A FAMILY, A FOUNDATION, A FUTURE

# Whitminster Endowed C of E Primary School

## Mathematics Policy

(See also Calculation Policy)

Agreed by Curriculum Committee: Summer 25
Review Date: Summer Term 27

**Intent**

Mathematics is important and integral in all aspects of everyday life and with this in mind we aim to ensure that all children leave Whitminster with an enthusiasm and resilience towards calculations, solving problems and reasoning that will stay with them forever.
This policy, combined with our calculations policy, should be read in conjunction with the 2014 National Curriculum for Mathematics and the Revised Statutory Framework for the EYFS (2021). This should enable teachers to design a programme of activities that is responsive to their own and children's skills and needs in Mathematics at that particular time whilst ensuring continuity, progression and high expectations for attainment. We aim to develop the children's understanding of why we learn maths and how we use it in our everyday lives.

At Whitminster we are committed to and aim to:

- ensure that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order to make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education.
- provide an emphasis on investigation, fluency, problem solving and reasoning within mathematics.
- develop mathematical talk and thinking.
- provide high quality teaching that produces individuals who are numerate, creative, independent, inquisitive, enquiring and confident.
- provide a stimulating environment and resources to develop mathematical skills to the full.
- ensure all pupils become confident and proficient in a range of maths skills and are able to use them in a range of contexts as an essential life skill.
- develop an appreciation of relationships within mathematics.
- develop ability to think clearly and logically with independence in order to be to be numerate in a range of situations and contexts.
- develop mathematical skills and knowledge and quick recall of basic facts.
- give opportunities to apply maths in real contexts across all curriculum areas.
- take pride in being effective mathematicians, whatever their gender, race or home context.
- engage in a range purposeful mathematical play activities to make mathematics fun.

**Implementation**

Mathematics is a core subject in the National Curriculum, and we use the Mathematics Programmes of Study: Key stages 1 and 2 National Curriculum in England (2014), The Foundation Stage Framework (2021) our school long term documentation as the basis for implementing the statutory requirements of the programme of study for mathematics. The Head Teacher and Mathematics Subject Leader are responsible for monitoring the mathematics teaching and learning within our school.

To provide adequate time for developing mathematics, maths is taught daily and discretely. Maths lessons may vary in length but will aim to last about 45 minutes. These lessons focus on fluency, reasoning and problem solving. Our school scheme of work is a working document and as such is composed of ongoing plans. These are adapted daily as teachers are reactive to the learning of the children.

In addition to the daily maths lesson all children will receive an additional arithmetic lesson:
EYFS – opportunities throughout the day to embed the maths focus of the day
Key Stage 1 – 15 minutes daily doing mastering number programme
Years 4 and 5 – 15mins maths mastery daily
Key Stage 2 – 2-3 times a week of 30 minutes to boost and extend the children that need it.

5 mins of arithmetic everyday

All of these lessons have the opportunity for follow up activities if children require further support and recap of the learning taking place.

Mathematical development is taught in a holistic way wherever possible at the Foundation Stage. Teachers of the Reception classes base their teaching on objectives in the Framework for Reception; this ensures that they are working towards the Early Learning Goals for Mathematical Development. Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Revised Statutory Framework for the EYFS (2021) and The White Rose planning documentation. We give all the children ample opportunity to develop their understanding of mathematics. We aim to do this through varied activities that allow them to use, enjoy, explore, practise and talk confidently about mathematics.

Staff are encouraged to use practical and visual models to support children's learning in mathematics. Children of all ages have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. Children use ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods.

Differentiation in our maths lessons at Whitminster should:

- Allow children to reach their highest potential.
- Not pre determine achievement. Intervention at the appropriate time supports the child.
- Promote independent learning.
- Be incorporated into all mathematics lessons in response to pupils' needs and can be done in various ways.
- Provide stepped or supported activities which allow access to activities for the less able pupils.
- Allow for open-ended activities/investigations where differentiation is through outcome and depth of understanding.
- Provide resourcing which provides a variety of resources depending on abilities e.g. place value counters, dienes, numicon, counters, cubes, 100 squares, number lines, mirrors, visual representations.

