

# Cams Lane Primary School



## Mathematics Policy

## **Our School Vision Statement**

‘Together as a Cams Lane family, we will inspire everyone to reach their potential. Guided by our 5 Rs, we will develop independent learners with an awareness of the world around them, ready for the challenges of the future. We will nurture relationships that build confidence and pride within each person.’

## **Our School Motto**

Our motto is the golden thread which permeates our school ethos and drives everything we do in school.

**“INSPIRE, BELIEVE, LEARN”**

## **School Values**

- Resilience
- Resourcefulness
- Respect
- Reflection
- Responsibility

## **Purpose**

- To promote a love for mathematics;
- To promote a belief that all children can achieve;
- To establish an entitlement for pupils;
- To establish high expectations for teachers and pupils;
- To promote coherence across the school

## **Aims of Policy**

- To ensure all pupils become fluent in mathematics through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- To provide our pupils with a mathematics curriculum which will produce individuals who are numerate, literate, creative, independent, inquisitive, enquiring and confident
- To provide a stimulating environment
- To provide adequate resources so that pupils can develop their mathematical skills to their full potential
- To enable our pupils to solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions
- To reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument or justification.

## **Intent**

We understand that our learners come from a wide variety of backgrounds with varying exposure to mathematical concepts and practical experience. As a result, they require robust and clear progression through mathematical concepts and support with learning. The goal of our Maths teaching is to deliver the core aims of the National Curriculum - both in the mathematics lessons and across the curriculum as a whole. Our children will be taught to be confident, successful and independent mathematicians who can apply their Maths to other contexts and situations. We want our children to leave Primary school 'Secondary ready', with excellent foundations ready for challenges for the future.

## **Rationale for Teaching Mathematics**

At Cams Lane, we follow the National Curriculum for Mathematics using the Mastery approach to teaching. Through the Mathematics curriculum, we reject the idea that some children can't do mathematics and instead recognise that by nurturing positive attitudes and building confidence in mathematics all children can achieve. We recognise that Mathematics is both a key skill within school, and a life skill to be utilised through everyday experiences.

Concepts are built in small, logical steps and are explored through clear mathematical structures and representations. Children are taught together as a whole class and the focus is on depth – not acceleration – that all children have a chance to embed learning. Teaching is supported by high-quality resources which present the flow of the lessons coherently and provide opportunities for plenty of intelligent practice. Children use concrete objects and pictures to physically represent mathematical concepts alongside numbers and symbols – this helps them to visualise.

## **Teaching and Learning**

We follow the scheme White Rose as our main teaching tool. We use Classroom Secrets and Twinkl to further challenge children in lessons. Throughout the school, Mathematics is taught as a discrete daily lesson. Also, as part of cross-curricular themes when appropriate. All lessons will have clear learning objectives which are shared and reviewed with pupils. As well all lessons will have a clear step to success to show how a child can achieve the learning objective for that day. Lessons will demonstrate a balance of interactive and independent elements used in teaching, ensuring that all pupils will engage with their learning.

## **Teaching Principles**

- Teaching is underpinned by a belief in the importance of mathematics and that the vast majority of children can succeed in learning mathematics in line with national expectations for the end of each key stage.
- The whole class is taught mathematics together, with no differentiation by acceleration to new content. The learning needs of individual pupils are addressed through careful scaffolding, skilful questioning and appropriate rapid intervention, to provide the necessary support and challenge. This will include bespoke post teach to individual needs by either a teacher or skilled teaching assistant.
- Factual knowledge (e.g. number bonds and times tables), procedural knowledge (e.g. formal written methods) and conceptual knowledge (e.g. of place value) are taught in a fully integrated way and are all seen as important elements in the learning of mathematics.
- The reasoning behind mathematical processes is emphasised. Teacher/pupil interaction explores in detail how answers were obtained, why the method/strategy worked and what might be the most efficient method/strategy.

- Interim methods (e.g. expanded methods for addition and multiplication) to support the development of formal written algorithms are used for a short period only, as stepping stones into efficient, compact methods.
- Precise mathematical language, couched in stem sentences, is always used by teachers and teaching assistants, so that mathematical ideas are conveyed with clarity and precision. Pupils are required to do the same (e.g. when talking about fractions, both the part and its relationship to the whole are incorporated into responses: “The shaded part of the circle is one quarter of the whole circle”).
- Conceptual variation and procedural variation are used extensively throughout teaching, to present the mathematics in ways that promote deep, sustainable learning.
- Carefully devised exercises employing variation are used. These provide intelligent practice that develops and embeds fluency and conceptual knowledge.
- Sufficient time is spent on key concepts (e.g. multiplication and division) to ensure learning is well developed and deeply embedded before moving on.
- Frequent additional practice, outside the lesson, is encouraged, in order to develop pupils’ fluency and consolidate their learning.

