Key Stage 3 – Year 7, Group A

Subject: Mathematics

The mathematics department aim to develop the full potential of every student in the subject. It is our aim to ensure that every pupil experiences success and enjoyment in the subject, whether it be equipping them with sufficient mathematical skills for everyday life or developing problem solving and reasoning skills to take them beyond GCSE.

The scheme of learning is divided into units of study consisting of interlinking skills and topics that build on prior learning. Throughout the year students will complete multi-choice quizzes, homework, 'common homework tasks' and assessments. The common homework tasks will be completed by all students following this scheme of learning. The assessments provide opportunities for students to demonstrate their ability to recall information, methods of calculation and skills studied in previous units of work, and apply their problem solving skills to a variety of contextual problems.

		I will learn to	How I will be assessed
Autumn Term	Unit 1	• Y7 only: Introduction to calculator skills; include negative, square and square root button. • Read, write and understand the place value of integers. • Read, write and understand the place value of decimal numbers. • Compare and order integers and decimals incl. using < and >. • Reading information from a scale. • Understand negative numbers in context. • Compare and order negative numbers. • Count forwards and backwards through zero. • Add and subtract negative numbers • Round numbers correct to the nearest 10, 100 and 1000 • Round to any number of decimal places.	Multi-choice Quiz Common Homework Topic Assessment
	Unit 2	• Add and subtract numbers of any size, mentally and using formal written methods • Add and subtract decimals, including financial mathematical problems involving money. • Recognise and use the inverse relationships of addition and subtraction • Solve problems involving addition and subtraction, including financial mathematics such as money problems. • Explain with convincing mathematical language whether a number between 0 and 100 is prime or not • Understand the terms factor, prime and multiple • Find multiples of a number • Find factor pairs of a number	Multi-choice Quiz Common Homework Autumn Assessment (Units 1 & 2)
Spring Term	Unit 3	• Multiply and divide by 10, 100 and 1000 • Multiply and divide integers mentally, and using formal written methods, including problem solving. • Multiply and divide a decimal by an integer • Show that multiplication is commutative but division is not • Understand and recognise square numbers and associated square roots up to 12 x 12 • Understand the order of operations (BIDMAS), including squares and roots • Measure a line correct to the nearest millimetre • Find the perimeter of a 2D shape using a ruler OR counting squares, including non-rectilinear shapes • Find missing lengths when given the perimeter • Find the area of a 2D shape by counting squares. • Find the area of a rectangle using the formula. • Find the missing length of a rectangle when given the area.	Multi-choice Quiz Common Homework Topic Assessment

	Unit 4	• Represent fractions using diagrams and on a number line. • Express one quantity as a fraction of another. • Identify and find equivalent fractions using diagrammatical and numerical methods. • Convert between mixed numbers and improper fractions and vice versa. • Simplify fractions. • Convert between fractions and decimals. • Add and subtract fractions with the same denominator and when one fraction requires to change. • Calculate the fraction of an amount, including different units	Multi-choice Quiz Common Homework Spring Assessment (Units 1 - 4)
Summer Term	Unit 5	• Describe 2D/3D shapes by identifying conventional terms such as parallel, perpendicular, vertex, edge and face • Classify the properties of 2D (triangles and quadrilaterals) and 3D shapes • Identify the order of rotational symmetry of a 2D shape, including order 1 has no rotational symmetry • Identify and describe types of angles; acute, obtuse, reflex and right angle • Estimate acute and obtuse angles and make direct links to checking for accuracy using a protractor • Measure and draw acute and obtuse angles correct to the nearest degree using a protractor • Know and use the fact that vertically opposite angles are equal • Know and use the fact that angles on a straight line add up to 180˚ • Know and use the fact that angles around a point add up to 360˚ • Know and use the fact that angles in a triangle add up to 180° • Solve missing angle problems using mixed angle facts with focus on accurate written reasoning for each step	Multi-choice Quiz Common Homework Topic Assessment
	Unit 6	• Interpret and construct frequency tables and tally tables for grouped and ungrouped numerical/categorical data • Interpret and construct bar charts and vertical line graphs for ungrouped numerical/categorical data • Interpret and construct pictograms for grouped and ungrouped numerical/categorical data • Calculate mean, median, mode and range for small sets of data • Tell the time including reading clock faces and 12 /24 hour clock conversions. • Complete, read and interpret information in tables, including timetables • Solve time problems including time intervals	Multi-choice Quiz Common Homework End of Year Assessment -all units

How you can support your child's progress in mathematics:

- Encourage independence in repeated practice of unfamiliar topics using vle.mathswatch.co.uk/vle
- Practise mental maths skills such as addition, subtraction, multiplication and division regularly.
- Provide real life opportunities to challenge your child's mathematical knowledge and skills. Examples could include; calculating change from a bill, estimating the cost of a restaurant bill, working out the best buy when shopping, working out the cost of a home improvement or the amount of supplies for a home improvement.