Boston Endeavour Academy **Mathematics Policy**
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Mathematics Policy

1. Introduction

Mathematics is a vital life skill that enables pupils to understand the world around them, develop problem-solving abilities, and build confidence in their capacity to think logically and creatively. In our school, we recognise the wide range of abilities, needs, and learning styles of our pupils, and we aim to provide a curriculum that is accessible, meaningful, and aspirational for all.

2. Aims

- To provide every pupil with a positive experience of mathematics.
- To develop mathematical skills that promote independence, functional application, and lifelong learning.
- To ensure teaching is adapted, personalised, and inclusive, addressing the diverse needs of pupils with special educational needs and disabilities (SEND).
- To foster enjoyment, curiosity, and resilience in mathematical thinking.
- To support pupils in applying mathematics across the curriculum and in real-life contexts.

3. Curriculum

- Pre-formal pathway: Pupils at a pre-formal stage learn best through rich, sensory experiences, so the focus is on exploring resources freely, noticing simple cause-and-effect, and engaging in early problem-solving through play. They benefit from hands-on sorting activities, exposure to numbers and shapes in their environment, and opportunities to listen to number and shape songs that build familiarity in a gentle, meaningful way. Learning is highly individualised, often through 1:1 interaction that follow each pupil's interests to support engagement, curiosity, and early awareness of mathematical ideas. This pathway is designed to provide our pupils with the opportunities to improve their sensory skills, develop their awareness and ensures that skills are advanced, over learnt and generalised in new and engaging contexts. The outcomes of this pathway are not to be followed in a particular order, and there are no expectations that any pupil will cover a certain number of them. Within this pathway we link learning to the Engagement Model and focus on the five areas of Engagement. This will look different for each pupil.

- Informal pathway: Pupils working at an informal stage begin their mathematical and cognitive development through hands-on, sensory-rich activities that focus first on exploring cause-and-effect. Experiences such as shape sorters, inlay jigsaws, and other manipulative tasks allow pupils to experiment, discover, and understand how their actions produce predictable outcomes. These activities are repeated in varied ways to provide rich, in-depth sensory experiences that support cognitive growth. Building on this foundation, pupils begin to develop problem-solving skills, experimenting with matching, sorting, and identifying similarities and differences in objects. Through these tasks, they gradually recognise properties such as shape, colour, size, and number. Learning is carefully adapted to individual needs, often supported 1:1 or small groups, and delivered in short, engaging activities such as tray tasks, number songs, and structured exercises that encourage curiosity, attention, and independent thinking. This approach creates an exploratory environment where pupils develop early mathematical knowledge while strengthening cognition, reasoning, and understanding of their world.

- Semi-formal pathway: Pupils working at a semi-formal stage learn through a balance of practical activities and worksheets, supported by concrete resources that match the needs of each group. Teaching is adaptive, provided with vocabulary sheets and clear learning outcomes to guide their progress. Practical modelling from the class lead, alongside explicit teaching, helps pupils understand new concepts, while hands-on tasks and structured written work reinforce learning in meaningful, accessible ways.

- Formal pathway: The formal curriculum, using the White Rose Curriculum, builds mathematical understanding in carefully sequenced small steps that develop fluency, reasoning, and problem-solving. Learning is structured to revisit and deepen key concepts over time, supported by manipulatives, clear representations, and explicit vocabulary teaching. Ongoing assessment helps address misconceptions and encourages pupils to explain their thinking. Overall, the curriculum aims to develop confident, independent learners who can make meaningful mathematical connections.

- Post 16 pathway: The post 16 curriculum focuses on preparing pupils for adulthood through a blend of functional skills, vocational learning, and personal development. Teaching follows a clear structure that introduces new concepts, models them, practises them with support, and then encourages increasing independence. Lessons combine practical activities, real-life tasks, and structured learning to build communication, numeracy, employability, and life-skills. Pupils work towards meaningful accreditation, develop confidence in everyday situations, and gain the knowledge and experiences needed to move into further education, supported employment, or community participation.

- Accreditation offer: The NCFE maths qualification helps learners build practical numeracy skills they can use in everyday life, work, and further study. It focuses on number, measure, shape, data, and problem-solving, using real-world contexts to develop confidence and independence.

4. Calculation policy

Please see current Maths calculation policy located here - BEA-Calculation-Policy.pdf.

5. Teaching and Learning

- Explicit teaching of mathematical language.
- A range of strategies are used, including concrete, pictorial, and abstract approaches (CPA).
- Use of assistive technology, visual supports, and manipulatives to aid understanding.
- Small-step progression to ensure success and build confidence.
- Opportunities for overlearning and consolidation are provided regularly.
- Real-life and community-based contexts are emphasised to support functional application (e.g. shopping, cooking, travel).

