



## The Elms Primary School

### Maths Policy

#### Intent

Mathematics is important in everyday life and, with this in mind, the purpose of mathematics at The Elms is to develop an ability to solve problems, to reason, to think logically and to work systematically and accurately. We believe that all pupils can succeed in maths and we purposefully create and encourage confident mathematicians. We engage, challenge and inspire pupils in mathematics and build upon children's existing knowledge and understanding. We develop their resilience to enable all children to reason and problem solve with increasing confidence.

All children are challenged and encouraged to excel in maths, to speak positively about the subject and to be fluent with the fundamentals of mathematics. We do understand that there will be pupils who need more support to access the curriculum and to succeed, and we endeavour to help them through strategies such as pre- and post-teaching sessions, additional adult support and intervention programmes.

New mathematical concepts are introduced using the "Concrete, Pictorial and Abstract" approach, enabling all children to experience hands-on learning when discovering new mathematical topics and allows them to have clear models and images to aid their understanding. Arithmetic and basic maths skills are practised daily to ensure key mathematical concepts are embedded and children can recall this information to see the links between topics in maths.

#### Implementation

At The Elms, we follow the National Curriculum, and use the White Rose Schemes of Work as a guide to support teachers with their planning and assessment. The Calculation Policy is used within school to ensure a consistent approach to teaching the four operations. Mathematics is taught daily.

Using a "Quality First" teaching approach, all teachers:

- Know where their children are, through the use of concise formative and summative assessment, prior learning, maths talk and questioning
- Understand where their children need to be, through a secure understanding of year group expectations and/or pre key stage expectations
- Know how they are going to get them there, holding high expectations, and through the use of a range of strategies to promote independence and mastery
- Effectively deploy additional adults, specifically during input, activities, and catch-up sessions
- Plan for progression during, and between, lessons.

Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics. Pupils are taught through whole-class teaching, where the focus is on all pupils working together on the same lesson content at the same time. The "learning journey" looks at recapping what the children know, then building on that knowledge to deepen and strengthen what they are learning. Daily maths lessons including counting and mental maths activities to ensure daily practice, fluency, reasoning and problem solving.

All children are challenged in maths lessons and differentiation is achieved by emphasising deep knowledge and/or through individual support and intervention. Children who have shown their understanding at a deep level within the unit will have opportunities to apply these skills in greater depth activities. This will be challenging and will ensure children are using more than just one skill to answer mathematical questions. Children with additional needs are included in whole class lessons and teachers provide scaffolding, relevant support and practical resources as necessary. For those children who are working outside of the year group curriculum, individual learning activities are provided to ensure their progress, and given additional small group sessions. If a pupil fails to grasp a concept or procedure, this is identified within the lesson, and timely intervention ensures the pupil is best placed to move forward.

Children are taught through clear modelling, and have the opportunity to develop their knowledge and understanding of mathematical concepts. Key vocabulary is introduced and revisited regularly, to develop language acquisition, embedding as the topic progresses. These key words are also noted in vocabulary books which travel with the child on their journey with The Elms. Reasoning and problem solving are integral to the activities children are given to develop their mathematical thinking. Resources are readily available to enable children to gain a conceptual understanding of different concepts appropriate for each year group.

A love of mathematics is encouraged throughout the school, applying an ever-growing range of skills independently. Each week, the teacher of each maths class nominates a "mathmagician" who receives recognition in the celebration assembly.

## Planning and Progression

At The Elms, we teach the National Curriculum objectives for primary school maths, supported by a clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year, and are sequenced appropriately to maximise learning for all children. We teach maths in topics/units of work, giving the children the opportunity to fully immerse themselves in the area of learning. At the beginning of each unit, the children are assessed on what they already know, which informs the programme of study and ensures that lessons take into account differing starting points amongst the pupils. Our maths lessons build upon the prior learning of the children, which is mapped out on our curriculum map and the White Rose scheme is used as a starting point although teachers adapt this to the needs of their classes as appropriate. At the end of each unit, children complete quizzes or end-of-block tests to assess progress.

## Teaching and Learning

At The Elms Primary School, maths teaching focuses on enabling children to think as mathematicians. Our main aim is to develop the children's knowledge, skills and understanding in maths and we use a variety of teaching and learning styles within our maths lesson to achieve this. We believe our children learn best when:

- They are encouraged to ask as well as answer mathematical questions;
- They are given the opportunity to use a variety of resources;
- They are given the opportunity to collaborate and work with their peers;

We recognise the fact that we have children of differing abilities in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies, which are differentiated by task, expected outcome, support from peers or adults, to suit the needs of all learners.

## Some cross-curricular links that maths offer:

- Computing: databases and Excel units of work
- Science: taking measurements; statistics (creating graphs, tables and interpreting data)
- History: understanding and using Roman numerals; the origin of the calendar in the times of the Maya
- DT: measuring and weighing in cooking; creating 3d nets
- PE: recording timings in athletics then trying to beat their personal best by working out the difference

## Impact of the maths curriculum Children

at The Elms:

- Enjoy and are enthusiastic about maths, and are engaged in their maths lessons.

- Show a high level of accuracy in their written calculations.
- Build upon previous skills each year; they are keen to learn new skills and to work hard to perfect those shown to them.
- Gain skills in investigation, collaboration and independent work.
- Show improved confidence and self-esteem; believe they will achieve.
- Are prepared with skills that can be transferred into future education, work and life.
- Most children reach the end-of-year expectations.
- Well-planned sequences of learning support children to develop and refine their maths skills.
- Are able to independently apply their knowledge to a range of increasingly complex problems.
- Are reasoning with increased confidence and accuracy.
- Demonstrate a quick recall of facts and procedures. This includes the recollection of times table facts.
- Show a high level of pride in the presentation and understanding of the work.
- Make good progress in this subject.
- Understand and make links with other areas of the curriculum.

### Assessment and Recording

At The Elms, assessment is an integral part of the teaching process and informs our lesson planning. The assessment of children's knowledge is forever ongoing, to ensure that the learning "sticks". Teachers consistently refer back to the National Curriculum and White Rose progression documents to ensure objectives are being met. Termly White Rose assessments are also carried out.

### Monitoring and Review

The maths subject leader is responsible for monitoring medium-term planning, using the curriculum map, and ensuring complete coverage of the National Curriculum maths objectives across the school. The maths leader also supports by finding appropriate resources to support subject delivery and ensures there is a sufficient number of resources across the school. They also review maths provision, including its strengths and the next steps for development as part of the action planning cycle.

Year group teams are responsible for planning lessons that cover the objectives set out on the curriculum map and monitoring progress of students in their class.

The governors are responsible for discussing maths provision with the curriculum lead and the subject leader as part of the wider curriculum. They allocate a governor to monitor provision, strengths and areas for development when required, and for reporting these to the wider governing body.

