Curriculum Plan for Parents – Year 9			

Subject	Mathematics	Contact Person	Mrs McGorian/ Mrs Landy

Half term and topic	Your child will learn....	Key Homework	Assessment
Autumn 1 Number Sequences Algebra skills Ratio and proportion	Formal written methods for adding, subtracting, multiplying and dividing; how to use BIDMAS, calculations involving negative values; multiples and factors; prime numbers; square numbers and their roots; triangular numbers Calculate with roots and indices Find the reciprocal of a number Multiply and divide with surds and write them in simplest form Add, subtract, multiply and divide numbers in standard form. Write a number as a product of its primes Find HCF and LCM Find the nth term and find missing terms of linear and quadratic sequences Simplify expressions involving indices, factorise expressions Find the product of 2 brackets Use direct and inverse proportion Divide in a ratio	Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test).	
Autumn 2 Measures and estimation Function and equations Translation and vectors Angles	Know and use standard units of time, mass, length, money and other measures Convert between units Calculate compound measures ; speed, distance, time, mass, density and volume Round to the required degree of accuracy Estimate by rounding to 1 significant figure then calculating Calculate upper and lower bounds Calculate perimeter of a semi-circle Find inputs, outputs and functions Solve one and two step equations and equations with unknowns on both sides and those involving fractions Solve simultaneous equations Use inequality notation Translate an object Use vector notation. Add, subtract and multiply vectors Recognise and name polygons Use the language associated with angle including angle types	Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test).	November – formal assessment on all work covered so far (non-calculator and calculator tests)

	Measure and draw angle Recall and apply angle facts eg missing angles on parallel lines Identify types of triangle Find missing angles in isosceles and equilateral triangles Calculate perimeter of a semi-circle and a quadrant Calculate the length of an arc and the perimeter of a sector Find the angle of a sector when given the length of an arc Recall and apply circle theorems Understand and use 3 figure bearings on a map or scaled drawing		
Spring 1 Graphs and tables Statistics	Read and plot coordinates in 4 quadrants Recognise and plot graphs of the form $x = a$, $y = mx + c$ Read and use information from mileage charts, timetables and distance time graphs Understand gradient of a distance time graph and velocity time graph Find the equation of a line from 2 points Design and use two way tables Interpret statistical diagrams including scatter graphs Find the mode, mean, median and range of a set of data and from a table of data Calculate the mean for grouped data Plot the graphs of quadratic, cubic and reciprocal functions	Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test).	January- exam
Spring 2 Decimals Fractions Probability	Understand place value Write decimals as fractions Add and subtract decimals Multiply and divide decimals by whole numbers and by decimals Find equivalent fractions Simplify fractions Add, subtract, multiply and divide mixed numbers Work out the probability of an event happening and not happening and calculate experimental probability Use two way tables, Venn diagrams and tree diagrams	Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test).	
Summer 1 Further algebra Percentages Trigonometry Shapes and transformations	Substitute and evaluate using positive and negative values Show an inequality on a number line Solve an inequality with 2 inequality signs Rearrange formulae	Homework will be set once each week to consolidate learning and provide challenge to promote independent thought.	June – formal end-of-year exams on all topics covered during the year

	Calculate percentages of an amount, percentage increase and decrease and reverse percentage answers with and without a calculator Calculate simple interest Properties of 2D and 3D shapes Describe transformations using correct terminology Find missing sides and angles in shapes that are congruent Find missing lengths using Pythagoras Understand trigonometric ratios and recall some exact values Find missing sides and angles in right angled triangles using trigonometry Construct plans and elevations	(Homework may be revision in the run-up to a test).	
Summer 2 Area and volume Constructions and loci Enlargement and similarity	Area of rectangle, parallelogram, right angled triangle, trapezium, circle, semi-circle, quadrant and sector Surface area of cubes, cuboids, triangular and other prisms, cylinder and cone Volume of cubes, cuboids and other prisms, cone, pyramid, and sphere Construct triangles, perpendicular and angle bisectors Understand and draw a combination of loci to identify a region Enlarge a shape by a positive scale factor from a centre on a coordinate grid Describe enlargements using the correct terminology Find missing sides in similar 2D shapes Understand how scale factor affects area and volume	Homework will be set once each week to consolidate learning and provide challenge to promote independent thought. (Homework may be revision in the run-up to a test).	June – formal end-of-year exams on all topics covered during the year (calculator and non-calculator assessments)