Stantonbury School
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Mathematics Curriculum Statement

Curriculum Intent

The purpose of the Mathematics curriculum is as follows:

To develop students' understanding of the role that mathematics plays in the world
To develop the mathematical competencies required to function well in society

Vision and values

A safe, happy, and successful learning community where all students and staff contribute to the common goal of providing a great mathematics educational experience to pupils of all ages, backgrounds, and abilities.

Teachers are confident and adaptable in their delivery of Mathematics, allowing fun, accessibility and challenge for students while using formative assessment to guide learning.

Students are resilient learners who have a growing awareness of the types of mathematical thinking they are using and developing their capacity to choose how and when to employ these skills.
By using technological tools to make learning more engaging and interactive, catering for differentiation.

By addressing misconceptions and finding ways to engage all learners in the classroom regardless of ability – using models which appeal to different abilities (reshaping tasks to stimulate thinking and engagement).

By displaying discretionary effort to accommodate interacting with students beyond lesson timetable.

Using flipped learning, where students are given topics to research and make notes, students are becoming more engaged in lessons as they now have the confidence to ask questions and participate in the learning. This has promoted a healthy class discussion and students feel they are getting the necessary support.

The introduction of the learning journey where each student is given a copy of what they will or are expected to learn at each stage of their learning cycle and how this leads or feeds into the overall curriculum has been helpful and supportive to students' engagement as they take ownership of their learning. Students can now confidently speak about their learning journey and know what they will learn in their next learning or over the course of the term.

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Planning and sequencing

There are Monday Fortnightly Maths Faculty workshops where the delivery of curriculum and lessons are discussed, to tailor teaching to the needs of students at the KS3 level. This results in differentiation to cater for varying student abilities. At KS4 teachers of similar ability groups co-plan.

The use of the individual lesson plans on both white rose maths and Pearson's active learn enables teachers to plan on how to support all ability groups with scaffolding work and addressing misconceptions as these would have already been anticipated.

Teachers are also aware of the individual needs to their students and what strategies are in place to support those students. This information can be found on the SEN register.

High quality teaching strategies are shared and practiced within the department. Lessons are differentiated by objectives, tasks, and assessment to cater to the varied abilities within the classroom.

Throughout KS3 students are exposed to follow the White Rose curriculum, this curriculum allows students to interact closely with mathematics thinking, analysis, maths in real life, problem solving, and life skills needed to matriculate into the next stage of learning and of work. This curriculum is closely aligned to National Curriculum and emphasises the skills needed for students to prepare for their exams at the KS4 and KS5 level and have been carefully integrated to allow students at Stantonbury School the best experience of mathematics through their time at school.

Inclusion

There are meetings with SEND staff to appraise them of methods and resources which could be used to support students' learning.

In the delivery of lessons, we ensure that we engage and provide equal opportunity to all students (for example in asking questions and take contributions).

The use of no hands up means that we can use targeted questioning to support the learning of all students irrespective of their ability or individual needs. This ensures full participation and engagement form all students.

There is ongoing collaboration with the SENDCo to provide additional support to students who may need it as well as to tailor the curriculum and assessment to ensure accessibility for all. Adaptations are made to meet students at their various levels and support their progress through bespoke worksheets and activities.

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Equality and diversity are further promoted through cooperative group work, through class discussion which encourage participation of all members, as well through recognition of students from various abilities and backgrounds through praise post cards as well as certificates of achievements and improvement.

Implementation

The 'White Rose' curriculum is designed to allow students more class time to cement the content covered in class over longer periods of time. For this reason, topics are only covered once as opposed to every year from Year 7 to Year 9 with previous plans. The benefits to students and teachers are to build a stronger baseline ability once starting the GCSE course in Year 10 due to the lengthy work covered for the extensive periods of time, allowing students to make greater progress with the GCSE course.

As part of the school's priority, at the start of every lesson, there will be a Do Now activity for students to complete across all key stages. This Do Now is a retrieval exercise intended to support students' ability to recall facts and practise their skills leant over a period. The Do Now activity is timed, and feedback given to the students. This exercise is to settle students down and be ready for the day's learning. The Do Now activity is to be completed in silence as this promotes independent learning. In maths, we use Mathsbox skills check for all year groups as Mathsbox has now incorporated White Rose into their curriculum. Teachers also use Corbett maths 5-a-day after we have covered more contents as this stimulates students' intellectual capabilities because they will need to remember various skills and apply them.
Year 7 and 8 students will be taught in mixed ability groups whilst the other students in Years 9, 10 and 11 are in sets of ability. They will be put in ability groups half-way through the year.
Years 7, 9, and 11 will have 6 lessons of maths a fortnight, including up to 1 planned ICT session. Years 8 and 10 will see students have between 7 and 8 lessons timetabled a fortnight.
The most impactful assessment of students is the day-to-day, lesson-to-lesson assessment that takes place in the classroom and opportunities for assessment are embedded within the lesson materials used.
All students throughout KS3 carry out 'End of topic tests' one to two weeks after completion of each topic in class. These will be sat in exam conditions as open book tests and self/peer assessed.

The curriculum is designed to develop students' personal development and like skills by focusing on topics in real life experience like compound interest on credit card versus simple interest on loans, ratio focusing on partnership and scale drawing with ability to read maps, solving equations including simultaneous equations to help solve problems and develop software apps, Money problems and Best Buy which focuses on making saving

from shopping around and many more. These topics and many more ensure that teachers relate the classroom experience to real life scenarios and help students to develop an understanding of the real world. Capture and recapture are a typical example of helping students to understand the consequences of climate and environmental changes on the planet.

The curriculum is designed to aspire and equip students with knowledge and skills to flourish in future careers as it is related to many different career fields. Teachers explain the importance of each topic to real life and future career. This inspires the students to research more and focus on class as they see the benefit of the learning in their future life.

Students are encouraged to research new topics and have misconceptions and challenges written down which are then examined in class. Flip learning is used as a means of encouraging students to build prerequisite skills ahead of new topics. Some of this is also done through students completing pre-test to diagnose and inform teaching.

All students will now be set a Memri weekly homework on Hegarty maths to consolidate their learning as these Memri work only focuses on challenging the students on concept that they get correct in their homework thereby enforcing independent learning.

Enrichment

Through enrichment clubs, games are used as a basis to present Mathematics to students so they can recognise the use of Mathematics in real life (e.g., Kahoot). This is supplemented through homework clubs where students have opportunity to be supported, even by the peers, to access learning they may have struggled with.

Students who do not have access to internet or data are invited to our homework club to use the ICT facilities in the department to support their learning. The homework club is opened to all students who need extra support in completing their work.

We also have drop-in sessions where students can go to any of the maths teachers for extra support at lunch time and after school even on days where we do not have math interventions. Our weekly Tuesday after school intervention is designed to support students to make the progression from one grade to the next. We have targeted grade textbooks which would be used to support students who are on the grade borderline to ensure that we achieve the higher grade. These will be strategically used as students will be placed in ability groups to maximise the impact of the intervention. At the end of every assessment point, we will analyse the data to further improve the groupings of the students.

Students get opportunity to prepare for and participate in UKMT Challenges. Students also participate in the Bletchley Park Challenge amongst schools int the area. Inter-house poster challenges involving research on Mathematicians from different backgrounds.