



Confident communicators	Knowledgeable and experienced learners	Committed community contributors	See the future and are ready for it
Our curriculum provides planned opportunities for all students to improve their ability to articulate their views and ideas in a confident and fluent manner, through what they say; what they read; what they write and what they create. Through this our students develop in both self-belief and confidence in their ability to communicate in a variety of settings.	Our curriculum provides opportunities for all students, regardless of their starting points, to develop the tools needed to learn and acquire both knowledge and skills. Through carefully sequenced learning, students' resilience grows as they become increasingly independent and proactive learners, who are empowered to succeed.	Our curriculum provides opportunities to enhance the cultural, creative and technological capital of all our students so that they can all make personal contributions in the wider community. They are proud of their school; understand the world around them. They develop personal skills as well as leadership attributes in order to make a positive contribution.	Our curriculum provides the opportunities, qualifications and aspirations, so that our students are able to make informed choices at each milestone. They are knowledgeable and have high aspirations for their own success so that they can thrive within a 21 st century world. Our students are supported to develop the skills to face uncertainty in new situations, and the resilience to persevere when faced with new challenges.

What are we trying to achieve?
Intent

Mathematics			
Mathematics itself is a universal language, using symbols and logic to convey ideas and solve problems. Our mathematics curriculum will provide opportunities for students to communicate through mathematical language, notation and diagrams as they hypothesise, reason, conjecture and explain. Students will benefit from well-structured lessons, with built in opportunities for modelling & sequential, multi-step methods, and develop as increasingly confident mathematicians.	Our curriculum is designed with different starting points, based initially on prior achievement, but with key topics embedded in each pathway so that students can move between them as they develop. Careful and purposeful sequencing of content and knowledge, from the functional to the mathematically complex, supports students to acquire long term memory and gain skills. Some of these skills will be applied in other subjects. Every student will leave Beckfoot Thornton with a qualification in maths.	The maths curriculum will enhance our students' abilities to deal with problems, hypothesise, find solutions and make decisions. Our students will have many opportunities to contribute in lessons and equip themselves with the tools to develop technological capital. We will promote leadership; our 6 th form maths leaders are role models and encourage all students to take pride in being Beckfoot Thornton mathematicians.	Our mathematics curriculum will provide opportunities for all students to aspire, to be successful, and to achieve the best possible qualification thus ensuring their economic well-being and enabling them to navigate through their future. They will develop resilience and flexibility through problem solving, applying maths to real-life situations or simply being able to enjoy the purity of the subject itself in lessons or in further study.
<p>During Key Stage 3 our mathematics curriculum is tiered so that students can make progress by building on their prior attainment. They are taught in setted groups but may move between tiers according to the progress made. The subject content of our KS3 curriculum covers the key areas of number, algebra, ratio, proportion and rates of change, geometry and measures, probability and statistics. Our students will:</p> <ul style="list-style-type: none"> • become increasingly fluent in the fundamentals of mathematics working with increasingly complex problems so that conceptual understanding deepens alongside the ability to recall and apply knowledge accurately; • reason mathematically by following a line of enquiry, exploring relationships and developing an argument or justification using mathematical language. • solve problems by applying their mathematics with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. <p>Starting points and decisions about progression are based on the security of students' understanding and their readiness to progress. Those not sufficiently fluent are supported to practice and consolidate their understanding before moving on.</p>			
<p>A tiered mathematics curriculum continues in Key Stage 4; key topics are nested within each tier to allow students to move between them according to their progress. Students will consolidate their numerical, algebraic, geometrical, statistical and mathematical capability from key stage 3. This includes:</p> <ul style="list-style-type: none"> • extending their understanding of the number system and using increasingly complex calculation strategies. • extending and formalising their knowledge of ratio and proportion, in working with measures and geometry, and in working with proportional relations algebraically and graphically. • reasoning deductively in geometry, number and algebra, including using geometrical constructions. • making and using connections between different parts of mathematics to solve problems whilst using mathematical language, presentation and properties effectively, and with increasing precision. <p>During Key Stage 4 our students will be prepared for the Edexcel 9-1 GCSE Mathematics, with Entry Level offered to ensure that all students complete KS4 with a recognised qualification in mathematics.</p>			
<p>In Key Stage 5 students are prepared for the AQA A-level Mathematics. Our Key stage 5 mathematics curriculum builds on the skills, knowledge and understanding from the Higher tier GCSE. Students will demonstrate the following overarching knowledge and skills of mathematical argument, language and proof, mathematical problem solving and mathematical modelling. These will be applied, along with associated mathematical thinking and understanding, across the content that follows: proof; algebra and functions; co-ordinate geometry in the (x,y) plane; sequences and series; trigonometry; exponentials and logarithms; differentiation; integration; numerical methods; vectors; statistical sampling; data presentation and interpretation; probability; statistical distributions; statistical hypothesis testing; quantities and units in mechanics; kinematics; forces and Newton's laws; moments.</p>			