### **Assessment, Recording and Reporting**

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. Assessments are made in line with school assessment policy. Formative assessment is ongoing on a daily basis. Pre unit assessments and end of unit assessments are completed for each unit taught. At the end of each term the children are assessed, using the White Rose materials and their progress is mapped against the 2014 Mathematic objectives.

Statutory Assessment Tests (SATs) are used for children in Year 6.

In Year 2 we assess using optional SATs.

The children in Year 4 are also required to take multiplication tables check (MTC) in the Summer Term. The purpose of the check is to determine whether pupils can fluently recall their times tables up to 12, which is essential for future success in mathematics.

A whole school tracking system is used to closely monitor children’s progress throughout the school. Teacher assessments are entered termly and are closely analysed to identify children working at greater depth or who are at risk, appropriate intervention is then put in place to close gaps.

An EYFS Profile will be completed for each pupil in the final term of the year in which they reach age five. The progress and development of pupils within the EYFS is assessed against the early learning goals outlined in the ‘Statutory framework for the early years foundation stage’.

Analysis of assessment is used to set targets for either whole class teaching, group teaching or individual pupils.

### **Monitoring and Evaluation**

Workbook scrutiny, drop ins and pupil voice are carried out regularly by the science subject leader and the SLT team, and feedback is given to teachers, at an appropriate time.

## **Marking**

Marking is in line with the school marking and feedback policy.

## **Staff Development**

Staff training needs are identified as a result of whole school monitoring and evaluation, performance management and through induction programmes. These will be reflected in the School Improvement Plan. Where necessary, the Maths coordinator or a member of SLT leads or organises school-based training. Additional adults who are involved with intervention programmes will receive appropriate training that may be school based or provided externally. They will also observe and shadow teachers across the relevant Key Stage.

## **SEN**

Cams Lane Primary School aims to offer a fully inclusive environment, high ambitions and goals for all pupils. We aim to identify and overcome potential barriers to learning and are committed to responding to pupils' diverse needs and abilities.

We provide a broad and balanced curriculum for children. The curriculum is adapted, designed and developed to be ambitious and meet the needs of all SEND pupils. The teachers meet the diverse needs of all children in their class. For some SEND pupils their learning needs will be met through differentiation and this can be through setting suitable learning challenges, classroom organisation, teaching materials, teaching style, questioning and different tasks. Teachers will make requirements and provision, where necessary, to support individuals or groups of children and enable them to participate effectively in curriculum and assessment activities.

## **EYFS Years Provision**

As well as Reception following White Rose for their daily Mathematics lessons, activities in continuous provision will provide pupils with the opportunity to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems and describing shape, space and measurements.

All activities will adhere to the objectives set out in the framework.

During the Early Years Foundation Stage, pupils will be taught to:

- Count with numbers from 1 – 20, placing them in order and naming the number that is one more or one less than a given number.
- Use quantities and objects to add or subtract two single-digit numbers, and count forwards or backwards to find the answer.
- Solve problems, including doubling, halving and sharing.
- Use everyday language to talk about size, weight, capacity, position, direction, time and money to compare quantities and objects and solve problems.
- Recognise, create and describe patterns.
- Use mathematical language to describe everyday objects and shapes.

## **Cross-curricular links**

Wherever possible, the Mathematics curriculum will provide opportunities to establish links with other curriculum areas.

### **English**

- Mathematical terminology is used, where appropriate
- Maths-based texts are sometimes used in English lessons and in guided reading sessions.

### **Science**

- Pupils' data collection and analysis skills are further developed through the conduction o physical experiments, using units of measurement, calculating averages and interpreting data
- Pupils record their findings using charts, tables and graphs.

### **Humanities**

- Data analysis, pattern seeking and problem-solving skills are developed through the teaching of geography.
- Pupils' understanding of time and measurement of time are developed through discussions of historical events.

### **ICT**

- Pupils are encouraged to use calculators and other electronic devices, gaining confidence throughout their school experience.
- ICT will be used to enhance pupils' maths skills using online resources and the creation of spreadsheets.
- ICT will be used to record findings, using text, data and tables.

## **Resources**

Each class has a Mathematics range of age-appropriate concrete resources to assist children.

Reviewed February 2024