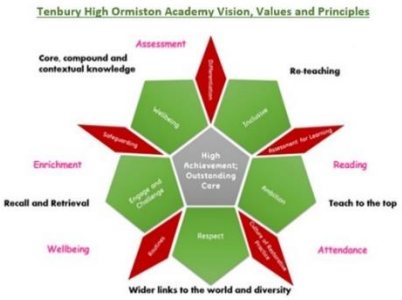
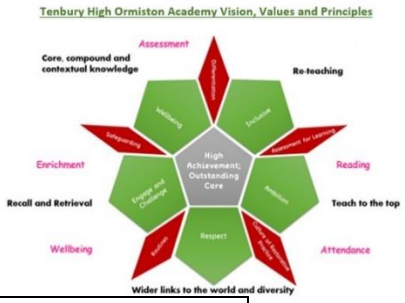
TENBURY HIGH
ORMISTON ACADEMY



Curriculum Overview for Mathematics
Year 7

Half Term 1: **Mathematics Fundamentals** **Declarative knowledge:** Know the place value grid names Know when to round up and when to round down Know when to round Know that multiplication is commutative Know what a factor is Know what a multiple is Know what a prime number is Know what a common factor is Know what a common multiple is Know that Pi is an irrational number Know some occasions when Pi is used in Maths Know what an index is Know the order of operations Know the vocabulary of algebra: term, expression, equation, formula, substitute, simplify **Procedural knowledge:** Round to a given degree of accuracy Partition numbers Use the formal written method and gird method to multiply numbers Use the formal short-division method to divide numbers Calculate with the order of operations Find factors of a number in factor pairs Find multiples of a number Identify whether a number is prime or composite Calculate with Pi Use a calculator Simplify algebraic expressions Solve simple algebraic equations Substitute into formulae Construct and interpret scatter graphs Draw lines of best fit on scatter graphs Categorise scatter graphs into positive, negative and no correlation	  	Modelling reading of questions by the class teacher – teaching like a Mathematician Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons Focus digit, Decider digit, Product, Divisor, Units, Commutativity, Multiplication, Division, Operation, Index, Term, Expression, Equation, Formula, Substitute, Simplify, Notation, Factor, Multiple, Prime number, Composite number, Input, Output, Pi (π), Ratio, Scatter graph, Line of best fit, Positive correlation, Negative correlation, No correlation Baseline assessment will be completed to support setting at the end of the unit. This will incorporate learning from the Mathematics Fundamentals unit and Key Stage 2 learning.



Contextual knowledge: Find the Highest Common Factor (HCF) of multiple numbers Find the Lowest Common Multiple (LCM) of multiple numbers Solve reasoning and problem-solving questions in a rounding context Solve reasoning and problem-solving questions in a multiplication and division context and the order of operations Solve reasoning and problem-solving questions in an algebraic context Solve reasoning and problem-solving questions involving data representations		Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school) We expect Year 7 pupils to spend 30 minutes on homework for Maths per week.

Half Term 2: **Standard Form and converting measures** **Declarative knowledge:** Know what standard index form is Know when to use standard index form Know the template of writing in standard index form is multiplying a number by 10 to the power of an integer Know what imperial measures are Know what metric measures are **Procedural knowledge:** Convert large numbers into standard form Convert small numbers into standard form Convert between metric units of measurement **Contextual knowledge:** Convert from 'almost standard form' to standard form Compare numbers in standard form Add and subtract in standard form Multiply and divide in standard form Apply knowledge to questions in context		Modelling reading of questions by the class teacher – teaching like a Mathematician Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons
		Standard form, standard index form, index, exponent, power, power of 10, unit, decimal, scientific form, tera, giga, mega, kilo, milli, micro, nano, pico.
		End of unit exam completed for Standard Form. Reteaching and relearning opportunities will be delivered to each class dependent on the performance of each class.
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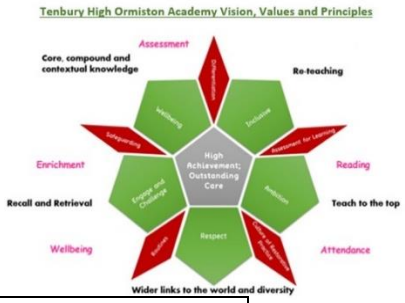

Half Term 2: **Directed Number** **Declarative Knowledge:** Label a number line with integers Know what a zero pair is **Procedural Knowledge:** Represent zero pairs using a variety of methods Add and subtract with negative numbers Multiply and divide with negative numbers Use a scientific calculator to calculate with negative numbers **Conditional Knowledge:** Use the order of operations when calculating with powers/roots and negative numbers		Modelling reading of questions by the class teacher – teaching like a Mathematician Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons
		Zero pair, positive, negative, number line, direction, sign, greater than, less than, addition, subtraction, multiplication, division, credit, debit.
		End of unit exam completed for Directed Number. Reteaching and relearning opportunities will be delivered to each class dependent on the performance of each class.
		Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school) We expect Year 7 pupils to spend 30 minutes on homework for Maths per week.