



# Faculty of Mathematics Curriculum Overview

The purpose of the Mathematics Curriculum at Biddick Academy is to provide all students with a rewarding and enjoyable experience of the subject. We will prepare students to become confident, numerate individuals who are able to deal with all aspects of mathematics in their chosen career and adult life – this will be accomplished through our commitment to the high-quality teaching of a well-designed curriculum containing an interesting variety of lessons which motivate and engage all students.

We have high expectations of all students so that they will deeply understand mathematical knowledge, master and apply mathematical skills and realise and achieve their full potential. We will support students in developing their own skills in analysis, reasoning, creativity, collaboration and self-evaluation so that they are ready to face the mathematical problems that arise throughout their education and in the real world, with resilience, thoughtfulness and enthusiasm. As passionate and committed educators in the Biddick Academy Mathematics Faculty, through the consistent delivery of high-quality teaching, learning and assessment, we strive to deliver, achieve and realise a coherently-planned, appropriately-sequenced, broad, balanced and suitably-ambitious mathematics curriculum designed to give all learners the knowledge and skills required for future education, employment or training.

Teachers in the faculty create a positive and engaging climate for learning, set high expectations for academic achievement, demonstrate good knowledge of the mathematics curriculum, plan and deliver well-structured lessons presenting subject matter clearly using their professional expertise, assess understanding and address misconceptions systematically providing clear and direct feedback and adapt their teaching to respond to the strengths and needs of all learners. We will provide a structured and supportive learning environment in which our students are given the best possible opportunity to demonstrate curiosity and resilience.

- **Declarative:** Facts, concepts and rules which are cognitively encoded ready to be recalled and applied (for example, to know the formulae for 'Area of a Circle' and 'Volume of a Sphere' as well as the 'Cosine Rule' for working out unknown sides in a triangle).
- **Procedural:** The ability to know how to perform the steps in a process (for example, to know how to use the 'Trigonometric Formulae' to work out the size of unknown angles and sides in a right-angled triangle).
- **Conditional:** The knowledge and awareness of when and when not to use a procedure, skill or strategy; why a procedure works and under what conditions; why one procedure is better than another (for example, to know when and understand why it is more appropriate to 'complete the square' rather than use the 'Quadratic Formula' for finding the turning point and roots of a function).