Year 8 Maths Medium Term Plan
Autumn Term

Learning Overview	**Block 1- Ratio and scale** • make connections between number relationships, and their algebraic and graphical representations • use scale factors, scale diagrams and maps • understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction • divide a given quantity into two parts in a given part : part or part : whole ratio; express the division of a quantity into two parts as a ratio • solve problems involving direct and inverse proportion **Block 2- Multiplicative change** • extend and formalise their knowledge of ratio and proportion in working with measures and in formulating proportional relations algebraically • interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning • use scale factors, scale diagrams and maps • solve problems involving direct and inverse proportion, including graphical and algebraic representations • move freely between different numerical, algebraic, graphical and diagrammatic representations **Block 3- Multiplying and dividing** • consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and place value to include decimals and fractions • select and use appropriate calculation strategies to solve increasingly complex problems • use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative **Block 4- Working in the cartesian plane** • move freely between different numerical, algebraic, graphical and diagrammatic representations • develop algebraic and graphical fluency, including understanding linear (and simple quadratic) functions • make connections between number relationships, and their algebraic and graphical representations

	• substitute numerical values into formulae and expressions recognise, sketch and produce graphs of linear functions of one variable with appropriate scaling, using equations in x and y and the Cartesian plane **Block 5/Block 6- Representing data/tables and probability** • construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical line (or bar) charts for ungrouped and grouped numerical data • describe different types of data • Read and interpret grouped data • sketch scatter graphs and use line of best fit to show correlation between two types of data • use language and properties precisely to analyse probability and statistics from two way tables, sample space diagrams and Venn diagrams
Assessment Opportunities	An end of block (unit) test after the completion of each block. Possibly formal end of term assessments, depending on SLT decision.
Textbooks Published Lesson Resources	ISBN number: 978-0-00-840089-7 (Collins White Rose Maths, Key Stage 3, Student Book 2 – Ian Davies and Caroline Hamilton)

Home Learning Resources	Dr Frost – Homework and independent learning Specific Links to Oak Academy
Knowledge organisers	Block 1 – Ratio and Scale Block 2 – Multiplicative Change Block 3 – Multiplying and dividing Block 4 – Working in the Cartesian plane Block 5 – Representing Data

Autumn 1

Week Number	Learning Overview	What should pupils know, understand and be able to do by the end of the week?
1	1.1 - Representing Ratios 1.2 – Solving ratio problems 1.3 – Dividing in a given ratio	By the end of this week, students should be able to: • Understand and use ratio notation • Compare ratios and related fractions • Solve problems involving ratios

		• Solve proportion problems • Divide value into given ratio
2		•
3		•
4		•
5		•
6		•
7		•
8		•

Autumn 2

Week Number	Learning Overview / objective (outlined above)	What should pupils know, understand and be able to do by the end of the week?
1		•
2		•
3		•
4		•
5		
6		
7		