East Somerset Federation

Bruton
Primary School

Upton Noble
C of E VC Primary School

Maths Policy

Approved by the Governing Body of

The East Somerset Federation

Signed:

Date: September 2023

Date for Review: September 2025

Mathematics Statement of Intent

At the East Somerset Federation, the teaching of mathematics aims to ensure that children are fluent in the fundamentals of the subject; are able to reason, both verbally and in writing; and are also able to solve problems in a range of contexts across the curriculum and in everyday life.

Aims and Objectives

During mathematics at the East Somerset Federation, we aim for every child to:

- recognise the importance of maths in everyday life
- develop a curiosity and a sense of enjoyment about the subject
- develop the ability to think mathematically through reasoning and problem solving in a range of contexts
- have a secure knowledge of age appropriate mental maths skills
- have a sound grasp of the fundamentals which underpin this subject

Planning

We use the National Curriculum statements and White Rose schemes of learning as a starting point for our planning, so that we implement the statutory requirements of the programme of study for mathematics. This means that:

- development matters statements and the EYFS curriculum are used to support planning in Reception
- a dedicated mathematics lesson is delivered on a daily basis
- pupils receive daily opportunities to develop age-specific mental maths skills
- challenging activities are planned, providing appropriately targeted work that will enable children to develop and embed new concepts
- children have opportunities to problem solve in a range of contexts to develop a deeper understanding of a given mathematical concept
- children are exposed to a range of reasoning opportunities – again with the intention of deepening their understanding. *For example. True/False, spot the mistake, odd one out* style questions

- children are exposed to age-specific mathematical vocabulary and this is explicitly shared with them across a unit
- To support teachers with planning, a separate *rapid recall and quick calculations guide* has been written so teachers are aware of age appropriate mental methods to focus on
- To support teachers with the teaching of times tables from year 2 onwards, there is a separate times table policy. (Appendix i)

Resources

During mathematics at East Somerset Federation:

- children should have access to appropriate mathematical resources in lessons; some of these resources are stored in central areas and others are stored in classrooms
- modelling of mathematical ideas with a range of resources should be used so that children are able to move from concrete resources, to pictorial ideals, and finally to abstract concepts
- the Federation has annual subscriptions with White Rose, Classroom Secrets Numbots, TT Rockstars to support the teaching of maths. All teachers are given a unique log-in and encouraged to make use of these resources

Calculation

A separate policy outlines how we teach calculation methods. This is based on the expectations of the National Curriculum, and provides guidance and progression in the methods a child will learn whilst at the East Somerset Federation.

Early Years Foundation Stage

Within EYFS:

- A mathematics lesson is delivered up to 5 times per week
- Children are provided with opportunities to explore maths through purposeful play opportunities
- Learning is extended through guided group work and questioning

- Children are routinely exposed to a range of concrete resources to assist with new understanding of mathematical concepts

Marking and Assessment

For all mathematics:

- written and verbal feedback is given to help guide children's progress
- teachers' marking is in line with the Federation's marking code
- AfL takes place in every lesson with teachers addressing misconceptions as they arise either with individuals, groups of pupils or the whole class.
- termly tests are undertaken to provide teachers with summative assessments to support their own on-going assessment of their pupils' attainment
- a baseline assessment is undertaken as children enter into the Early Years Foundation Stage
- end of Key Stage SATs are undertaken at the end of years 2 and 6

Reporting

Progress and attainment is collated 3 times per year and is shared with teachers and governors.

Parents' evenings are used to discuss children's attainment and progress biannually.

Written reports inform parents of children's progress and attainment at the end of each academic year.

The Foundation Stage profile is completed for children at the end of their Reception year

Monitoring and Review

The monitoring of standards of work and the quality of maths teaching is the responsibility of the maths subject leader. The work of the subject leaders is significant in raising standards and this involves supporting colleagues in their teaching, being informed about current developments in their subject, and providing

a strategic lead and direction in maths. Where possible, subject leaders have specially allocated time for carrying out the vital tasks of reviewing samples of work and visiting classes to observe teaching.

This policy will be reviewed biennially.

Appendix i

East Somerset Federation Times Table Policy

The purpose of this policy is to ensure that all students in the East Somerset Federation develop fluency and accuracy in their times tables by the end of Year 4, as outlined in the national curriculum.

