

# Sheringham Community Primary Maths Policy





## Policy for Mathematics

### Introduction

Outstanding Mathematics teaching is rooted in the development of all pupils' conceptual understanding of important concepts and progression. It enables pupils to make connections between topics and see the 'big picture'. Teaching nurtures mathematical independence and allows time for thinking and encourages discussion. Problem solving discussion and investigation are seen as integral to learning mathematics. (Ofsted 2012)

It is our belief at Sheringham Community Primary School that mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills, fluency and the ability to think in abstract ways.

Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

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 2014)

### Aims

We aim to provide the pupils with a mathematics curriculum which will allow them to become reasoning, resilient, enthusiastic confident and independent in their understanding of mathematics. We also aim to provide stimulating environments and a range of resources to enable pupils to develop their mathematical thinking, problem solving and reasoning skills.

Our pupils should:

- have a well-developed sense of place value, the size of a number and where it fits into the number system
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to figure out numbers mentally
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies with full conceptual understanding
- use appropriate mathematical language in context and where necessary spell mathematical words correctly.
- be able to solve problems and reason using conjecture, justification and proof.
- explain their methods and reasoning, using correct mathematical terms
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2d and 3d shapes

## **Curriculum Content**

In the Nursery and Reception years, the planning follows the Development Matters document as they work towards the Early Learning Goals.

The teaching of mathematics at KS1 and KS2 is based around the New National Curriculum 2014. The subject leaders have written a scheme of work based around the three aims of problem solving, reasoning and fluency. Class teachers assess the amount of coverage given to areas based on the needs of the class. Use of the WhiteRose maths Hub and the NCETM mastery documents are used to provide mastery resources, these are used alongside the school scheme of work.

## **Teaching and marking.**

- In EYFS Mathematical learning takes place through whole class input and structured play both in and outside the classroom.

- Year 1 to 6 children will generally have a daily maths lesson using the School Scheme of work written from the National Curriculum 2014. The timetable is flexible to allow for Maths Mornings and English Mornings – Time given to each subject will be equal.
- Learning Champions at EYFS, KS1 and KS2 focus on targeted pupil groups for intervention. Progress and groups are reviewed each half term.
- Tackling Tables is used at years 2, 5 and 6 (with a view to purchasing for Years 3 and 4 in 2017/8) to support and develop the understanding of tables knowledge.
- Children are encouraged to use and apply maths learning in different lessons and contexts. ICT is encouraged to support learning through the use of the i-pads or the ICT suite.
- Marking – either oral or written is carried out in line with the school marking policy. Marking informs the children of their progress and their next steps. Children are encouraged to ‘purple pen’ their feedback and work.
- Targets- unit targets are set for either the whole class alongside individual targets and assessed and stamped with ‘smiley face’ or ‘target met’ stampers as work is completed.
- Reports – Parents are kept informed of their child’s progress through parents evenings and half yearly reports indicating achievements.

## **Assessment**

### Formative Assessment

Teachers integrate the use of formative assessment strategies such as effective questioning, clear learning objectives, the use of success criteria and effective feedback and response in their teaching.

### Summative Assessment

Using termly tests (Rising Stars), pupils are assessed against NC levels every term. The school’s progress tracking system is updated termly.

National Curriculum tests are used at the end of KS1 and 2.

### EYFS

In EYFS Mathematics areas of Numbers and ‘Shape, Space and Measures’ are assessed in ongoing formative assessment through observation and summative assessment with an aim of GLD.

## Pupil Progress Meetings

Termly Pupil Progress Meetings and data reviews ensure that children's progress is monitored and interventions put in place as necessary.

## **The Mathematics Lesson – Teaching approaches**

Teachers use a range of teaching strategies to engage the children in maths and ensure progress is made by all children within a class; no set formula is used. A typical lesson may include:

- Both teaching input and pupil activities.
- A balance between whole class, guided grouped and independent work, (groups, pairs and individual work)
- Effectively differentiated activities/objectives and appropriate challenge. Children may self- select activities (cold, medium, hot).

Sometimes the focus for the session is new learning, at other times pupils may be practising, to master the application of a concept they have learned earlier. The focus of the session may vary for different children depending on their learning needs.

Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use Mathematics in real contexts. It is important that time is found in other subjects for pupils to develop their mathematical skills, e.g. there should be regular, carefully planned opportunities for measuring in science and technology, for the consideration of properties of shape and geometric patterns in technology and art, and for the collection and presentation of data in history and geography.

## **Classroom Environments**

- Each classroom has a working wall which is updated throughout the learning unit supporting the current area of learning. The working walls should display the learning objective, support the learning, display relevant language, be interactive, and have examples of children's input.
- Manipulatives are key to conceptual understanding and all classrooms should have fully equipped maths resource baskets or trugs. Key items in these should be: base 10, numicon, number lines or tracks, bead strings, 100 squares, digit cards,

counters/cubes. Other items available to the children should be Cuisenaire rods, shapes, maths dictionaries, counting sticks, money, mirrors. In ALL lessons resources should be used and learning based around a CPA (Concrete, Pictorial, Abstract) approach.

- It is the responsibility of the subject leader to ensure that there are resources available to all classrooms, it is the responsibility of the class teachers to ensure that they request and develop maths resource banks for the children.

### **Role of the Subject Leader**

- Ensures teachers understand the requirements of the National Curriculum and helps them to plan lessons.
- Leads by example by setting high standards in their own teaching.
- Prepares, organises and leads CPD and joint professional development.
- Works with the SENDCO and Learning Champions.
- Observes colleagues from throughout the school year with a view to identifying the support they need.
- Keeps parents informed about Mathematics issues – through mathematics learning Cafes.
- Runs math events to promote mathematics in the school– Number Day.
- Discusses regularly with the Head teachers and the mathematics governor the progress of implementing National Curriculum for Mathematics in school.
- Attends CPD through the Mathematics Network and other providers where possible. Reads current publications related to mathematics.
- Monitors and evaluates mathematics provision in the school by conducting regular work scrutiny, learning walks and assessment data analysis.
- Ensure resources are kept up to date and available to all classrooms.

### **Equal Opportunities**

All children have equal access to the curriculum regardless of gender, background or SEND. We aim to incorporate mathematics into a range of experiences enabling all pupils to achieve success and reach as high a standard as possible.

### **Monitoring and Review**

We are aware of the need to review and update the school mathematics policy regularly to take into account of new initiatives, changes in the curriculum and assessment. We will review this policy in September 2018.

Date:.....

Signed:.....

Date presented to governors:.....

Date of next review: September 2018

J TUPPER June 2017