CURRICULUM CORE KNOWLEDGE PLAN

SUBJECT: Mathematics YEAR GROUP: Year 7 DATE: HT1

Term and unit	Core knowledge	Core vocabulary	Revisiting prior knowledge	Links to Walney Ways & Employability skills/Careers
Autumn Term 1.1 – Algebraic Thinking Sequences (2 weeks)	• Describe and continue a sequence given diagrammatically • Predict and check the next term(s) of a sequence • Represent sequences in tabular and graphical forms • Recognise the difference between linear and non-linear sequences • Continue numerical linear sequences • Continue numerical non-linear sequences • Explain the term-to-term rule of numerical sequences in words • **Find missing numbers within sequences (H)**	Sequence Rule Term Term-to-term Position Table Graph Axes Linear Non-Linear Difference Ascending Descending Constant difference Arithmetic Second Difference Geometric Fibonacci		

Autumn Term 1.2 – Algebraic Thinking Understand and Use Algebraic Notation (2 weeks)	• Given a numerical input, find the output of a single function machine • Use inverse operations to find the input given the output • Use diagrams and letters to generalise number operations • Use diagrams and letters with single function machines • Find the function machine given a simple expression • Substitute values into single operation expressions • Find numerical inputs and outputs for a series of two function machines • Use diagrams and letters with a series of two function machines • Find the function machines given a two-step expression • Substitute values into two-step expressions • Generate sequences given an algebraic rule • Represent one and two-step functions graphically	Function Input Output Estimate Operation Square Inverse Bar-Model Variable Coefficient Commutative Expression Evaluate Substitute Bracket Constant Position to term Curve Equation Scale		

Autumn Term 1.3 – Algebraic Thinking Equality and Equivalence (2 weeks)	• Understanding the meaning of equality • Understand and use fact families, numerically and algebraically • Solve one-step linear equations involving +/- using inverse operations • Solve one-step linear equations involving x// using inverse operations • Understand the meaning of like and unlike terms • Understand the meaning of equivalence • Simplify algebraic expressions by collecting like terms,	Equality Equation Equals Fact family Bar Model Solve Solution Unknown Inverse Like Unlike Index Coefficient Expression Simplify Collect		