# Upton Westlea Primary School

# Maths Policy

Approved by staff: November 2019

Signed:  K Carruthers

Approved by Governors: November 2019

Signed:  N Buckley

Review Date: November 2022

# Mathematics Policy

## Intent

The intent of our mathematical curriculum at Upton Westlea is to ensure that our children develop a healthy and enthusiastic attitude towards Maths. We strive to embed the skills necessary to enable our children to learn, succeed and be inspired to further their own learning within Maths. We aim to develop their knowledge, understanding and skills to support them in applying their learning in a range of different contexts. Through our teaching we want to ensure children can calculate, problem solve and reason to support them in their everyday life. We aim to develop children's enjoyment of Maths through the planning and teaching of a range of different opportunities to build on the children's conceptual understanding in enjoyable approaches. We plan opportunities for children to apply their mathematical skills in other curriculum areas including Science, History and Geography. We encourage all of our children to work both independently and collaboratively to develop their resilience within their learning.

## Implementation

At Upton Westlea, we understand that the children need to be confident and fluent within the yearly objectives taught to support their progress in deepening their learning and tackling more complex problems and activities. To ensure consistency across the school within the teaching of Mathematics we use White Rose Planning. Within the White Rose the objectives are split into smaller step objectives which are taught in sequence to support the children's learning and development. We supplement and support the teaching and learning with a range of resources including Classroom Secrets, Real Life Problem Cards, Convince Me Cards, Concept Cartoons and any other relevant resources to support the children's understanding. We ensure children are provided with opportunities to gain fluency within their new learning and build on this with Problem Solving and Reasoning opportunities.

In all classes there are children of differing mathematical ability. We recognise this fact and 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 – in some lessons through differentiated group work, and in other lessons by organising the children to work in pairs on open-ended problems or games.

Staff and pupils have access to a range of resources which are kept in classrooms and in the staff room (mathematical stories). Appropriate software is installed on the school network which enables children to enhance their learning, as in modeling ideas and methods. Numicon (multi-sensory maths kit) is used in the Foundation Stage, KS1, and early KS2 to support children with special educational needs throughout the school. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

### Foundation Stage

We teach mathematics in our nursery and reception classes. Children develop mathematical concepts and skills using stages with Development Matters and the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children aged three to five. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics. ICT is integral to this planning. We also use NUMICON (multi-sensory maths) as a resource to assist in children understanding the abstract concept of number.

During Key Stage 1

Pupils develop their knowledge and understanding of mathematics through practical activity, exploration and discussion. They learn to count, read, write and order numbers to 100 and beyond. They develop a range of mental calculation skills and use these confidently in different settings. They learn about shape and space through practical activities, which build on their understanding of their immediate environment. They grasp mathematical language, using it to talk about their methods and explain their reasoning when solving problems. We are encouraging fluency of mathematical skills at the appropriate level for the age group. Opportunities for Greater Depth are planned for to support children's greater understanding within Mathematics. All children are given opportunities to develop their problem solving and reasoning skills in the different concepts that are taught throughout the year.

During Key Stage 2

Pupils use the number system more confidently. They move from counting reliably to calculating fluently with all four number operations. They are encouraged to try to tackle a problem with mental methods before using any other approach. Pupils explore features of shape and space and develop their measuring skills in a range of contexts. They discuss and present their methods and reasoning using a wider range of mathematical language, diagrams and charts. We are encouraging fluency of mathematical skills at the appropriate level for the age group. Opportunities for Greater Depth are planned for to support children's greater understanding within Mathematics. All children are given opportunities to develop their problem solving and reasoning skills in the different concepts that are taught throughout the year.

Teaching mathematics to children with special needs.

Within the daily mathematics lesson teachers not only provide activities to support children who find mathematics difficult but also provide appropriate challenges for children who are high achievers or Gifted and Talented. Where applicable children's SEND profile targets incorporate suitable objectives from the National Curriculum and teachers keep these objectives in mind when planning. Interventions are planned in for Mathematics throughout the year, for specific children. As a school we use First Class @ Number 1 and 2 and also teachers plan and deliver boosters after school to support identified children.

## **Impact**

Daily formative assessment takes place with the class teacher marking and assessing the children's work and how they achieved during the lesson. Teachers use their daily formative assessments to adjust planning accordingly for the following lesson to meet the emerging needs of their class, groups and individuals. At the end of each term, Summative assessment takes place with each child from Year 1 to Year 6 completing assessments which provide standardised scores. Children's progress and attainment is discussed at Pupil Progress Meetings which are held ½ termly with Senior Leaders. The teaching and learning of Mathematics is monitored frequently by Senior Leaders and the Subject Lead through lesson observations, book scrutinies and pupil voice interviews.

## Assessment and recording

**The assessment procedures within our school encompass:**

- Making ongoing assessments and responding appropriately to pupils during 'day-to-day' teaching. These 'immediate' responses are mainly verbal and are not normally recorded;
- Using knowledge of pupils drawn from ongoing pupil tracking records and the progression document to inform 'prior learning' at the beginning of each unit of work to guide our planning and teaching;
- Adjusting planning and teaching within units in response to pupils' performance;
- Use of assessment papers and with KS2 Test Base papers are used to support assessment.

**The school also uses:**

- SATs and optional SATs from Y2 upwards.
- Written tests are delivered, marked, scores collected and data is analysed (three times a year) to show areas of strengths and weakness in each class from Y2 - 6. This information then aids the following terms planning.
- Books and planning are evaluated by the mathematics subject lead throughout the year.
- Pupil profiles used in the foundation stage.
- Individual pupil tracking.
- Teacher assessments for SEN children.

The results are used and analysed to inform teachers and parents of children's performance and potential. The results are also used to set challenging targets, track children and identify cusp groups. Analysis of assessment also informs of targeted areas of mathematical weakness in classes and throughout the school.

The mathematics Lead is released from her classroom to monitor and evaluate the quality and standards in mathematics throughout the school with lesson observations and book scrutinies.

## Pupil Voice

Regular pupil voices are carried out to find out pupil's views on Maths. Below are some of the children's comments:

"Maths is fun! We do lots of different things."

"I like the challenges."

"It's important."

"I like learning different methods to sort things out."

For further information about our Mathematics Curriculum at Upton Westlea Primary School please see the overviews of learning or each year group and the calculation policy.