Mathematics at The Weald - Year 8 KS3 Mastery Statements

	Working towards Mastery	Meeting Mastery	Beyond Mastery
N U M B E R	- Write out the terms of the Fibonacci sequence - Round to the nearest 10 or 100 - Recall times tables up to 12 x 12 - Understand powers of 10 - Find common factors for pairs of numbers - Write down multiples of any whole number - Write down factors of numbers less than 100 - Identify prime numbers under 20 - Understand that percent means out of 100 - Find the percentage of an amount - Convert between percentages and decimals	- Understand and find square roots and cube roots - Round number to one or two decimal places - Check answers to problems by estimating the answer - Find the HCF and LCM of a pair of numbers - Write a number as a product of its prime factors - Multiply and divide by powers of 10 - Multiply large and small numbers together - Write a value as a percentage of another - Use a multiplier to calculate percentage increase or decrease - Convert between fractions, decimals and percentages - Calculate simple interest	- Round numbers to a specific number of significant figures - Work out the HCF and LCM using prime factors - Write a number as a product of its prime factors including index notation - Write a change of value as a percentage increase or decrease - Calculate and identify an increase of more than 100%

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A L G E B R A	- Use algebra with function machines - Simplify expressions involving multiplication - Simplify expressions by collecting like terms - Plot coordinates - Solve simple equations - Substitute positive values into expressions	- Draw a straight line graph by completing a table of values - Simplify expressions that have two or more terms - Expand a linear expression with brackets - Identify equivalent algebraic expressions - Write algebraic expressions in simpler form using index notation - Find and use the nth term of a sequence - Solve simple equations involving brackets and fractions - Substitute values into formulae - Solve one step inequalities	- Write and simplify expressions involving four operations and fractions - Expand an expression with brackets involving powers - Write algebraic expressions involving cubes and other powers - Calculation the gradient of a straight line - Solve equations with a variable on both sides

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S H A P E	• Find missing angles in triangles and quadrilaterals • Find the area of a rectangle	• Use angle properties of parallel lines • Find the area of triangles, parallelograms and trapezia • Find the area of a compound shape • Find the surface area and volume of a cuboid • Find the interior and exterior angles of polygons	• Use geometric properties of quadrilaterals • Convert the units of area and volume • Calculate surface area and volume of prisms

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S T A T S	• Create and interpret information from a bar chart	• Read information from pie charts • Construct a pie chart • Understand and draw scatter graphs	• Draw a line of best fit on a scatter graph and use it to interpolate or extrapolate data • Interpret and criticise a variety of graphs