



***Mission Statement: Valuing Potential; Creating Opportunities***

### **MATHEMATICS POLICY**

This policy to be read in conjunction with Assessment and Marking Policies, Calculation Policy, Equal Opportunities Policy, Planning, Teaching and Learning Policies, Racial Equality Policy, Inclusion and SEND Policies

#### **POLICY REVIEW**

This policy has been agreed by staff and Governors and will be regularly reviewed.

<b>DATE OF POLICY:</b>	MARCH 2025	<b>DATE OF NEXT REVIEW:</b>	MARCH 2026
<b>MONITORED BY:</b>	SUBJECT LEADER AND SENIOR LEADERSHIP TEAM	TEACHING & LEARNING COMMITTEE	

#### **VISION**

Children are at the centre of everything that we do. Decisions that we make around the curriculum and school life are carefully considered to reflect their current and future needs. Mental health is balanced with academic needs to nurture the whole child.

We strive to provide a fun, inclusive and nurturing environment for children to learn, through challenging lessons with an emphasis on progress and achievement. The curriculum design will be broad and ambitious and provide opportunities for the children to learn about the wider world around them. We aim for them to see themselves reflected within the topics and themes that we choose but also to enhance their awareness and understanding of those who are different from them.

Our outside space is extensive and well resourced. We believe that outdoor provision provides opportunities for children to build the characteristics of effective learning which enables them to achieve across the curriculum and build life skills such as team work, resilience and creative thinking.

The strong community of our school is built upon the relationships between all children, staff, governors and parents. By the time our children leave Hartsbourne we believe that they will be confident, inquisitive learners who will have lifelong happy memories. The skills they develop will enable them to overcome any challenges that they meet and prepare them for secondary school and beyond.

#### **RATIONALE**

We believe that children will acquire mathematical understanding in many different ways. Our objective is to assist the children to develop and refine their thinking and deepen their understanding in order to give them the ability to use mathematics fluently and efficiently.

We believe that mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the real world. Mathematics can be used to describe, to illustrate, to interpret, to predict and to explain. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating and exploring new, imaginative worlds. The utility of mathematics is unquestioned, but the skills and knowledge should be embedded in purposeful activities.

## **AIMS AND OBJECTIVES**

We aim for our pupils to develop the ability to adapt their mathematical techniques and strategies to a variety of situations, problems and challenges with growing fluency, mathematical knowledge and enjoyment. They will be able to articulate their ideas and thoughts using a range of mathematical language, in a reasoned and logical manner.

We will achieve this by providing a rich and diverse mathematical curriculum that makes links across mathematical concepts and other curriculum subjects where possible. Children will have the opportunity to learn maths in a range of contexts and environments.

Our vision is to ensure all children will leave Hartsbourne with an enthusiastic, excited and confident approach to maths - enabled with the skills to achieve well throughout their lifetime.

At Hartsbourne School we aim to ensure that all children:

- Become mathematically fluent, can reason and explain mathematically and solve problems.

### **Our Objectives**

In order to develop in children a positive attitude towards mathematics (a growth mindset), involving enjoyment, satisfaction and confidence in application of skills and knowledge, we will:

- ☐ Emphasise the importance of understanding when teaching (abstract) maths concepts.
- ☐ Recognise the importance of maths in everyday life, related to real life situations wherever possible, and used as a means of communication.
- ☐ Recognise the relevance of maths in other areas of the curriculum and teach in an inter-connected rather than an isolated way.
- ☐ Provide broad guidelines, a sense of common purpose, continuity of approach, method, language and content within the school.
- ☐ Provide every child with the opportunity of developing to the full his/her mathematical potential, irrespective of sex, race or social factors, whilst recognising the wide range of abilities and progress that will be encountered.
- ☐ Involve the children fully in all aspects of their learning, including the recognition and assessments of their achievements.
- ☐ Provide an environment that supports and encourages learning through a variety of resources and positive attitudes.
- ☐ Encourage the children to see a progression in their acquisition of knowledge and skills, and to appreciate and express the logical principles involved in mathematics.

## **TEACHING AND LEARNING**

Our children will be regularly exposed to increasingly complex problems to solve, which allows them to apply their maths knowledge. In doing so they are encouraged to develop an argument and line of enquiry, which they can prove and both define whilst using appropriate mathematical vocabulary.

