



## Blackwater Mathematics Strategy 2023 - 2024

### Statement of Intent

Mathematics is an important creative discipline that helps us to understand the world. We want all pupils at Blackwater Primary School to experience the beauty, power and enjoyment of mathematics and develop a clear understanding and curiosity about the subject.

- We foster positive 'can do' attitudes and we promote the fact that 'We can all do maths!'
- We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through manageable steps.
- We use mistakes and misconceptions as an essential part of learning and provide challenge through rich problems.

At our school, the majority of children will be taught the content from their year group only. They will spend time becoming true masters of content, applying and being creative with new knowledge in multiple ways.

In line with the 2014 National Curriculum for Mathematics we aim for all pupils to:

- become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics.
- reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
- be able to solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios

### Statement of Implementation

Teachers create a positive attitude 'can do' mindset in relation to learning in mathematics within their classrooms. We reinforce an expectation that all children are capable of achieving high standards in Mathematics.

Our whole school approach to the teaching and learning of Mathematics involves the following;

### Planning

- Objectives are taken from the new EYFS framework, forming a coherent and progressive programme of study.
- Children in EYFS and KS1 are taught number sense through mastering number programme.
- In KS1 and KS2, objectives are taken from the National Curriculum, forming a coherent and progressive programme of study.
- Learning is taught in 'blocks' but follows a 'spiral' plan, revisiting topics in a rolling programme.
- Planning is in small steps using the NCETM PD for teaching guidance.
- Long term planning has been adapted based on a focus on number and calculation.

### Lesson Design

- In EYFS children will be taught daily and activities planned through continuous provision.
- Children will be taught as a whole class or as separate year groups depending on the topic.
- Children participate in mastering number programme using whole class, small group and continuous provision activities to embed understanding.

### Book Work

- EYFS have a 'maths' book to compile evidence of learning.
- Children working below ARE track progress using Tapestry.
- Children are encouraged to record their learning in continuous provision.

### In KS1 and KS2

- All work is recorded in yellow books.
- All work is dated and includes learning objectives.
- Fluency, Twist, Deep Dives will be signposted to show the progression in the learning with the lesson.
- Learning is interleaved daily and signposted as 'Fluency Old Learning' in KS1
- Learning is interleaved daily and signposted as 'spiral maths' in LKS" and 'fluency old learning in UKS2.
- Because bubbles will be used to evidence reasoning.

## Teaching and Learning

### In EYFS:

- Children will be taught the objectives from the new EYFS framework and the NCETM Mastering Number programme.
- Children will be taught within their year group objectives.
- Children will be taught in small steps.
- Children will learn using concrete, pictorial and abstract representations.
- The school calculation policy gives guidance on representations and procedures to ensure consistency.
- Pre-teach will be used to support struggling children.
- Children working outside their year group will be supported through interventions planned by the teacher.
- Children on the SEN register will access maths using 'Breaking Barriers'
- Children 'on alert' will be given targeted support (NCETM for guidance) to enable them to progress.
- In KS2 children working below or well below will be supported by in school maths tutor.
- Varied reasoning and problem solving will be taught within the lesson or sequence of lessons.
- Stand alone fluency sessions will embed the understanding of number and four operations
- KS1: Mastering Number KS2: Freckle
- Children from Reception to Year 6 will use the 99 club to support fluency in the four operations.

## Working Walls

- All classes have a working wall.
- KS1-KS2 walls display:
  - fluency, reasoning, problem solving
  - learning objectives and small step pyramid
  - vocabulary
  - reasoning question stems
  - examples of the children's learning.
  - Signposting of small steps being 'nailed'.
  - Declarative knowledge for term (sticky facts)

## Assessment

### Feedback:

- Children are formally assessed every term using NFER tests. (Year 1 will be tested from Spring 2).

- The lowest 20% are identified and supported by interventions planned by the teacher.
- Termly pupil progress meetings analyse need and provision.
- Teacher assessment is analysed using insight every half term.
- Whole class feedback is used in KS2 to support high expectations for all children and to address misconceptions promptly.
- In KS1 marking is completed in class orally and misconceptions addressed same or next day.

### Statement of Impact

Children at Blackwater have a positive attitude towards Mathematics and pupil conferencing evidences the enjoyment of maths across the school. This positive mindset, high expectations, quality first teaching and high levels of engagement will ensure all children are progressing and achieving their potential in Mathematics.

Focus on the importance of early number was a key focus for us last year and we continue to build on progress. Mastering number has been successful in raising children's recall of number bonds, understanding of relationships as well as improving children's attitude and confidence to communicate their thinking in maths. Entering our second year we are seeing the impact of the programme.

Fluency continues to be a key focus for us this year and we are assigning additional time to fluency sessions across KS1 and KS2. Our aim is that ALL of our children have automaticity in recall of number facts as well as an in depth understanding of additive relationships on entry to KS2.