KS3 Mathematics Curriculum Coverage:

Year 7 Autumn Term

Sequenced	Block 1: Sequences	Block 2 : Algebraic notation and substitution	Block 3: Expressions and equations	Block 4: Place value, ordering and rounding	Block 5: Four Operations	Block 6: Averages and range	Block 7: Rounding and estimating
Key Knowledge	To know: • the difference between linear and non-linear sequences • linear sequences have a common difference	To know: • the inverse of addition is subtraction and the inverse of multiplication is addition; • Know the correct algebraic notation for multiplication and division; 5 x a = 5a a÷5 = a/5 y x 3 + 2 is written as 3y + 2 y ÷ 3 − 2 is written as $\frac{y}{3} - 2$	To know: • the meaning of equality and equivalence • the equivalence symbol is the identity symbol ≡ • the difference between like and unlike terms and when to collect them • the inverse operations of addition, subtraction, multiplication and division and when to apply them when solving an equation	To know: • the place value of digits up to 1 billion • the meaning of symbols • =, ≠, , ≤, ≥, >, < • the place value of decimals • how to identify the 1st significant figure of a number • **powers of ten (E)**	To know: • Add and subtract integers • Add and subtract decimals • Multiply and divide by 10, 100 and 1000 • **Multiply by 0.1 and 0.01 (E)** • Multiply integers • Divide integers • Multiply decimals • Divide decimals by integers • **Divide by a decimal (E)** • The order of operations	To know: • The method for calculating the 3 averages - mean, median and mode • That the range is a measure of spread, not an average	To know: • Where the 1st significant figure of any number is • The estimate symbol is ≈ • To estimate, we round each number to 1 significant figure • What an overestimate and underestimate is
Key Skills	To be able: • describe and continue linear and non-linear sequences • explain the term-to-term rule of linear and non-linear sequences; • find missing numbers within numerical sequences	To be able to: • use numbers and letters to complete inputs, output and operations with one or two function machines • substitute values into expressions • generate sequences using an algebraic rule • represent 1 and 2 functions graphically	To be able to: • use fact families numerically and algebraically • solve 1 step linear equations with positive solutions • simplify algebraic expressions by collecting positive like terms	To be able to: • compare numbers up to 1 billion • position integers and decimals on a number line • round numbers to the nearest power of 10 and to 1 significant figure • order integers and decimals • **Write any number in the form A x 10^n (E)**	To be able to: • Add, subtract, multiply & divide integers and decimals • Multiply and divide by a given power of 10 • Apply the correct order of operations in order to answer calculations	To be able to: • calculate the mean, median, mode and range from a list of values • calculate the mean, median, mode and range in context	To be able to: • Round to 1 significant figure • Round to 2 or more significant figures • Round numbers to a given number of significant figures • Estimate answers to calculations • Solve problems with estimation • **Understand and use error interval notation (E)**
	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary	Tier 2 and 3 key vocabulary
Subject specific vocabulary	sequence term linear arithmetic non-linear term-to-term rule position ascending descending common difference	term operation notation input output function substitute generate sequence expression	equality equivalence fact family inverse operation equation expression term identity symbol like terms collect solve solution co-efficient	place value compare order ascending descending round position interval power of ten a x 10^n	Multiply divide operator power integer	average mean median mode range modal value consistent spread	equivalent, calculation, multiple, rounding, significant figures, estimate, overestimate, underestimate, product, quotient,