6. Adaptations and Support

We recognise that pupils may face a wide range of barriers to learning in mathematics. To ensure access and progress for all, teaching will be adapted to address the following difficulties where required:

- **Mathematical Vocabulary**: Pre-teaching of key terms, consistent use of symbols and visuals, and opportunities for overlearning.
- **Word Problems**: Simplifying language, providing visual supports, breaking problems into smaller steps, and modelling strategies.
- **Symbols and Notation**: Use of colour-coding, larger print, and tactile resources to reinforce understanding.
- **Working Memory Difficulties**: Step-by-step scaffolds, visual reminders, checklists, and opportunities to revisit prior learning.
- **Slow Processing**: Allowing extra time, reducing the quantity but maintaining the quality of work, and focusing on depth over speed.
- **Sequencing Challenges**: Visual aids (timelines, number lines, step cards), repetition, and structured routines.
- **Abstract Concepts**: Use of concrete resources and real-life contexts before moving to pictorial and abstract representations.
- **Dyscalculia and Poor Number Sense**: Personalised interventions, daily fluency practice, and highly structured, cumulative teaching approaches.
- **Place Value**: Use of manipulatives (base 10, Numicon, place value grids), visual supports, and practical application.

- **Attention and Focus**: Short, varied activities with movement breaks and multisensory engagement.
- **Impulsivity**: Promoting self-check strategies, checklists, and structured reflection before finalising answers.
- **Organisation**: Providing templates for column work, squared paper, and explicit teaching of layout.
- **Maths Anxiety and Low Resilience**: Growth mindset approaches, celebrating small successes, reducing emphasis on speed, and normalising mistakes as part of learning.
- **Fine Motor Difficulties**: Adapted tools (grips, larger pencils, accessible rulers and compasses, digital alternatives).
- **Visual Processing**: Use of overlays, enlarged print, clear spacing, colour coding, and accessible graphing resources.

Staff are expected to incorporate these adaptations into lesson planning and delivery to ensure equity of access and meaningful progress.

7. Assessment

- Assessment in maths including Evidence for Learning provides a clear picture of each pupil's journey. Baseline information establishes pupils' starting points and identifies gaps or strengths. Progress is tracked continuously through observations or book work. Attainment is evaluated against the engagement model and personal learning goals for pre-formal and informal learners; trust curriculum objectives for semi-formal and formal learners and NCFE objectives for post 16 pupils.

7. Roles and Responsibilities

- Head teacher:
    - Ensures the maths curriculum aligns with the school's vision, statutory requirements, and trust expectations.
    - Provides strategic oversight of teaching and learning, resourcing, and staff development in maths.
    - Monitors pupil outcomes and holds leaders accountable for progress and attainment.
    - Supports a culture where high-quality maths teaching is prioritised across the school.
- Curriculum senior leader:
    - Oversees the design, coherence, and progression of the whole-school curriculum, including maths.
    - Ensures the maths curriculum is sequenced effectively and aligns with wider curriculum intent.
    - Works with subject leaders to evaluate impact and drive improvement.
    - Leads professional development linked to curriculum implementation.
- Math Subject Leader (Trust wide)

    - Provides strategic leadership for maths across all trust schools.
    - Ensures consistency in curriculum design, assessment, and pedagogy.
    - Leads trust-wide CPD, moderation, and resource development.
    - Analyses trust-level data to identify priorities and support school-based leaders.
- Maths Coordinator: (school specific)
    - Oversees the implementation of the maths curriculum within the school.
    - Supports teachers with planning, subject knowledge, and use of agreed schemes (e.g., White Rose).
    - Manages maths resources and acts as the link between the school and trust-wide leadership.
- Teachers:
    - Deliver high-quality maths teaching aligned with the school's curriculum and pedagogical expectations.
    - Use assessment to inform planning, address misconceptions, and support pupil progress.
    - Promote fluency, reasoning, and problem-solving through effective use of representations and vocabulary.
    - Maintain accurate records of attainment and engage in ongoing professional development.

8. Resources

A range of resources are available across the school to support the curriculum pathways. These include:

- Manipulatives
- Interactive whiteboards, apps, and specialist software
- Adapted materials (large print, tactile, symbol-supported)

9. Monitoring and Evaluation

- Progress and attainment are checked at the start of each long term through looking at observations and data on Evidence for Learning and pupil progress meetings.
- Quality of teaching is reviewed by subject splashes taking place twice a year.

10. Review

This policy will be reviewed every two years, or earlier if significant changes are required.

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