

# PHOENIX PRIMARY SCHOOL

## MATHS POLICY 2024/25

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### 1.1 DEFINITION

"Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject" National Curriculum 2013.

### 1.2 AIMS

The national curriculum for mathematics aims to ensure that all pupils:

- ✓ become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- ✓ reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- ✓ can 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.

The core curriculum for maths aims to ensure that all pupils:

### 1.3 NATIONAL CURRICULUM

National Curriculum subject content;

#### Key Stage 1 – Years 1 and 2

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1

## Lower Key Stage 2 – Years 3 and 4

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

## Upper Key Stage 2 – Year 5 and 6

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

### 1.4 INTENT

The national curriculum states 'Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.' Therefore, the intention for mathematics is to ensure that all pupils become fluent, reason mathematically and solve problems. '

At Phoenix Primary School we aim high. We want every part of our school community- pupils, parents and members of staff to experience success. Our motto is 'Where we rise to the challenge'. When teaching mathematics at Phoenix, we intend to provide a curriculum which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful in their future adventures. We aim to prepare them for a successful working life and therefore incorporate sustained levels of challenge through varied and high-quality activities with a focus on fluency, reasoning and problem solving.

In Mathematics we teach our children how to make sense of the world around them by developing their ability to calculate, reason and solve problems. We want our children to develop skills which are essential in most other areas of the curriculum as well as recognise and develop knowledge and skills for life to achieve success in the work place and economic well-being. Our curriculum allows children to better make sense of the world around them relating the pattern between mathematics and everyday life

## **1.5 IMPLEMENTATION – WHITE ROSE**

Every class from EYFS to Y6 follows the White Rose scheme of learning which is based on the National Curriculum. Lessons are taught daily and may be personalised to address the individual needs and requirements for a class but coverage is maintained. In order to further develop the children's fluency, reasoning and problem-solving, we use Mastering Number which correlates to the White Rose lessons and further develops children's fluency. We also use a range of planning resources including those provided by the NCETM, NRICH and Classroom Secrets to enrich our children's maths diet.

Staff also refer to the Calculation Policy when teaching formal methods, understanding that sometimes children find their own efficient methods along the way. Each week a Times Tables focus is planned to give children the opportunity to practise and improve their rapid recall skills with facts 12x12.

Help desks and working walls support children's learning for each unit and the understanding that there are three before me. The children use these resources effectively to support their daily learning.

### Consolidation/Pre-teaching

We have Start of Day Activities in each class whereby children are set a maths task to ensure general maths knowledge and fluency are maintained and developed. This is called flash back 4 and recalls facts that the children have focused on over the current and previous academic year. While the class are solving the questions, the staff are able to support children with consolidation or pre-teaching ensuring they are confident with skills required for the upcoming sessions.

## **1.6 RECORD KEEPING, ASSESSMENT AND REPORTING**

As with all areas of the curriculum, assessment is an integral part of the teaching process. Class teachers should keep records of work carried out, and levels of achievement of the work. Photographs are a useful tool to keep, as a reminder of pupil's achievement. These are uploaded onto Seesaw.

Through our teaching we continuously monitor pupils' progress against expected attainment for their age, making formative assessment notes where appropriate and using these to inform our teaching. Summative assessments are completed at the end of each half term; their results form discussions in termly Pupil Progress Meetings and update our summative school tracker on Insight. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child. Robust monitoring and assessment ensures that any misconceptions, gaps, or ineffective teaching is identified and addressed in a timely manner. These assessments are carried out through pupil book scrutiny, 1 to 1 or small group catch up /tutoring sessions in the PM, pre-learning (EAL session).

Children's progress in Mathematics is reported to parents through the pupil annual report and consultation meetings throughout the year.

## **1.7 REASONABLE ADJUSTMENTS FOR PUPILS WITH SEND:**

As part of the planning and preparation for the delivery of each maths topic, teachers will need to consider how specific activities or the delivery may need to be adjusted to ensure that pupils with SEND are able to access the materials and participate fully in the lesson. Pupils with language and communication difficulties (including those with ASD) may need additional visual prompts to help them understand what is expected of them. Some pupils may require individual task boards to enable them to follow a series of steps where a task has been broken down into smaller, more manageable chunks. Some pupils may have sensory sensitivities. For those pupils, adjustments may need to be made in order for them to access the full curriculum. For example, making sure concrete resources are easily accessible within every lesson.

## **1.8 Online Maths Tools/Homework**

In order to advance individual children's maths skills in school and at home, we utilise Times Tables Rock Stars and Numbots for multiplication practise, application and consolidation.

Homework is set weekly to consolidate already taught skills as well as using apps to practice skills. We encourage children to access.

### **1.9 SPEAKING AND LISTENING**

Children are given time to reflect on prior learning at the beginning of each lesson. This will include partner/whole class discussion, 1:1 feedback with the teacher/ other adult and individual responses in books. Pupils are encouraged to have regular discussions with their peers to explain and justify their reasoning and problem solving.

### **1.10 MONITORING**

The monitoring of coverage and progress across the school will be done by the subject coordinator in consultation with teachers and the SLT.

### **1.11 INCLUSION**

At Phoenix Primary we plan to provide for all pupils to achieve, including boys and girls, higher achieving pupils, gifted and talented pupils, those with SEN, pupils with disabilities, pupils from all social and cultural backgrounds, children who are in care and those subject to safeguarding, pupils from different ethnic groups and those from diverse linguistic backgrounds.

### **1.12 MISSION STATEMENT**

'Where We Rise To The Challenge'

Working together as a whole school community we aim for all pupils, parents and staff to increase their participation within our school. This is achieved through the development of inclusive cultures, policies and practices. We take account of disability, race and gender to create a secure and accepting community where everyone feels valued.

We strive towards an outstanding school that provides a creative and enriching learning experience for all pupils. We respond to the diversity of need through our commitment to equality; overcoming potential barriers to learning and setting suitable personalised targets.

We set high expectations and expect every child to thrive. They should reach their full potential, recognising personal strengths and celebrating personal achievements of themselves and others; both within the school and its wider community.

### **1.13 EQUAL OPPORTUNITY FOR SPECIFIC GROUPS INCLUDING EAL CHILDREN**

Care should be taken to give each child the opportunity to learn about the global community, regardless of race, Religion, language or gender.

### **1.14 HEALTH AND SAFETY**

Children should be working in a safe environment both in and outside of the classroom. The relevant risk assessments must be completed when using any potentially dangerous equipment, such as scissors or craft knives. When conducting fieldwork, children should be properly supervised and should be made aware of any potential dangers, such as busy roads or water hazards.

## 1.15 PARENTAL INVOLVEMENT

As with all areas of children's learning we need the support of parents and carers to help us to maximise the development of each child's potential. This would include helping the child with any research or homework that may be set. Asking parents to come and share their skills and experiences. As well as joining in with the celebration of their children's achievement and success.

## 1.16 WELLBEING

Mental health and wellbeing is at the forefront of everything we do, from children to all staff across the school. We have an open door policy within our environment and we offer all the opportunity to express themselves appropriately and ensure that matters of concern are dealt with correctly and supportively.

Approved by Governors:

Name: \_\_\_\_\_ Signed: \_\_\_\_\_

Date: \_\_\_\_\_

To be reviewed: September 2025

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