Subject: Mathematics

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ARCHBISHOP SENTAMU ACADEMY
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Key Stage 3 - 5 - Intention Statement: To inspire courage and confidence through success. Students will be positive contributors to their community by being numerate, financially aware and well qualified.
Students respect the opinions of others and value the wealth of enriched and varied inputs that a community brings.

How does Maths develop:	
Respect	Through class discussion and specific Mathematical Thinking lessons students learn to respect the input of others. Students share their ideas and learn to respect different viewpoints. When discussing scores students are encouraged to recognise that they work at different abilities and are respectful of this.
Courage	Giving students courage to share ideas in class for approaching and solving AO3-style questions and problem solving. Students need the courage to start problems and investigate appropriate lines of enquiry. Key Question and diagnostic booklets allow pupils to gain confidence in attempting exam papers and support them in developing the courage to attempt even the questions they find most challenging. Students are instilled with the courage to aspire to attempt increasingly challenging material.
Community	Mathswatchers of the week are celebrated on social media for students who have attempted the greatest number of questions. Success is also celebrated through a display board on the Maths corridor and students receive public rewards for the progress they make. Students are encouraged to support each other with work and create confident and safe environments for them to flourish in.
Wisdom	Regularly sharing students areas of strengths/areas to develop. Students are given structure so that they have opportunities to reflect regularly on work they complete and improve where necessary. The breadth of curriculum allows students to apply their knowledge and wisdom to multiple and varied contexts.

Intention Overview:

Curriculum Knowledge
The Maths curriculum at ASA has been developed to allow a smooth and clear transition from KS1 to KS5. This allows for scaffolded support for those in most need of accessing the curriculum as well as extension opportunities for the most able. At KS3, level of depth is dependent on confidence and level of support required (which is delivered on a principle of overcoming barriers to learning e.g SEND, gaps in knowledge etc). . At KS4 students move to follow two tiers, Higher or Foundation. For all qualifications offered, we use Edexcel. At KS3, the spiralling curriculum in Y7 and Y8 is built upon the material directly learnt from KS1 and KS2, with a view of plenty of structured practice and spaced retrieval aimed at mastering core concepts. Y9 introduces new concepts from the KS3 curriculum that build beyond what they have learnt in Y7 and Y8. All lessons and units are tied directly into the mathswatch support programme. At KS4 we follow the Mathswatch SOL that covers the full content of the GCSE curriculum. All lessons are linked back to mathswatch to allow students the chance for repeated practice, blended learning and spaced retrieval. At KS5 three pathways are offered. Any student achieving Grades U-3 will be re-sitting their GCSE qualifications. Any student achieving a Grade 4 or above has the option to study Core Maths (Maths in Context). For the more able, high performing, Higher-tier students, they have the option of studying A Level Maths. For all qualifications studied we follow the Edexcel pathways. At KS5 we follow Schemes of Learning that allow for sequential development of knowledge over time.

Essential Skills to Develop	
Subject Specific Skills	**Supportive Learning Skills and Attributes**

- KS3 Connect tasks used as starters every lesson. Designed to build speed, accuracy and confidence with essential KS3 number work..
- KS4 spaced retrieval Connect task. Either a recall starter or a repetitive skills based task e.g numeracy ninja to begin the lesson. Whole class feedback is used to design these activities.
- Problem solving challenges at KS3. Allow pupils to develop oracy and literacy skills in a low stakes environment
- Integration of problem solving and application activities to KS3. The SOL is designed to allow time for this to occur throughout lessons.
- Resilience. Regular formative testing and assessment from year 7. KS3 assessments are based on clearly-articulated end points, focussing on AO2/3 style presentation. KS4 (KS5 resit) assessments replicate material seen at GCSE.
- KS4 knowledge quiz starters, designed to address areas where previous cohorts have performed poorly. Including AO1, high frequency geometry and measure topics (foundation), high frequency algebra topics (higher) and AO3.
- Pupils are provided the opportunity to gain qualifications other than the GCSE to support their progress and learning journeys.
- With the new SOL, our lowest attaining students are provided a rigorous opportunity for graduated progression and gaining of qualifications to facilitate confidence and success within Maths.
- At KS4 our lowest attaining pupils are given the opportunity to gain an entry level Mathematics qualification.

Cultural Capital (opportunities and experiences)

- We aim to celebrate Maths specific dates within the calendar with all year groups; Pi day, Maths Week. During these times we have Maths enrichment activities that run alongside the curriculum time as well as competitions.
- Junior and Intermediate Maths Challenges have been reintroduced to the department. We also aim to develop Maths Challenge teams to compete against other schools.
- We compete in Maths team challenge events hosted by Hull University.
- As part of our Mathematical Thinking lessons they will look at where Maths applies to them in their setting and surroundings.
- Maths in Context (Core Maths) allows students to apply what they learn to the real world. We look to enrich their studies with talks from local companies and industries.
- The Maths department works alongside the leaders for STEM to provide enrichment opportunities beyond the curriculum for students.
- Students are given the opportunity to attend external events hosted by Hull University for Maths, including Saturday morning taster sessions.
- Our lowest attaining learners develop their financial fluency so they are better prepared for when they leave school.

Implementation:

- Staff follow the SOL as dictated by the interactive document. At KS5 staff follow the Edexcel driven SOL. A central spreadsheet is used as a guide for teachers, allowing for staff to differentiate what they present to their classes based on their individual and group needs. Details are all available through the central document.
- The department has a central store of resources and trackers. Staff are working on developing the online provision so that assessments, learning journeys and knowledge quizzes are digital and accessible for students for a more blended learning approach.
- The Maths department follows a DTT model of teaching. Each assessment also includes pre-skill material that focuses on key skills to allow for confidence when working through the next unit.
- Use of strand analysis in the central trackers to identify areas for further focussed teaching.
- At KS5 we use diagnostic end of unit assessments to measure progress made and drive teaching.

Measuring Impact:

- Student voice and quality assurance demonstrates that students are confident, safe and happy when attending Maths lessons.
- Student voice and quality assurance demonstrates that students are clear in what is expected of them and have a clear understanding of the structure of the Scheme of Learning and how it is implemented.
- Use of Central trackers for the regular analysis of performance across all year groups and celebrating all elements of progress made.
- Improved GCSE and AS/A Level figures for all key headline measures.
- Increased uptake of A Level Maths and Maths in Context (Core Maths) at Sixth Form.
- Increased numbers of students choosing to study Maths or Mathematical-based subjects at University.