This includes the ability to break down both routine and non-routine problems into a series of steps. At Hartsbourne Primary School we promote the concept that acquiring maths knowledge and skills provides the foundation for understanding the world around us.

We will use the National Curriculum Programmes of Study and the WhiteRoseMaths Schemes of Work to plan high quality lessons. We will provide children with the appropriate manipulatives to tackle problem solving. The White Rose Calculation Policy details the methods used to teach calculation and progression in addition, subtraction, multiplication and division. (This can be found on the school website).

## EYFS

Maths is one of the seven areas of learning and development within the EYFS. A strong grounding in numbers is essential to develop the necessary skills to meet the Early Learning Goals at the end of Reception, and to make good progress in maths as children move through the school. Children need to be able to count with confidence, understanding what each number from 0-10 means. Children need to compare numbers, using the vocabulary more, less, bigger, smaller, the same and equal to, accurately. Children need to be able to subitise to 5, know number bonds to 5 and some number bonds to 10. Children will develop an understanding of patterns within numbers.

Mathematical skills will be learnt, rehearsed and practised in both adult-directed input and through carefully planned enhancements to continuous provision. The Nursery and Reception environment will allow for continuous engagement in mathematics with displays, manipulatives and toys available to support number, pattern, shape, space and measure learning. Opportunities for stories, songs, games, rhymes and imaginative play will be supported both inside and outside.

## KEY STAGE 1 AND 2

We will ensure children in Key Stage 1 are secure in their understanding of number and number relationships and deliver maths in line with National Curriculum guidelines.

From Year 1, all pupils will have a daily mathematics lesson that demonstrates a good balance between whole-class learning, group teaching and individual practice.

It is important that children are allowed to explore maths and present their findings not only in a written form but also visually; to that end the school uses a maths mastery approach adopting the 'CPA strategy' to teaching mathematics: concrete, pictorial, and abstract methods of learning. This will allow the children to experience the physical aspects of maths before finding a way to present their findings and understandings in a visual form before relying on the abstract numbers. There are manipulatives available in every classroom to help facilitate this process.

To deliver the curriculum we offer the children a variety of learning experiences including:

- Directing, instructing and demonstrating
- Explaining, reasoning and illustrating
- Questioning and discussing
- Consolidating and revising
- Problem solving, investigations and games
- Evaluating pupils' responses and summarising
- Access to practical equipment and technology, including calculators and computers.

We believe that effective learning will take place in an atmosphere that encourages exploration and experimentation, and recognise that uncertainty and mistakes are frequent and necessary components of learning. We will encourage a climate where thoughts and ideas are valued and provide children with a variety of opportunities for learning, including:

- Development of mental strategies, consolidation of basic skills and number facts.
- Mathematical discussion and opportunities for problem solving
- Different written methods and recording
- Practical activities
- Investigational work

## **PLANNING AND ASSESSMENT**

In order to inform planning and to assess children's progress, teachers will carry out a range of summative and formative assessments and keep a record of the achievement of the end of year objectives.

Assessment is regarded as an integral part of teaching and learning and is a continuous process. Assessment for learning lies at the heart of successful teaching and in raising standards of attainment. It is the responsibility of the class teacher to assess all children in his/her class. Information for assessment is gathered in various ways, including talking to the children, observing, testing and marking their work in accordance with our current Marking Policy.

Mental maths activities will be carried out regularly throughout KS1 and KS2 to improve children's mental agility. Children will be regularly tested on multiplication tables and prepared for the DfE test in Year 4. Children are provided with feedback either verbally or through written marking in line with the school's marking policy. Same day intervention will take place in lessons enabling all children to make progress. Often, in order to clarify understanding of a concept, children will be asked to respond to feedback, this is completed by the children at the beginning of the next lesson.

Teaching Assistants are recognised as a vital resource in the support of learning at Hartsbourne School. They will be involved at individual and group level in delivering the curriculum and are an important part of the teacher's planning and assessment process.

## **RESOURCES**

We use a variety of curriculum and practical resources to support the learning in mathematics, including: concrete materials in the classrooms, pictorial methods, online resources, appropriate text books, pupil books, games, problem solving activities and assessment materials. These are used in each classroom together with many other resources: practical apparatus, computers and additional worksheets and activities provided by the teacher.

