

Secondary mathematics

Year 11 Targeting Grade C – Terms 3 & 4 – Outline teaching plan

Following an analysis of mock GCSE exams in December, the post-Christmas scheme of work was revised for students targeting Grade C.

The plan includes new topics as well as revisiting ones already covered, you may decide that some of the new topics can be omitted, particularly with students who are struggling to reach the 'C' standard.

In the plan, the references are to the BRUM (Birmingham Resources for Understanding Mathematics) resources which we have used quite extensively in Bristol during the last year – thanks to Geoff and the Birmingham team. These resources are specifically for use with students targeting grade C.

TERM 3 w/ b	Outline of unit content
<p>Each week, students will use the C If U Can booklet to assess progress in either the topic taught that week or the revision of another topic covered before. C that U Can one-liners have also been built into the plan.</p>	
1/1 & 8/1	Handling Data coursework task
15/1/07	Inequalities and equations
	L1 : C that U Can one-liner. Represent inequalities on a number line. Solve simple problems e.g.: <i>List the integers values for x which satisfy this inequality, $-1 \leq x < 4$</i> Plenary resource : Algebra Unit 5 - Conundrum 5.2
	L2: Revise solving simple linear equations, then solve simple inequalities, such as $3n > -6$; $3x - 5 \leq 7$ Starter resource : Algebra Unit 3 – Conundrum ‘Equations’ Plenary resource: Algebra unit 5 - Cee Levels page 2
L3: C if U Can - Algebra : Inequalities and T&I (May need to re-cap T& I)	Brackets and Factorising
22/1/07	L1: Expand simple brackets e.g. $6(3x-5)$ and then two brackets e.g. $(x+3)(x-5)$ Plenary resource : Algebra 7.2 – Cettlers ‘Brackets’
	L2: Recap factorising, then factorise SIMPLE quadratic expressions. Plenary resource : Algebra Unit 7 Cee-levels Page 2 (middle question)
	L3: C that U Can one-liner. Further factorisation. Solve SIMPLE quadratic equations of the type $x^2 + 5x + 6 = 0$.
	L4: C if U Can - Algebra :Factorising
29/1/07	Transformation and similarity
	L1: C that U Can one-liner. Review reflection, rotation & translation Main resources : SSM Unit 2 Rotating objects; SSM Unit 9 Transformations & Transformations 2 Plenary resource : SSM Unit 2 Transform Target Board
	L2: Enlarge a shape from a given centre, find the centre Main resource : SSM Unit 9 Scale factor
	L3 : C if U Can – S & S :Transformations Starter resource : SSM Unit 9 Transformations powerpoint (Can Cards).
5/2/07	Fraction and percentage
	L1: C that U Can 1 liner. Multiply and divide fractions, including of mixed numbers
	L2: Add and subtract fractions, incl. problem solving Plenary resource : Number Unit 3 – Conundrum – Solving problems with fractions L3 : Percentages – which method do I use to solve a problem? Starter resource: Number unit 3 - Cettler 3.2 Main : sort GCSE questions by type (% of a qutty, % incr & decr, one quantity as a percentage of another – max of 8 questions) Plenary resource : Number Unit 3 – Conundrum – Finding percentages
	L4: C if U Can – Number : fr, dec & % 1
12/2/07	Trigonometry
	L1: Introduction to trig – finding a side
	L2: Finding an angle
	L3 : Solve problems/GCSE questions

TERM 4 w/b	Outline of unit content
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Each week, students will use the C If U Can booklet to assess progress in either the topic taught that week or the revision of another topic covered before. C that U Can one-liners have also been built into the plan as starters.

26/2/07	Probability
	L1 : C that U Can – one liner Revisit probability e.g record outcomes of 2 events; find the missing prob in a table Starter : HD Unit 3 or unit 5 – ppt Can Cards or 3.2 Deal or no deal or 5.2 Dice Plenary : HD Unit 3 – Understanding Probability
	L2: Tree diagrams. Complete tree diagrams and use to calculate outcomes of 2 events Main: HD Unit 5 – Calculating Probability and/or Outcomes
	L3 : C if U Can – HD :Probability
5/3/07	Graphs
	L1: C that U Can – one liner Substitution into formulae, including squares, cubes and negative values. Main : Algebra Unit 1 substitution or Can cards ppt Plenary resource : Algebra unit 5 – Conundrum ‘Substituting’
	L2 : Plot straight line graphs from tables of values. Use to solve equations. Starter : Algebra Unit 4 – Can Cards ppt Main : Alg Unit 4 Conundrum – Graphs and Alg Unit 6 Drawing Graphs of Functions Plenary : repeat more challenging slides from starter or Alg Unit 6 Can Cards ppt – grad & intercept
	L3 : Plot graphs of $y = ax^2 + bx + c$ ($a \neq 0$) and use to solve equations Main : Alg Unit 6 Drawing graphs of quadratic functions; Alg Unit 6 pages 2 and 3
	L4: C if U Can Algebra : Graphs
12/3/07	Shape and Space – Perimeter, Area and Volume
	L1: C that U Can – one liner Perimeter and area of plane rectilinear shapes Main : SSM Unit 3 Can cards ppt area & perim or ‘Calculating areas’ Plenary ; SSM3 Pages 1 & 2
	L2: Area and circumference of a circle & volume of a cylinder Starter : SSM Unit 3 Cettler SSM3- P12 Main : SSM6 Can cards ppt; SSM6 Conundrum ‘Cylinders’ Plenary SSM 6 Clock It
	L3 : C if U can S&S : Area and volume
19/3/07	Shape and Space – Angles and Loci
	L1: C that U Can – one liner as a starter Solve problems with angles between parallel lines and in triangles etc.. Main : SSM1 Can Cards ppt or SSM1 Calculating Angles 1 & 2 or SSM7 Using angle facts Plenary : SSM 1 Pages 1, 2 or 3
	L2: Bearings – scale diagrams to solve problems. Starter : SSM1 Can Cards ppt or SSM1 Calculating Angles 1 & 2 or SSM7 Using angle facts
	L3: Loci Plenary : SSM 7 Pages 1 & 2
	L4 : C if U can S&S : Angles
26/3/07	Catch-up week You can use this week to catch-up on lessons that needed more time or to use alternative sections in the C if U Can booklets. Also, no Handling Data (except probability) has been covered since the coursework so it may be desirable to revisit HD topics here.
	L1:
	L2:
	L3 :
2/4	Use the lesson(s) this week to develop pupil’s study skills to prepare them for revision.