Year 7 Mathematics – Outline Programme of Study

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	Analysing & displaying data Number skills	Algebra – expressions, functions &formulae Decimals & measures	Fractions Probability	Ratio Proportion	Lines & angles Sequences & graphs	Transformations
Key Knowledge	Interpret and construct tables, charts & diagrams. Analyse and compare the distribution of data sets. Order positive & negative integers, decimals, fractions & mixed numbers. Factorisation of numbers, including HCF & LCM. BIDMAS including powers, roots, reciprocals & inverse operations.	Use and interpret algebraic manipulation. Substitution of numbers into algebraic functions. Simplify and manipulate algebraic expressions. Use standard units of measure and related concepts. Work with coordinates in all four quadrants. Use scale factors and measures.	Interpret fractions and percentages as operators. Identify and work with fractions in ratio problems. Express one quantity as a fraction of another, less than and greater than 1. Relate relative expected frequencies to theoretical probability, use appropriate language and the numerical probability scale.	Use ratio notation, including reduction into simplest form. Divide a given quantity into two parts in a given ratio. Express the division of a given quantity into two parts as a ratio. Apply ratio to real contexts and problems.	Use conventional terms and notations for lines and angles. Apply the properties of angle laws. Understand and use corresponding and alternate angles on parallel lines. Derive and apply the properties and definitions of triangles and special quadrilaterals. Generate terms of a sequence from term to term and position to term. Understand equations of lines.	Use congruence criteria for triangles. Identify, describe and construct congruent and similar shapes. Understand transformation of shapes, including rotation, reflection, translation and enlargement. In regard to enlargement, centre of enlargement and positive scale factors are to be understood.

Further information and reading list
• Our Key Stage 3 programme links in prepare students for the Edexcel examination syllabus for GCSE mathematics. • There are a range of support books and revision guides available for KS3 maths from CGPor Letts & Collins for example. • Sparx Maths homework platform has help videos for students on all topics. These are accessed with the homework questions or independently using the independent learning button from the Sparx Maths homescreen. • Useful websites for Year 7 are: https://corbettmaths.com/contents/, https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/maths (Oak Academy, KS3, Maths) https://www.bbc.co.uk/bitesize/subjects/zqhs34j (bbc bitesized, ks3, maths).
Ways to support and extend student learning in this subject
Support Guidance: • Students need to be secure in their timestables knowledge which underpins mathematical methods. Continue to practice these at home, or utilising programmes such as TT rockstars, which will help students build confidence in mathematics. There is a regular timetabled question support available as part of Sparx Maths homework platform for all year 7 students. • Have fun with maths! There are lots of games which work on mental maths, for example card games or darts. • Access support programmes for key stage 2 and 3 via mathsfactor.com for a paid subscription help service, alternatives are available or by working through the free website resources listed above together with the school provided subscription of MathsWatch. • Ensure that Sparx Maths compulsory homework is being completed and use the XP boost button for extra practice questions together with the independent learning button to look forward to what is coming next in class and get a head start. High-achieving guidance: • Utilise the Sparx Maths Target button to provide extension and challenge questions in addition to the compulsory homework set each week.