## **INCLUSION**

Maths is taught to the whole class with all children succeeding in reaching the lesson objective. Lessons are carefully planned to include small steps of learning so all children can 'keep up' and access the lesson. Same day or next day interventions will take place across all year groups so that any children who did not achieve a good level of understanding in the lesson are able to catch up before the following lesson. Staff will ensure that oral questions are differentiated to maintain the involvement of **all** abilities. Teachers will use adaptive teaching strategies in lessons to ensure any barriers to learning are addressed and overcome.

All children will have access to reasoning questions and appropriate challenges to allow for a deep understanding and provide opportunity for more able pupils to be stretched. Children working significantly below year group level will work on separate, personalised objectives in Maths to ensure they are making progress and building their understanding of mathematics.

## **CROSS CURRICULAR OPPORTUNITIES**

Throughout the whole curriculum, opportunities exist to extend and promote mathematics. All teachers and Teaching Assistants will take advantage of cross-curricular opportunities as and when it is appropriate to do so.

## PRESENTATION POLICY IN MATHEMATICS

**Aim:** To establish high expectations and pride in our maths learning. To create a clear and consistent guideline for presentation within maths lessons.

### Objectives:

- To use the squares as an aid to calculation
- To motivate every child to present their work in the best possible way.
- To enable pupils to recognise work that is presented to a high standard.
- To ensure each child knows the standard of presentation that is expected of them

### Expectations for Teaching staff:

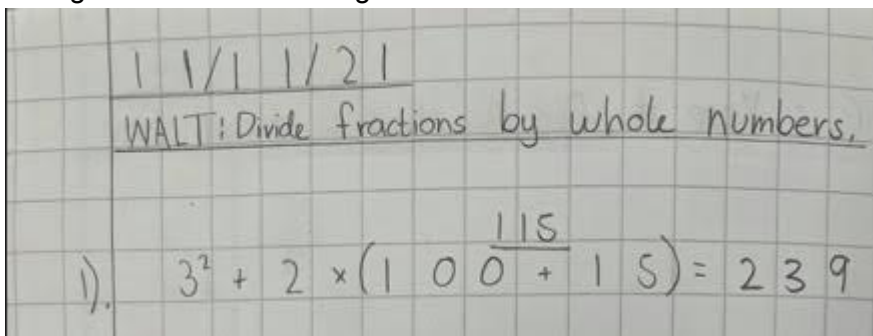
- Remember – the teacher is the most important role model for presentation and high expectations! Use the resources available to you.
- All pupils' work must be marked using the agreed marking policy.
- When sticking work/labels/headings in books ensure they are straight and cut to size.

### Expectations of pupils:

- Pencils should be used in all maths books.
- Margins in books should be drawn in pencil using 2 squares per margin.

### Expectations for layout:

- The date is written in numbers at the top on the left-hand side.
- In Year 1, they use labels that must be stuck at the top on the left-hand side.
- Then, write the learning objective (WALT) on the left hand-side under the date.
- Underline both the date and WALT with a ruler.
- Start your work by missing a line.
- If you make a mistake, draw one neat line through the mistake with a ruler and start again – do not overwrite.
- All figures must be written neatly and clearly with one digit to each square.
- Each calculation and subsequent answer must be clearly numbered or lettered but also distinguishable from workings out/notes.



- When drawing lines to underline, for shapes or any process within mathematics children must use a ruler to ensure accuracy and precision. (Teachers should model using a ruler to encourage the children).

- When calculating children must work vertically rather than horizontally to avoid mistake.

E.g.:

$$25+6=$$

$$25+5=30$$

$$30+1=31$$

$$25+6=31$$

To avoid things like this:

$$25+6=25+5=30+1=31$$

### **Classroom organisation and maths resources:**

- All pupils should have access to the following in every maths lesson: rulers, pencils, erasers, and pencil sharpeners.
- Pupils should have easy access to the appropriate maths equipment for that lesson.
- All resources should be labelled, and children know where the access equipment if they need it to help them learn.

### **Outcomes of presentation policy and monitoring:**

- Pupils of all abilities can present their work to the highest possible standard increasing their confidence and self-esteem.
- There is consistency across the school in terms of the standard of presentation expected in mathematics.
- Progression in presenting work between each class is evident and understood by all pupils and adults.
- The mathematics leaders will monitor awarding House points for exemplary work through termly book scrutiny in conjunction with the schools monitoring schedule and senior leadership.