**MATHEMATICS POLICY**



It is our intent at Pinders Primary School to provide pupils with a high-quality education in Maths that will teach pupils to be resilient, fluent mathematicians who are able to reason and problem-solve.

We intend to encourage all pupils to use a wide range of concrete manipulatives across school to establish confident, resilient learners with a positive attitude to maths. Children are taught the skills to be able to articulate logical reasoning strategies.

*For every child to have a sound understanding of Maths, equipping them with the skills of calculation, reasoning and problem-solving that they need in life beyond school.*



**MATHEMATICS POLICY**

**Policy Intent**

Mathematics makes a considerable contribution to the overall school curriculum and is constantly used in everyday life. The ability to apply it effectively to unfamiliar problems is therefore very important. It is our intent at Pinders Primary for every child to have a sound understanding of Maths, equipping them with the skills of calculation, reasoning and problem-solving that they need in life beyond school. Furthermore, a broad mathematical education is essential for all pupils to equip them to enjoy and to meet the responsibilities of adult life in the world today.

**Aims and purposes of mathematics**

Throughout the school mathematics is organised to follow the 2014 National Curriculum. When possible, practical opportunities, using models and real life situations are incorporated into lessons. We aim to ensure all children are taught following the mastery principles and practice of the Concrete, Pictorial, Abstract (CPA) approach. Which create mathematicians who can fluently solve calculations and problems in a variety of contexts. Mathematicians who also build upon and apply reasoning skills with the support of rich vocabulary and mathematical talk which will enable them to gain a deeper understanding of mathematical processes.

We also aim to present maths as a challenging, exciting, creative and relevant subject in order to promote a positive and confident attitude. Maths teaching should contribute to the acquisition of life-long skills and promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.

**Achieving and Maintaining High Standards** The staff at Pinders Primary School understand the factors that lead to high standards in maths, and have developed a common approach to teaching throughout the school. This approach acknowledges the primacy of mental calculations, backed by accurate and rapid recall of number facts, the importance of tailoring teaching for individual learners and the importance of depth, rather than superficial understanding, following mastery principles.

**Maths in Action**

In the Early Years Foundation Stage, maths is taught in practical ways in order to promote social skills and the development of mathematical language and understanding. Child initiated learning opportunities are cross-curricular and children experience a wide range of open-ended problems and resources, both indoors and out. In the EYFS maths is also taught as a discrete subject. Group activities and adult-led lessons are between 15-20 minutes.

Throughout school, maths is taught following a same-day intervention approach for 4 days out of 5 where all children use concrete apparatus. The lesson is broken into two sections, where after the first session, children’s books are marked and assessed, as appropriate, children move onto reasoning and problem-solving tasks (‘silver’ and ‘gold’ tasks). Children who have not met the lesson objective will take part in a same-day intervention where they are given a further opportunity to achieve the lesson objective with teacher or teaching assistant input.

There is an emphasis on interactive teaching where the children are encouraged to talk about how they calculate and problem-solve. Children are given ample opportunities to answer questions and to discuss answers. They are encouraged to comment on and choose different methods, once taught, and to work collaboratively in pairs and in groups.

Links are also made to mathematics within other subjects so pupils can develop and apply their mathematical skills. Mental maths sessions are an integral part of maths lessons in key stage 1 and 2, and as an assessment tool to support precision teaching.

At the end of a half term class teachers award a certificate for a pupil who has shown they are a ‘Star Mathematician’ based on their application of skills or attitude in maths lessons.

**Maths Planning**

Teaching staff plan in phases, in accordance with current National Curriculum Guidance (2014), supported by the Maths Hub Programme of Study and the Classroom Secrets resources. Plans are evaluated daily and updated to meet the needs of the class alongside the assessment for learning principles and precision teaching.

Staff utilise the ‘S-‘Planning’ structure to strengthen children’s working memory by consistently revisiting mathematical concepts from previous learning taking advantage of LBQ and Pixl resources to re-visit previous objectives.

**Assessment, Recording and Reporting**

Assessment for Learning (AFL) is regarded as an essential part of teaching and learning and is a continuous process which is shared with all learners. All class teachers are committed to raising standards of attainment through AFL and are responsible for the assessment of all pupils in their class.

At Pinders Primary School, we are continually assessing pupils’ progress. 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. We make use of precision reports based on summative assessments to support whole class teaching and target specific interventions.

We asses through:

* Talking to and questioning the children
* Observing and marking work
* Self and peer assessment
* Statutory Assessments (Y2 and Y6)
* PIXL Assessments KS1 and KS2

Children in the early years are assessed by means of the Early Years Foundation Stage curriculum goals and records are kept in the Foundation Stage Profile.

**Equal Opportunities**

Pinders Primary School values the individuality of all children (irrespective of ethnicity, attainment, age, disability, gender or background) and the maths policy firmly supports the equal opportunities philosophies of the school. We are committed to giving all of 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.

**Special Educational Needs**

Each class has a class teacher and designated classroom assistants are deployed where needed for children with additional needs. Where necessary, adaptations will be made to the curriculum, to equipment and to resources to allow access to maths for pupils with SEN, including provision for pupils that are exceptionally able in mathematics.

**Homework and parental involvement**

Homework in mathematics is given every week in Key Stage 2 classes and as deemed appropriate in Key Stage 1. Homework in mathematics should be enjoyed by parents and children. It aims to support learning in school.

**Resources**

Each class has designated maths resources with a variety of concrete resources which are used in daily lessons. FS and KS1 also have resources embedded in their maths continuous provision areas. Further shared resources can be found in the Maths resource cupboard. Each classroom is equipped with an interactive whiteboard and a range of interactive teaching programmes are available both on pupil iPads. All children, regardless of ability, get the opportunity to use concrete apparatus to support their understanding.

**Cross curricular links**

Cross curricular links are made whenever appropriate, for example, the use of measurement in science, model making and design, the use of graphs, geometric patterns in art, use of space and direction in PE and other aspects of topic work.

As far as possible teachers attempt to provide ‘real life’ situations which enable children to use their mathematics skills and prepare for ‘real life’ situations such as the Primary Futures 2019 event ‘Money, Money, Money’.

**Curriculum Leadership**

The role will include:

* Inspiring an exciting and creative approach to maths teaching
* Supporting maths teaching through advice, guidance, CPD and resources
* Sharing information acquired from courses or other sources that may be beneficial to staff
* Reviewing the maths policy, Calculation policy and monitoring its implementation
* Regularly evaluating the maths scheme of work and amending as necessary
* The management, maintenance and storage of resources
* Reporting to parents, governors and others when appropriate