

MATHS: CURRICULUM STATEMENT

Intent

At St Mary's we believe that maths is for everyone and that learning mathematics should be fun and enjoyable. We want our pupils to grow into mathematical thinkers and develop self-belief, persistence and resilience. Teachers ensure that pupils feel welcome, supported and safe to 'have a go'; mistakes are framed as learning opportunities which helps to grow a positive growth mind-set. We have ambitious expectations for all; students are encouraged to take pride in their work, to try their best in every task and to ensure their behaviour and attitude reflect the high standards expected of St Mary's pupils. We want pupils to be successful members of the community and to maximise their life opportunities. It is the intention of our curriculum, enrichment opportunities and intervention to enable this. We want students grow in mathematical fluency, building their skills and becoming able to reason and to solve problems. We want mathematicians at St Mary's to be successful in meeting or exceeding their FFTD20 targets.

Implementation

We base our KS3 schemes of work on the White Rose Maths model; WRM is an ambitious, connected curriculum accessible to all pupils. All classes follow the same SOW which is written based on the WRM secondary progression map. The WRM resources link to the KS3 and KS4 National curriculum and allow teachers to see which topics pupils have previously covered and where they will be revisited and extended in the future. It also helps teachers and pupils to see the links between topics, for example, the block on Multiplicative relationships covers best buys, similarity and currency conversion. The SOW is made up of small steps to avoid cognitive overload and focuses on developing deep understanding rather than memorisation. While many curriculum subjects are about sharing knowledge, teaching maths is about building an interconnected understanding. The concepts which pupils need to understand and become skilled in are often highly abstract; we carefully sequence and adapt lessons to help pupils to develop their conceptual understanding of mathematics by using concrete objects, pictorial representations and abstract thinking. We place great emphasis on mathematical language and questioning so pupils can discuss the mathematics they are doing, and to support them to take ideas further. We coherently plan, sequence and adapt our curriculum to meet the unique needs of all of our learners. Each class teacher carefully adapts the SOW for their pupils and colleagues at St Mary's routinely co-plan and share ideas and best practice on a regular basis. The maths department ensure that pupils are engaged and challenged and that the SOW is adapted to suit the needs of each class. Differentiation is delivered by, for example: varying the degree of support provided, using enabling and extending questions, and providing or asking for alternative representations (CPA approach). Teachers use careful questioning to encourage mathematical thinking and to identify and address misconceptions. Conceptual and procedural maths taught together, pupils should know 'why' as well as knowing 'that' and knowing 'how'. We understand the importance of regularly revisiting and recalling content, each lesson begins with a 'Flashback' starter, teachers skilfully question pupils and encourage them to make links to other areas of the curriculum, and termly assessments incorporate previous learning as well as the small steps from that term. At KS4 pupils will either study for the Foundation or Higher tier exam and will follow a SOW based on one written by our exam board (Edexcel). Class teachers enjoy flexibility in the order in which they deliver the objectives and the resources that they use. Teachers continue to incorporate the principles of mastery and work together with colleagues to ensure lessons are of the highest quality. Pupils in all year groups are regularly given the opportunity to solve problems and apply their knowledge by completing GCSE questions; giving appropriately challenging questions to all pupils from the beginning demystifies the GCSE exams and builds

confidence as well as essential skills. We want all pupils to reach their potential and offer comprehensive intervention and support. Pupils can seek teacher support at break or lunch each day, they have access to Mathswatch which has excellent videos and interactive questions. We provide weekly one to one sessions for approximately 15 GCSE pupils and we benefit from a skilled TA in lessons/ withdrawing pupils once a week in year 11. Pupils who have additional SEND needs or who are on our pupil premium register are always prioritised for intervention. We run highly effective GCSE revision classes from January with approximately half of year 11 attending, resources are shared on Teams for those pupils not able to make the session. We run extended revision afternoons before each of the three GCSE papers which are also very well attended. We have a popular weekly challenge board in the maths area which is also shared with pupils in form time. We take pupils to competitions such as Maths Picnics and Feasts organised by the Advance Mathematics Support Programme. We also take pupils to workshops at local Universities and enter them for UKMT competitions. We look at ways of celebrating maths during the year such as Pi and National numeracy day as well as celebrating other cultures by exploring other number systems, highlighting the contributions of mathematicians from across the world or celebrating festivals such as using mandarin numbers in a starter challenge to celebrate the Chinese New Year. Many of our pupils continue with their maths studies; this year we have started an 'A Level Maths' club to support those wishing to study Maths / Further maths at A Level. In 2023/24 we are introducing Level 2 Certificate in Further mathematics for our most able mathematicians.

Impact

Pupils become fluent in the fundamentals of mathematics, they are able to reason and to solve problems. Pupils at St Marys are successful, they exceed their FFTD20 targets and the Maths GCSE results are consistently and significantly above national and local averages.

Grades for 2023 were as follows:

- 19% of students achieved a 7 to 9 grade
- 59% achieved a grade 5 to 9
- 87% achieved a grade 4 to 9

Grades for 2022 were as follows

- 10.9% grade 8+
- 27% of students achieved a 7 to 9 grade
- 70.7% achieved a grade 5 to 9
- 88.4% achieved a grade 4 to 9