



Mathematics curriculum statement

“Mathematics is, in its way, the poetry of logical ideas.” Albert Einstein

Intent

At Boston West Academy, the aim of our mathematics curriculum is to equip our pupils with the necessary knowledge and skills to be fluent in the fundamentals of number, to be able to reason mathematically and to solve a range of routine and non-routine problems. We want our pupils to develop a sense of enjoyment and curiosity about mathematics and to be able to share their mathematical thinking with others. It is our intent that pupils recognise the importance of mathematics in the wider world and can use a wide range of mathematical skills confidently in their everyday lives. We want our pupils to develop resilience in tackling mathematical challenges. In order to do this, our pupils need to be able to identify patterns and relationships between numbers, make connections across mathematical ideas and representations, think logically and work systematically.

Implementation

The mathematics curriculum at Boston West Academy is underpinned by the EYFS Framework and the National Curriculum. The core principles of our mathematics curriculum reflect those found in high-performing education systems internationally and these convey how our curriculum is implemented, through a mastery approach.

Our expectation is that the vast majority of pupils will move through the programmes of study at broadly the same pace. To aid mastery of new concepts, we ensure that learning always builds on prior knowledge. Pupils who grasp concepts quickly will be given sophisticated problems and investigative tasks to deepen their understanding further. Those pupils who have struggled to ‘master’ new concepts are given opportunities to consolidate their understanding through targeted support or intervention.

To ensure whole school consistency and progression, the school uses the White Rose Maths schemes of learning to guide mathematics planning. Lessons are carefully crafted, following small steps progression that are informed by ongoing assessment for learning.

To ensure that all pupils develop sound fluency skills, there is time at the beginning of each mathematics lesson for pupils to complete a fluency ‘quiz,’ providing a daily opportunity to practise and consolidate prior learning.

Working together for success





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To reduce pupils' cognitive load, the use of teacher modelling, worked examples and scaffolding are a key feature of all maths lessons in our school. The use of concrete resources, pictorial representations and abstract thinking (the CPA approach) helps pupils to explore concepts and problems in a tangible way. Previously covered concepts can be reviewed by pupils on the maths working wall in each classroom. Relevant mathematical vocabulary is discussed in each lesson and stem sentences are used to support pupils in proficiently articulating their mathematical reasoning.

Throughout each mathematics lesson, teachers use precise questioning to check pupils' conceptual and procedural knowledge. Teachers endeavour to provide immediate feedback to individuals, groups or the whole class verbally or through pupils self-marking and any misconceptions are promptly addressed. NTS mathematics assessments are used to monitor progress and identify gaps three times yearly from year 1 (summer term) to year 6.

Impact

- Pupils will be enthusiastic mathematicians
- Pupils will be fluent in the fundamentals of number
- Pupils will be able to use mathematical reasoning to choose appropriate problem solving strategies
- Pupils will be able to solve routine and non-routine problems
- Pupils will confidently communicate their mathematical thoughts and reasoning
- Pupils will be able to apply their mathematical skills and knowledge to real life situations
- The percentage of pupils working at ARE will be at, or above, national averages
- The percentage of pupils working at greater depth will be at, or above, national averages
- There will be no significant gaps in the progress of different groups

Emma Bills, April 2021

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