MATHS CALCULATION POLICY - YEAR 3

PURPOSE

This policy outlines the agreed approach to teaching calculation in Year 3. It ensures:

- Consistency of models, language and expectations across classrooms.
- A secure transition from Year 2 foundations into more formal written methods.
- Continued emphasis on number sense through Mastery Number.
- Alignment with NCETM Curriculum Prioritisation for main maths teaching.

AIMS

- Strengthen and extend number sense through structured small-step teaching.
- Deepen understanding of place value within 1000.
- Use consistent representations to expose structure and support reasoning.
- Build fluency through daily rehearsal and intelligent practice.
- Develop precise mathematical language and encourage pupils to justify their thinking.
- Depth before acceleration; pupils move together through the curriculum.

KEY LEARNING EXPECTATIONS

1. Number Sense and Place Value

Year 3 pupils will:

- Understand numbers to 1000, including hundreds, tens, and ones.
- Partition numbers flexibly (e.g., 462 as 400 + 60 + 2 or 300 + 160 + 2).
- Compare and order numbers using place-value reasoning.
- Count in steps of 4, 8, 50, and 100.
- Recognise patterns and relationships within the number system.

2. Addition

Conceptual Understanding

- Combining quantities.
- Increasing a number.
- Understanding addition as part-whole and as movement along a number line.
- Recognising addition as the inverse of subtraction.

Strategies

- Counting on using place value.
- Bridging through multiples of 10 & 100.
- Using known facts & related facts.
- Expanded column addition (conceptual structure only).

Fluency Expectations

- Addition within 1000 using place-value strategies.
- Secure use of number bonds to 10, 20, and 100.
- Confident mental addition using partitioning.

3. Subtraction

Conceptual Understanding

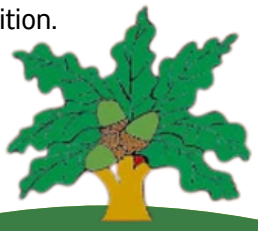
- Removing from a quantity.
- Finding the difference.
- Understanding subtraction as part-whole and as movement backwards on a number line.
- Recognising subtraction as the inverse of addition.

Strategies

- Counting back.
- Counting on to find the difference.
- Using known bonds.
- Expanded column subtraction (conceptual structure only).

Fluency Expectations

- Subtraction within 1000 using place-value strategies.
- Confident mental subtraction using partitioning and adjusting.



Equally Important, Equally Different

4. Multiplication

Conceptual Understanding

- Multiplication as equal groups.
- Multiplication as repeated addition.
- Understanding arrays and the commutative property.
- Scaling and multiplicative relationships.

Facts

- Secure 3, 4, and 8 multiplication tables.
- Strengthen 2, 5, and 10 tables from Year 2.
- Use related facts (e.g., 4 × 8 linked to 2 × 8).

5. Division

Conceptual Understanding

- Division as sharing equally.
- Division as grouping.
- Understanding the relationship between multiplication and division.
- Interpreting remainders informally.

Facts

- Division facts linked to 3, 4, and 8 multiplication tables.
- Secure division facts for 2, 5, and 10.

6. Fractions

Year 3 pupils will:

- Understand unit fractions as equal parts of a whole.
- Recognise and find fractions of sets and shapes.
- Begin to understand non-unit fractions.
- Use bar models to represent fractions.
- Compare and order simple fractions.

REPRESENTATIONS & MODELS

Year 3 teachers will use the following consistently:

- Part-whole models for addition and subtraction.
- Number lines for addition, subtraction, multiplication, and division.
- Base-10 equipment and place-value counters for place value and calculation.
- Arrays and bar models for multiplication and division.
- Bar models for fractions.
- Concrete manipulatives.

Representations must be used to expose structure and support reasoning.

MENTAL FLUENCY EXPECTATIONS

By the end of Year 3, pupils should have secure fluency in:

- Addition and subtraction within 1000.
- Number bonds to 10, 20, and 100.
- Multiplication facts for 2, 3, 4, 5, 8, and 10.
- Related division facts.
- Counting in 4s, 8s, 50s, and 100s.
- Efficient mental strategies using place value.

WRITTEN METHODS

Year 3 introduces early written structures that prepare pupils for formal methods in Year 4. Pupils record using:

- Number sentences.
- Part-whole diagrams.
- Number lines.
- Base-10 drawings (hundreds, tens, ones).
- Expanded addition and subtraction (conceptual only).
- Early short multiplication (conceptual structure only).

Formal compact column methods are not taught in Year 3.

MATHEMATICAL LANGUAGE

Teachers model and expect precise vocabulary, including:

- Addition: add, plus, total, sum, altogether, increase.
- Subtraction: subtract, minus, take away, difference, decrease.
- Multiplication: multiply, times, equal groups, lots of, product, commutative.
- Division: divide, share, group, quotient, remainder.
- Fractions: unit fraction, numerator, denominator, equal parts.

Language is embedded in daily routines and reasoning discussions.

ASSESSMENT

Teachers use:

- NCETM Curriculum Prioritisation Assessments.
- Daily formative assessment through questioning, observation, and pupil talk.
- Small-step intervention for pupils needing additional practice.

INCLUSION

All pupils access the same curriculum. Support is provided through:

- Concrete manipulatives.
- Pre-teaching.
- Guided practice.
- Structured rehearsal.
- Challenge is provided through depth, not acceleration.
- Targeted Interventions.

EXPECTATIONS OF TEACHERS

- Follow NCETM Curriculum Prioritisation for planning.
- Deliver daily Mastery Number sessions.
- Use consistent representations and language.
- Prioritise depth and secure understanding.
- Engage with ongoing professional development linked to mastery.

Created & Implemented	1st September 2026
Persons Responsible	Maths Leaders
Next Review Date	September 2027