Teachers plan problem solving and investigational activities daily, following a mastery approach to ensure that pupils develop the skills of mathematical thinking, fluency and enquiry. 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 numeracy skills e.g. measuring in science, properties of shape in technology and the collection and presentation of data in geography.

**Working Walls**

Maths working walls are in every classroom. They are updated regularly to reflect the learning journey through key vocabulary and key challenging questions.

- Display (removable) key vocabulary which you will expect children to use in the lessons
- Vocabulary can be supported with definitions, examples, images etc to support understanding
- Make links to previously taught skills, knowledge or understanding
- Break down methods or steps, showing them visually

**Oracy**

Oracy is incorporated in maths lessons to increase mathematical vocabulary, support children in proving or justifying their answer and to address misconceptions.

Oracy has a particularly important role in Maths reasoning lessons, which have a focus on children verbally communicating their understanding of mathematics accurately. Children work collaboratively to solve a problem and justify their answers. Sentence stems are used to support discussion and used by the children to explain their answers. This is currently being used in Key Stage two.

We use a progression in vocabulary from Reception to Year six (attached to the calculation policy) This is modelled by both teachers and TAs through teaching a lesson, individual and group support. Teachers will model verbally and with written examples.

Stem sentences are used to support the children's understanding of concepts, these are also displayed in the classroom.

**Use of additional Adult Support (including TAs)**

Adult support where available should be used to support children in a variety of ways. Where additional adults are used it is important that they understand the overall aims and objectives for the lesson, so that they are able to reinforce what the teacher has said.

- To support children with SEN.
- To support other children while the teachers supports children with SEN.
- To help implement intervention programmes.
- To help children record their work.
- To help supervise children doing practical work outside the classroom.
- To help children read Mathematical questions.
- To help children to go deeper when required

**Homework**

Reception

Weekly homework is set to link to the learning that is happening in the classroom that week.

Years 1 and 2

Weekly maths homework which will be mostly linked to the number skills the children will have been working on that week in school. Occasionally they may receive work linked to shape or measure. This will be work they are familiar with from prior teaching and should be a manageable activity for them. It is also aimed to be an opportunity for parents to see what their children have been doing in Maths that week. This can be in paper form or on purplemash.

Years 3 and 4

Weekly maths is set linked to the weeks teaching, this is in paper form or on purplemash.

Years 5 and 6
Children will be given one to two pieces of homework once a week, which will reflect either what they have been doing within that week, or the one previously. These tasks will be differentiated depending on the progress of the pupils within those lessons. This will therefore help to secure their learning and allow them to practice methods taught at school.

**<u>Impact</u>**

At Whitminster we endeavour at all times to set work that is challenging, motivating and encourages pupils to think about how they learn and to talk about what they have been learning. Effective pupil tracking enables identification of pupils who may benefit from early ‘intervention’ at an appropriate level. We also recognise, and aim to make provision for, pupils who have a particular ability in mathematics.

Assessment has two main purposes:
assessment of learning (also known as summative assessment).
assessment for learning (also known as formative assessment).

At Whitminster we recognise that assessment for learning (AFL) lies at the heart of promoting learning and in raising standards of attainment. We further recognise that effective AFL depends crucially on using the information gained.

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 always recorded.
- Using knowledge of pupils drawn from ongoing pupil tracking records, Rising Star assessment materials and the Classroom monitor statements 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 ongoing teacher assessment in order to identify gaps in attainment on a half termly basis and after each pupil review meeting with the headteacher.
- Use of information gained from Rising Stars assessment materials, statutory and optional tests. Analysis is done at both a quantitative and qualitative level. Information gained is used to set focused curricular targets (what to teach) and also to determine which strategies or methods are particularly effective in respect of specific areas of mathematics (the how and why).

The school supports teacher assessment through the use of the Insight statements which provide clear criteria against which judgements can be made about year group attainment alongside the termly Rising Star and Twinkl assessments. This is then recorded onto Sonar and analysed in half termly or termly pupil progress review meetings with the Head Teacher.