

Rationale & Intent

The teaching and learning of maths at Brentry Primary school helps us achieve our school Mission. It impacts directly on the areas of **Achievement** and **Enjoyment**, helping pupils, among other things, to apply numerical skills confidently, think to solve problems, rise to a challenge and love learning.

Our intent is to develop a culture of deep understanding, confidence and competence in maths – a culture that produces strong, secure learning and real progress. We want pupils to become fluent in the fundamentals of mathematics, to be able to reason and solve problems. To help facilitate this, we use the White Rose Maths mastery curriculum, which is an ambitious, connected curriculum accessible to all pupils from Reception to Year 6. Their mission is to help every teacher to be a world-class teacher of mathematics, through providing National Curriculum content, pedagogic advice, suggestions and sample materials in a structured, coherent curriculum that develops pupils into mathematical thinkers. White Rose provide guidance to help pupils become visualisers, describers and experimenters.

Our pupils generally enter our Reception Class with poor basic skills. We therefore need to place an emphasis on fluency with number, particularly in the first few years. Reasoning and problem solving skills are not forgotten – indeed we place an expectation that opportunities to develop these are provided in each lesson. However, the fundamentals must be in place first, and White Rose gives us the early emphasis on number that we need, and the flexibility to deliver what *our* pupils need. The documents included with this statement on the website, including the Schemes of Learning, Guide to Progression and the calculation policies show what we intend to teach and when. They show how we have organised the curriculum in order to meet our aims, and what skills and knowledge we want children to have gained by certain ages.

We believe that all pupils can succeed in mathematics. We don't believe that there are individuals who can do maths and those that can't. We do understand that there will be pupils that need more support to access the curriculum and succeed, and we endeavour to help out through things such as pre and post teaching, additional adult support, intervention programmes and Individual Learning Plans.

We also use opportunities to develop cultural capital through focuses on famous mathematicians and their work, and through a look at the history of mathematical development. By building confidence, resilience, interest and a passion for maths, we hope to show that whatever your prior experience or preconceptions, maths is an exciting adventure that everyone can enjoy, value and master.

Implementation

White Rose is based on the mastery approach which is used so successfully in countries such as Singapore. It breaks the curriculum down into small, manageable steps that all children work on in a daily lesson together. Those that need a bit more support are given additional help either in the lesson, before or afterwards. Those that need more challenge are given rich tasks and deeper problems to build a more profound understanding.

There is a distinct focus on number work. Children who have an excellent grasp of number make better mathematicians. Spending longer on mastering key topics will build a child's confidence and help secure understanding.

We use a range of mathematical resources in classrooms including Numicon, Base10 and counters (concrete equipment). When children have grasped a concept using concrete equipment, images and diagrams are used (pictorial) prior to moving to abstract questions (the CPA approach).

Our pupil's maths diet is enriched using resources provided by the NCETM and NRICH, and fluency is supported by the use of Times Table Rock Stars. We also aim to apply mathematical skills in other subject areas using a cross curricular approach, and hold an annual Maths Week that brings the whole school together to concentrate on maths themes.

Through our teaching we continuously monitor pupils' progress against expected attainment for their age, making formative assessment notes where appropriate and using these to inform our teaching. Pre and post assessments are completed before each main topic, to show progress. Summative assessments are completed at the end of each seasonal term (using PUMA tests); their results are added to our school data tracker and inform discussions in termly Pupil Progress Meetings. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child.

Impact

The impact of the teaching and learning of maths is monitored regularly through things such as pupil book looks, lesson observations and pupil conferencing. These indicate that the mastery approach is well understood and followed, and that reasoning and problem solving are given priority in lessons. There is evidence to show that the more able are challenged and less able supported, where appropriate. Teachers are confident and model well. Pupils are positive about their learning and believe they can learn new concepts and apply existing skills. They demonstrate a quick recall of facts and procedures. Pupils use acquired vocabulary in maths lessons. They have the skills to use methods independently and show resilience when tackling problems.

Formal assessments show that the large majority of pupils are on track in terms of age related expectations, and this improves as they make good progress throughout the school. They start from a relatively weak position as they come into Reception, approach or match national figures by the end of KS1, and exceed them by the end of KS2.

Monitoring outcomes, results and data analysis are shared with teachers and Governors. Any developmental points that arise are used to inform the annual action plan and programme of CPD for staff.

Ultimately, most children talk enthusiastically about their maths lessons and speak about how they love learning about maths.