KS3 Mathematics Curriculum Coverage: 2023 – 2024

Year 7 Autumn Term

Sequenced	Block 1: Sequences	Block 2: Understand and Use algebraic notation	Block 3: Equality and Equivalence	Block 4: Place value and ordering integers and decimals	Block 5: Fractions, decimal and percentage equivalence
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; $5 \times a = 5a$ $a \div 5 = a/5$ $y \times 3 + 2$ is written as $3y + 2$ $y \div 3 - 2$ is written as $\frac{y}{3} - 2$	To know: • the meaning of equality and equivalence • the equivalence symbol is the identity symbol $\equiv$ • 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 • $=, \neq, , \leq, \geq, >, <$ • how to find the median and range from a list of numbers • the place value of decimals • how to identify the 1st significant figure of a number • **powers of ten (H)**	To know: • equivalent fractions between tenths and hundredths • common equivalent fractions, decimals and percentages $0.1 = 1/10 = 10\%$ $0.25 = ¼ = 25\%$ $0.5 = ½ = 50\%$ $0.75 = ¾ = 75\%$ $0.2 = 1/5 = 20\%$ $0.125 = 1/8 = 12.5\%$ • how to convert between fractions, decimals and percentages with tenths, hundredths, fifths, quarters
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 • find the range and median from a set of numbers • **Write any number in the form A x 10ⁿ (H)**	To be able to: • position tenths and hundredths on a number line and represent on diagrams • convert between fractions and decimals with tenths, hundredths, fifths and quarters • **convert between fractions and decimals with eights and thousandths (H)** • convert fluently between simple fractions, decimals and percentages
	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	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 median range position interval power of ten significant figure $a \times 10^n$	equivalent fraction decimal percentage represent convert position tenth hundredth fifth quarter eighth