ACP Learning Outline - Mathematics

Topic 9: Algebra (Level 1 & GCSE Only)

Learning Aim (WALT)	Activities	Learning Outcome (WILF)	Tutor Comments
Algebraic Manipulation 1	- MyMaths: Algebraic manipulation lessons - 10Ticks L6-1 p3-28(brackets)	• Collect like terms involving the 4 operations • Collect like terms involving indices • Expand and factorise single brackets • Expand and factorise quadratic expressions	
Algebraic Manipulation 2	- My Maths: Expressions and Formulae – substitutition, rearranging 1 - 10Ticks L4-5 p36-42 (substitution)	• Demonstrate substituting into formulae with one variable • Demonstrate substituting into formulae with multiple variables • Demonstrate how to change the subject of simple formulae	
Solving Linear Equations	- MyMaths: Equations linear lessons - 10Ticks L4-5 p11-24 (function machines) - 10Ticks L6-1 p6-8 (solve equations) - Snakes and ladders, truncate games - 10Ticks L6-1 p37-38 (trial and improvement)	• Solve linear equations with one operation • Solve linear equations with multiple operations • Solve linear equations with unknowns on both sides. • Solve linear equations involving brackets • Solve equations using trial and improvement	

Learning Aim (WALT)	Activities	Learning Outcome (WILF)	Tutor Comments
Application of Equations to problem solving	- MyMaths: Expressions & Formulae – algebraic thinking, algebraic thinking - 10Ticks L6-1 p9-10 (form and solve equations)	• Form equations and expressions to solve problems • Apply skills to solve worded problems	
Solving Simultaneous Equations	- MyMaths: Expressions & Formulae – equations simultaneous 1,2,3 - 10Ticks L7-4 p3-12	• Set up and solve simple equations with 2 unknowns • Set up and solve equations involving negative values • Set up and solve equations where answers are not integers	
Graphs 1 – Drawing graphs, understanding linear graphs	MyMaths: Graphs – plotting graphs1 & 2, gradient & intercept, y=mx+c, plotting graphs 3 & 4 10Ticks L6-1 p27-28 (plot linear functions) 10Ticks L6-1 p35-36 (plot quadratics)	• Link coordinates by plotting simple linear graphs • Plot lines with different gradients and intercepts • Identify gradient and intercept on graphs • Understand the formula for linear graphs • Plot quadratic graphs • Plot other non-linear graphs	

Learning Aim (WALT)	Activities	Learning Outcome (WILF)	Tutor Comments
Graphs 2 – applications	MyMaths: Graphs – conversion graphs, real life graphs, distance time graphs Workbook: 27_graphs	• Convert between units graphically • Draw graphs to solve real life problems • Draw and interpret distance time graphs	
Inequalities	MyMaths: Inequalitites – inequalities & intervals, inequations, negative inequations 10Ticks L6-6 p7,8 - L6-7 p21-22 10Ticks L7-4 p13-30	• Draw and identify inequalities on a number line • Solve simple linear inequalities • Apply skills to solve inequality problems involving negatives	
Sequences	MyMaths: Sequences – sequences, geometric sequences, arithmetic sequences, 10Ticks L4-5 p25-35 (patterns) 10Ticks L5-5 p25-40 10Ticks L6-1 p29-32 (investigating linear patterns)	• Create simple sequences by identifying terms required • Identify values and rules for geometric sequences • Find and use rules for arithmetic sequences • Recognise common sequences	

Reviewing Progress	GCSE Algebra Question Packs to prepare for exam and review learning
	  - Algebra D
	  - Algebra C
	  - Algebra B
	  - 26_algebra
		•	