with more challenging content in lessons, along with the opportunity to attend additional sessions run by a maths tutor from Herschel Grammar.

Age related targets in maths are consistent throughout the school. Targets sheets that show children what they need to achieve in order to progress to the next stage in their learning are found in the front of books, and are amended on a 3-weekly basis.

### **Special Educational Needs**

All children will have their specific needs met through differentiated work in conjunction with their targets. TA support time is planned for and provided in relation to the identified needs for individuals and groups.

### **National Curriculum**

The Early Years Foundation Stage Curriculum feeds into the new National Curriculum and the revised Primary Framework for mathematics. It is good practice to make use of cross curricular links to enable children to use their learning in a real life context. Therefore pupils should be given plenty of opportunities within sessions to use and apply the mathematical skills and concepts they have learned.

The school's calculation policy has been created to provide continuity throughout the school with all four operations, which in turn will facilitate measured progress for the children at Montem.

### **Staffing**

All of our children receive focused mathematics teaching and are always taught by a qualified teacher within the classroom setting.

The teachers and children may be supported by a teaching assistant (TA) within the class during the maths lesson or at other times in the day through interventions. However, the level of TA support is determined by the needs of the children.

Should a teacher not teach a maths lesson (perhaps due to management time or professional development opportunities), the class teacher remains responsible for the effective delivery of the learning outcomes and must ensure sufficient time for the person covering to become familiar with the planning and expectations for the lesson.

Children not in line to achieve the required progress from Key Stage 1 to 2 are prioritised for additional intervention as are those who are working below the level of expectation for their age. Class teachers are responsible for the content of these sessions although they may be delivered by a different teacher or HLTA.

## **Implementation**

We carry out curriculum planning in mathematics in three phases (long-term, medium-term and short-term). Our mathematics curriculum is delivered using the new Early Years Learning goals and the new Mathematics Programmes of Study as a tool to ensure appropriate pace, progression and coverage of the subject. This coverage is reviewed continually by class teachers and planning is adjusted accordingly to ensure appropriate coverage of all mathematical strands.

Differentiation and challenge is driven by our 'Bronze, Silver and Gold' approach, which allows the children to assess their own learning and steadily progress through the programme of study. Once they understand a mathematical concept, they are then required to solve problems and carry out investigations to do with that area - all the time deepening their conceptual understanding while also becoming more sophisticated in their Mathematical approach.

## **Resources**

All classes have access to the appropriate resources for their varying topics of learning in Maths. When additional resources are required, further items are ordered through the Maths subject leader.

## **ICT**

Information and Communication Technology can enhance the teaching of mathematics significantly. It has ways of impacting on learning that are not possible with conventional methods. Teachers can use software to present information visually, dynamically and interactively, so that children understand concepts more quickly.

A range of software and hardware (Tablets with numerous apps, laptops and desktops) is available to support work across the school.

## Assessment, Targets and Recording

Frequent and effective assessment is fundamental to raising standards and enabling children to reach their full potential. Assessment in mathematics takes place daily, using a range of Assessment for Learning (AfL) strategies as well as marking and feedback of work (Tickled Pink and Green for Growth) and verbal discussions with children, which often take place during interventions in the Maths lesson. This information informs subsequent planning and next steps in teaching and learning. It also informs the children as to what they need to do in order to progress to the next level.

Teachers are now using new assessment grids, along with 'End of Unit' assessments and 'Optional Tests' which are in line with the new Maths curriculum. This detailed assessment is completed on a half termly basis, in conjunction with their new medium term planning which is also in line with the new mathematics programmes of study.

By tracking this continually, all teachers have a clear idea of how well their pupils are achieving and where development or challenge is required. This tracking also includes half termly tracking of standards for each child.

This data is used by the Maths Subject Leader and Head Teacher to review progress towards end of year targets, which in turn informs Pupil Progress Meetings (PPM) on a termly basis. The outcomes of the regular assessments are recorded and combined with the teacher assessment.

Assessments specific to year groups:

Year	Formal Assessment
Foundation Stage	Attainment on entry Early Learning goals Age and stage bands for Early Years Outcomes
Year 1	Detailed teacher assessment Termly Unit tests Half Yearly Assessments Optional tests
Year 2	Detailed teacher assessment Termly Unit tests Half Yearly Assessments  Optional tests KS1 NCTs followed by detailed teacher assessment
Years 3, 4 and 5	Detailed teacher assessment Termly Unit tests Half Yearly Assessments Optional tests

Year 6	Detailed teacher assessment Termly Unit tests Optional tests Mock SATs KS2 NCTs
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### **Monitoring and Evaluation**

The quality of teaching and learning is monitored as part of the appraisal process through lesson observations and monitoring progress and attainment towards end of year targets. In addition, continuity and progression across the school is monitored by the maths subject leader as is the implementation and impact of various strategies and resources. Actions identified in the Maths Action Plan, intended to raise standards, are also monitored for implementation and, when appropriate, impact.

### **Leadership and Management**

The subject leader's role is to empower colleagues to teach maths to a high standard in the following ways:

- By keeping up to date on current issues; disseminating relevant information and providing training for staff members (either directly or through other professionals)
- Leading by example / modelling lessons or styles of teaching
- Having a knowledge of the quality of mathematics provision across the school through learning walks and observations.
- Identifying and acting on development needs of staff members.
- Monitoring expectations, provision and attainment across the school and providing feedback to develop practice further in order to raise standards.
- To review and maintain the maths action plan and ensure that the targets and expectations are reached.
- Providing necessary equipment and maintaining it to a high standard.

### **Partnerships with parents**

Workshops are organised and run for parents with a view to sharing new initiatives and strategies that their children may be using in school. Parents are also invited in to school on a termly basis in order to discuss their child's progress and attainment.

Reviewed: September 2016