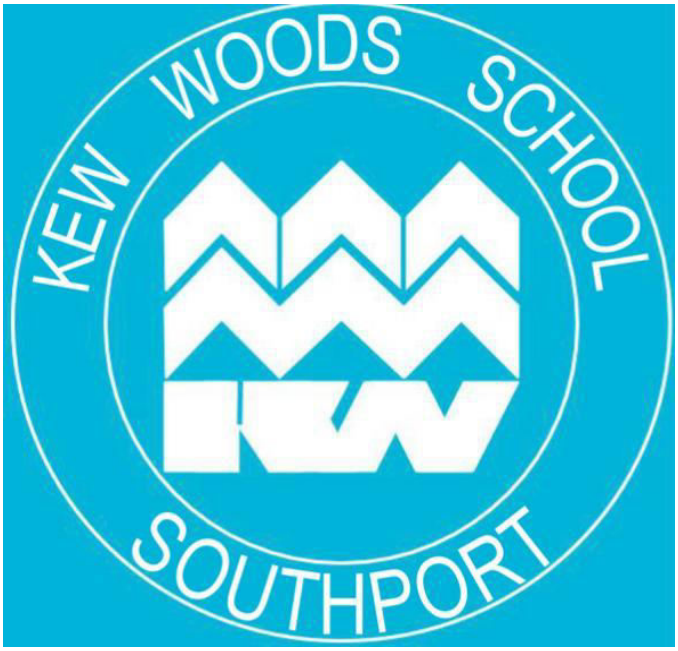
KEW WOODS PRIMARY SCHOOL



Mathematics Policy

POLICY INTO PRACTICE

Mathematics

Mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics. Mathematics is important to every day life. We endeavour to ensure that children develop an enthusiasm towards mathematics and a skill set that will stay with them throughout life.

Aims

The aims of mathematics are:

- to promote a love for learning through practical activity, exploration and discussion;
- to develop an ability to think clearly and logically;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop an ability to talk confidently in mathematical terms, explaining and discussing mathematical problems and concepts
- to promote an awareness of the uses of mathematics in the world beyond the classroom in solving problems they meet in everyday life, and in understanding things they see
- to promote an appreciation of mathematical pattern both in shape and number and its application to relationships
- to develop a practical understanding of the ways in which information is gathered and presented;

Teaching for Mastery approach

At the centre of the mastery approach to the teaching of mathematics is the belief that all children have the potential to succeed. They should have access to the same curriculum content and, rather than being extended with new learning, they should **deepen their conceptual understanding by tackling challenging and varied problems.** Similarly, children must not simply rote learn procedures but demonstrate their understanding of these procedures through the use of concrete materials and pictorial representations.

Teaching and Learning

The experiences and materials provided to teach mathematics are appropriate to the needs and abilities of the individual child and increasingly reflect the use of new technology. These will include:

- A balance between tasks which develop knowledge, reasoning skills, concepts, understanding and the ability to solve problems.
- A focus on pupil learning through independent application of knowledge and skills.
- Working as a class, in groups and individually, the opportunity for collaborative learning contributes towards pupils' spiritual, moral, social and cultural development.
- Providing a variation of activities between writing, oral, practical, short and extended tasks, ensuring enjoyment.
- Using practical tasks and investigations, books, calculators, mathematical apparatus and instruments and information technology.
- Oral and written communication of maths; children should be encouraged to talk about and explain their working.
- Using and applying mathematical knowledge to cross-curricular learning opportunities.
- Teachers will take every opportunity to ask open questions.
- Teachers will probe and challenge answers and where appropriate ask for alternative strategies or explanations.
- Teachers will seek to ensure that every child has the opportunity to use and apply their mathematical knowledge on a regular basis, including planning for puzzles, challenges and problem solving tasks.
- Teachers will respond to individual needs by carefully targeted questioning.
- Teachers will devise work, which although differentiated, will seek to include and challenge every child in the class.
- Written methods of calculation will be taught in accordance with the School Calculation policy, ensuring the children move along the stages at an appropriate pace whilst still ensuring the children's thorough understanding of the methods taught.
- Teachers will use a range of computing resources to enhance their Maths teaching and the children will be given regular access to IT to reinforce and consolidate their Mathematical learning

Statutory Requirements

The school mathematics policy draws together the principles of the National Curriculum 2014, as well as the Foundation Stage Curriculum.

Maths and Cross Curricular Links

Teachers will seek to take advantage of opportunities to make cross-curricular links and themes on a termly or half-termly basis. Staff will ensure pupils can practise and apply the skills, knowledge and understanding acquired through mathematics lessons to other areas of the curriculum and school life in general.

Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage children to read and interpret problems in order to identify the mathematics involved. The children are encouraged to explain and present their work to others throughout lessons. Younger children enjoy stories and rhyme that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

Mathematics contributes to the teaching of personal, social and health education, and citizenship. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own

learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views. We present older children with real-life situations in their work on the spending of money.

SEND and Most Able and Talented Pupils

We are aware of a range of abilities within each class and will target questions or tasks appropriately to meet individual needs. Tasks will be differentiated according to ability and extended where appropriate. At times, working in mixed-ability groups or whole class activities is appropriate. Children with particular needs, in addition to differentiated work, may receive additional support or intervention from teaching assistants. Additional support and intervention is offered to pupils, identified through tracking, in a variety of forms including intervention before school.

Assessment

There is continuous assessment carried out by the class teacher through observation, verbal feedback and questioning taking place on a daily basis. Children in Nursery and Reception are continually assessed in line with the Foundation Stage Profile Development Matters. Within Key Stage One and Two, White Rose Maths assessments are used to assess the children at the end of each block. In addition they are also assessed each term using the White Rose Maths End of Term assessment appropriate to their year group. SATs tests for Year 2 and Year 6 pupils are standardised in May each year and pupils are tracked individually and by year group. Within Years 3, 4 & 5 children will sit Optional SATs during the summer term. Children are involved in the assessment of their own learning through the use of Assessment for Learning strategies, e.g. peer assessment, success criteria, target setting.

Resources

There is a range of resources to support the teaching of mathematics across the school. All classrooms have a wide range of appropriate small apparatus and there are shared resources in KS1 and KS2 resource areas. Each class has a 'Maths Toolkit', which includes a wide range of practical resources and can be quickly accessed by children to aid them in their learning. A range of software is available to support work on the computers and iPads.

Monitoring and Evaluation

The subject leader monitors planning through half termly monitoring meetings. They will scrutinise weekly plans for each class which are evaluated to ensure coverage and progression through the calculation policy.
At least once a year the subject leader will undertake a scrutiny of books and Work. This scrutiny provides evidence of continuity and progression.
In addition, the co-ordinator has several monitoring foci each year which include lesson observations, pupil interviews, and work scrutiny to further aid development of the mathematics curriculum and inform the next academic years subject action plan.

Parents and Homework

Parents are encouraged to give support with mathematic e.g. practicing times tables, discussing homework and involvement with related activities in school. Workshops are offered to parents which show how parents can support their children.

Homework is provided weekly from Year 2 to Year 6 and online homework is offered through ‘Times Table Rock Stars’. Formal reporting to parents takes place at two parents’ evenings in the Autumn and Spring Terms, and a written report which is sent home in the Summer Term. Parents are provided with their child’s mathematical targets during each term. At the end of Key Stage 1 and Key Stage 2, SATs results and teacher assessments are provided to parents. From Year 1 to 5 teacher assessments are provided at the end of the academic year. Early Years and Foundation Stage profile data is provided to parents in the end of year report.