

Maths Curriculum

Intent

'where are we going' or 'what sort of curriculum did we want to create'?

- A curriculum in which knowledge is delineated *carefully*, taught *explicitly*, and placed *forensically*...
- Where skills are taught *deliberately* and practised *repeatedly* as 'know how'...
- Where knowledge can then be applied to a wide range of similar situations..
- Where students can decode which knowledge to use before applying it effectively.

'What sort of Maths curriculum did we want to create'

- A mastery KS3 which develops confidence, builds on KS2 competencies and embeds Mathematical reasoning and problem solving
- A KS3 which is focussed on number, ratio and algebra as the fundamental Mathematics skills required to be able to access any subsequent content
- A Do/Twist/Solve model for learning all areas of Mathematics to equip students with the skills to select and apply their skills in a range of contexts, beyond basic fluency and repetition of skills
- A content rich KS4 where students can extend their number and algebra competencies to application within geometry, statistics and measure
- A challenging selection of pathways enabling every student to make progress in at least 2 Mathematics GCSE's at KS4
- A varied selection of accelerated pathways across all 3 key stages ensuring that high prior attainers are relentlessly challenged with their Mathematical studies including opportunities for demanding and enriching additional studies and experiences
- A highly supported selection of foundation and core pathways across all 3 key stages ensuring that all students are confident and competent using numeracy and logical reasoning in both practical life contexts and in the workplace
- A fluid and transparently linked scheme of learning conveying the interconnectedness and infinite nature of Mathematics
- A presentation of Mathematics as progressive whereby students are encouraged to deepen their understanding through independent studies

Implementation

Where did we start? By picturing our typical KS4 student, and identifying what we would like them *to know* and *to understand* to become our **ideal** student.

Implemented of Curriculum	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Students in year 7 are assessed on entry using PiXL micro-wave resources and benchmarked using national comparisons. Subsequent interventions using bespoke resources ensure students can bridge	X						

any gaps in missing KS2 knowledge. Primary data is used to create a nurture pathway highly focussed on numeracy for students significantly below ARE to allow them to make rapid and accelerated progress to close the gap between them and their peers							
Students in all year 7-10 lessons are taught through the Do/Twist/Solve model ensuring that students are well rehearsed with having to apply skills in new and challenging contexts and will have to select appropriate skills as well as use reasoning to justify their thinking	X	X	X	X			
Students in all lessons are exposed to high quality modelling from teachers ensuring that they are exposed with the necessary procedures, Mathematical reasoning and metacognitive processes that will be required from them in their independent work	X	X	X	X	X	X	X
Students are given opportunities to develop their behaviour for learning habits through the integration of the Stoke Damerel 6 principles in lessons	X	X	X	X	X	X	X
All lessons are planned and executed using the 6 principles of teaching	X	X	X	X	X	X	X
All students in year 7 develop and refine written methods for numeracy through following the numeracy ninjas programme in every lesson	X						
All students in years 8-11 retain knowledge and fluency of basic skills through following a low stakes quizzing programme in every lesson which strategically re-tests students at timed intervals to support long term memory		X	X	X	X		
All students in years 7-11 are supported to revisit the trio of new content, personalised areas for improvement (based on live data) and further independent areas of study through the 'Hegarty Maths' system for home learning including clear expectations for managing their time, in school support clubs and constant teacher online support from home	X	X	X	X	X		
All students in year 7-13 are supported to work independently through the use of google classrooms	X	X	X	X	X	X	X

to be able to communicate with teachers and find bespoke resources							
All students at KS5 are encouraged and support to continue with their Mathematical studies through a range of 5 pathways ranging including Core Mathematics and Further Mathematics						X	X
Teaching groups are modified regularly following triangulation of assessment data, student feedback and pastoral oversight.			X	X	X		
Students are given timely and regular feedback on their skill selection, skill application, reasoning and problem solving skills. Teaching is reactive and DIRT activities and weeks are planned to allow students to improve as well as correct.	X	X	X	X	X	X	X
Success is celebrated and communicated home following assessments using enrichment activities for post PPE reward lessons	X	X	X				
Success with independent learning is celebrated using displays and communication home through analysis of live data each week	X	X	X	X	X		
Students can learn about the cultural and industry aspects of Mathematics through enrichment opportunities such as clubs and trips	X	X	X	X	X	X	X
Students are made aware of knowledge that must be learned and are given strategies and resources in which to learn key vocabulary, formulae and diagrams through the use of knowledge organisers				X	X		

Impact

- All students are supported in working towards their attainment targets
- All students are supported to have confidence and high levels of numeracy
- Assessments and schemes of learning are refined in light of data analysis, specification reforms and changing needs of particular cohorts
- Students are assessed following a whole school calendar leading to data collection, distribution and reactive planning on every level (both academic and pastoral)
- Leaders set and meet targets which are realistic and evidence repeated marginal gains