

Intent:

At Broadfield Academy, we believe Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides pupils with a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

The aims of our Mathematics curriculum is to deliver a curriculum that is accessible to all pupils, so they know more, remember more and understand more. Our Mathematics curriculum aims to:

- ✚ Build a Mathematics curriculum that develops solid mathematical learning behaviours to help pupils be successful in the subject and across other curriculum areas.
- ✚ Develop the acquisition of fluent knowledge and problem-solving skills in Number, Measurement, Geometry, and Statistics, so that all pupils know more, remember more, and can do more.
- ✚ Give pupils at least the basic Maths skills so they can access the next stage of their school Maths education.
- ✚ Foster a sense of deep understanding in pupils that Maths is a key skill that is required in school and beyond and contributes to being a capable and independent adult in the wider world.

Implementation:

At Broadfield Academy, our Maths Curriculum reflects the guidance stated in the National Curriculum. Maths lessons follow clear, sequential teaching steps outlined by White Rose Maths. We expect all our teachers to follow the sequence outlined on their year group Curriculum Overview. Maths lessons include:

- ✚ Developing fluency, reasoning skills and competency
- ✚ Using concrete, pictorial and abstract representations to explore and consolidate conceptual understanding
- ✚ Specifying key mathematical vocabulary to be used and its meaning
- ✚ Making rich connections across mathematical ideas
- ✚ Solving increasingly sophisticated problems
- ✚ Reasoning and justifying through conjecturing and generalising
- ✚ Applying knowledge to rich tasks and real-life experiences to gain an understanding of the world

Online Maths Resources:

We use a range of online resources to enhance the Mathematics curriculum:

- ✚ Mathletics
- ✚ Times Tables Rock Stars
- ✚ White Rose
- ✚ Numb Bots

The National Curriculum for Maths aims to ensure that all pupils:

- ✚ Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- ✚ **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- ✚ Can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Scheme of Work:

We use the **White Rose Maths** scheme of work to teach and develop pupils' mathematical knowledge, skills and understanding.

Please see the Maths curriculum overview for further information of the skills covered in each year group.

Basic Skills:

Number sense and place value have a high priority throughout the school. We follow the White Rose Maths: Calculation Policy to ensure clear progress in the development of pupils written methods for addition, subtraction, division and multiplication. English, Maths and ICT skills are taught during discrete lessons and are interwoven across the wider curriculum, so children can apply and embed the skills they have learnt in a purposeful context. Times tables are taught systematically to promote rapid recall. Pupils have access to online platforms at school and at home including 'Times Table Rockstars' (Y2-6) and 'Mathletics' (Y1-6) and are expected to complete weekly homework to promote fluency.

Cultural Capital:

Where possible, we do our best to make Maths come alive! We plan trips, visits, invite visitors in and take children out into the community and local environment to provide first-hand experiences, to support and develop learning and life-skills. We recognise that to have impact, the planned cultural capital must be clearly linked to real-life experiences, so it can be acquired and applied to what pupils already know. Rich experiences include outdoor learning at our Forest School in EYFS, financial literacy link with Metro Bank in the wider community and inter-school maths competitions.

Impact:

Ultimately, the impact of each pupils' Mathematics curriculum journey will enable them to:

- ✚ Be resilient learners and have a confident and positive attitude towards Mathematics.
- ✚ Be secure in arithmetic methods and use these along with times table facts to solve real-life problems fluently.
- ✚ Develop their ability to reflect on their methods and adapt their approaches when necessary.
- ✚ Reason and justify their thinking using mathematical vocabulary and a wide range of representations.
- ✚ Recognise that maths is essential for everyday life and use the skills they have learnt in school and beyond.