

Mathematics Department Year 7



MAGHULL HIGH SCHOOL – CURRICULUM MAP

HALF TERM 1 SEPT - OCT	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
TOPIC (S)	Core catch up	7.1 Numbers and Numerals	7.2 Axioms and Arrays Diagnostic Testing (CAT)	7.2 Axioms and Arrays	7.3 Factors and Multiples	7.3 Factors and Multiples	7.4 Order of Operations	Independent assessment and core catch up
Knowledge & Skills development	<p>Week 1: Core catch Up</p> <p>7.1 Numbers and Numerals (7th Sept - 11th Sept)</p> <ul style="list-style-type: none"> Understand the value of different place value columns in base 10 number systems Understand the multiplicative relationships between different columns in base 10 number systems Recognise and name nine- and ten-digit numbers in base 10 Understand a range of notation for quantities of time and time of day Develop a sense of flexible number composition by solving problems involving time of day and quantities of time Have an awareness of different numerical systems and their representation <p>7.2 Axioms and Arrays (14th Sept - 18th Sept)</p> <ul style="list-style-type: none"> Use arrays and area models to develop understanding of commutativity of multiplication Use arrays and area models to develop understanding of associativity and distributivity Make use of and generalise the commutative, associative and distributive properties Use commutativity, associativity and distributivity to solve calculations efficiently <p>7.2 Axioms and Arrays (21st Sept - 25th Sept)</p> <ul style="list-style-type: none"> Compare and contrast scaling, area, repeated addition and grouping/sharing models for multiplication and division Develop number sense and efficient calculation strategies Make links between efficient calculation strategies and the axioms <p>7.3 Factors and Multiples (28th Sept - 2nd Oct)</p> <ul style="list-style-type: none"> Understand the terms factor and multiple Recognise and define prime, square and cube numbers Use the definitions of factors and multiples to find common factors and common multiples Express an integer as a product of its factors 							

	<p>7.3 Factors and Multiples (5th Oct - 9th Oct)</p> <ul style="list-style-type: none"> ● Interpret and create representations of integers that reveal their structure ● Conjecture and make generalised statements e.g.: - Square numbers cannot be prime - The common multiples of 5 and 4 are always multiples of 20 - Prime numbers greater than 3 are one more or one less than a multiple of 6 ● Solve problems involving factors and multiples in unfamiliar contexts <p>7.4 Order of Operations (12th Oct - 16th Oct)</p> <ul style="list-style-type: none"> ● Understand the equal priority of addition with subtraction and multiplication with division in written calculations ● Understand that operations of equal priority can be evaluated in any order ● Understand that written calculations follow rules of 'syntax' determining the order of operations ● Understand the higher priority of multiplication with division over addition with subtraction in written calculations. ● Interpret the order of operations from written calculations, function machines and worded descriptions ● Form written calculations, function machines and worded descriptions correctly embedding the order of operations ● Form and identify equivalent calculations based on distributivity, commutativity and the order of operations <p>Week 8: (19th Oct - 23rd Oct) End of term Assessments. Open book independent revision and assessment. Core catch up.</p>							
Assessment / Feedback Opportunities	Flashback every lesson for retrieval practice	End of each block mini assessments	End of term assessments	DIRT opportunities	Feedback in DFM during 'homework' sessions	Retrieval Homework	Formative teacher assessment - verbal	
Cultural Capital	Understanding different base number systems, how to calculate with time							
SMSC / Promoting British Values (Democracy, Liberty, Rule of Law, Tolerance & Respect)	<p>Understanding the consequences of actions: Eg. If you perform a particular action to one number, will the same outcome apply to other numbers? Is it always the case? 'Sometimes, always, never' statements</p> <p>Participating, co-operating and resolving conflicts: as above, but also 'X thinks ____, Y thinks ____, who is right?' type questions.</p> <p>Understanding and appreciating personal influences: taking into account other people's views and understanding how to express own views. Eg. How to explain to someone where they may have gone wrong in a question.</p> <p>Use maths to learn about different faiths and cultures around the world. Eg. looking at patterns/shapes within Islam / Hindu religions.</p>							
Reading opportunities	Murderous Maths (Series) by Kjarten Poskitt							

Key Vocabulary	approximate, approximately approximately equal to (\approx) between compare decimal number decimal place digit equals (=) greater than (>), less than (<) greatest value, least value most/least significant digit nearest order place value round tenth, hundredth, thousandth to one decimal place (to 1 d.p.) value zero place holder classify common factor consecutive divisible, divisibility divisor factor factorise highest common factor (HCF) integer lowest common multiple (LCM) multiple negative (e.g. -6) plus, minus positive (e.g. +6) prime prime factor property sign square number, squared square root triangular number
Digital Literacy	Excel Formula
Careers	Programmer, Artist, Engineer, Teacher, Surveyor,