Aims

- By the end of Year 2, students will be able to recall the 2, 5, and 10 times tables as well as the related division facts
- By the end of Year 3, students will be able to recall the 3, 4, and 8 times tables as well as the related division facts
- By the end of Year 4, students will be able to recall all times tables up to 12x12 as well as the related division facts

Expectations:

- There will be a daily times table session in all classes from years 2-6
- Parents/guardians are encouraged to support their child's learning by helping them to practice their times tables at home
- Any pupil struggling with a times table will be targeted with immediate intervention
- All pupils from years 2-6 will receive a login for TT Rockstars and will be instructed to use this from home
- Teachers will regularly update TT Rockstars to ensure the times tables which pupils access match the times tables which are being taught or have previously been taught

Teaching & Learning

- There is a termly planner for years 2, 3 and 4 to support teachers with the sequence of times table delivery
- The direct teaching of times tables ***will begin in year 2 after*** children have been exposed to multiplication and division in the ***Spring term.***
- The whole class will be taught the same times table at the same time
- Times tables sessions will be delivered daily and will last no longer than 10 minutes
- Each session will begin with children drawing an array linked to their focused times table and writing the linked multiplication facts & division facts. The facts will then be chanted together as a class
- All pupils will receive booklets linked to the focused times table and these will be used daily to support the teaching of times tables
- Children must have an appreciation of the relationship between multiplication & division as well as the law of commutativity before following the booklets
- The booklets will begin with the first half of a times table, move onto the second half before including all of the times table facts
- Teachers can use their judgement to deliver alternative sessions such as TT Rockstars or Jill Mansergh's counting stick method but it is important to note that the booklets are the primary mode of delivering times table sessions

Session Structure

- A multiplication fact will be written on the board. Children will need to draw an array which represents this fact. This fact will change each day.
- Pupils will then write the related multiplication and division facts, using the array to support with conceptual understanding.
- Whilst the booklets are being given out, children will be encouraged to chant in multiples of the focused times table
- A counting stick will be displayed on the interactive white board and pupils will chant through the multiplication facts before chanting through the division facts
- Because of children's understanding of the commutative law and inverse relationships, the largest factor in the calculation will always be said first. *(for example 5 x 6 is said as **'six fives are thirty'** or 3 x 10 is said as **'ten threes are thirty'**).*
- The pupils will be given 3 minutes to complete as many of the 40 questions as they can. It is important to ensure that the counting stick stays on the board for pupils to refer to should they need it.
- The questions are to be completed in order with no skipping questions
- Pupils are to record their time should they finish all of the questions before the 3 minutes is complete.
- During marking, the pupils will chant the question and the answer with the teacher, who will be writing the answers on the IWB simultaneously.
- Pupils will then identify the times table fact which they need to learn

Chanting

The way in which the times tables are learned follows very specific chanting. This is an important part of the counting stick phase of the lesson as well when the calculations are being answered.

Multiplication

The full times table fact is read out. We always say the largest factor first so that they are learning the fact one way around only. For example:

6 X 5 = ___ You say: *six fives are thirty*

6 X 8 = ___ You say: *eight sixes are forty-eight*

4 X 6 = ___ You say: *six fours are twenty-four*

Division

We are looking to develop automaticity of division facts as well, and this is achieved seeing the division fact as a multiplication fact. In the examples below, mmmmm represents the missing answer

18 ÷ 3 = ___ You say: '*mmmmm' threes are eighteen*, *six threes are eighteen*

15 ÷ 5 = ___ You say: '*mmmmm' fives are fifteen*, *three fives are fifteen*

Intervention

- Children must have an appreciation of the relationship between multiplication & division as well as the law of commutativity before following the scheme. Pupils who don't will receive intervention to develop this understanding
- Pupils who are unable to recall the focused times table in line with their peers must be targeted for immediate intervention to ensure they keep up
- Intervention can take the following forms
    - A second afternoon session using the booklets
    - Chanting through the facts using a counting stick
    - TT Rockstars
    - Focused teaching of a specific fact using arrays and linking the associated multiplication & division fact
- For pupils who are significantly behind their peers, they should receive the same sessions but at a level which suits their needs
- At the beginning of year 5, any pupils who scored below 15 on the MTC, will be immediately identified for daily intervention

Assessment

- At the end of year 4, pupils will sit the Multiplication Check (MTC). This is statutory for all year 4 pupils.
- At December and Easter data drops, year 4 pupils will complete a non-statutory multiplication check to identify pupils who may need additional support
- At the end of year 3, pupils will be tested on the 2,5,3,4,8 times table across the course of a week in June/July (a test for a times table each day)
- At the end of year 2, pupils will be tested on the 2,5,10 times table across the course of a ween in June/July