Secondary Mathematics

Year 9 – Targeting Level 5 outline plan for terms 3 & 4

Following an analysis of mock KS3 tests in December, the post- Christmas scheme of work was revised for groups of students targeting Level 5

More detailed schemes of work were put in place based on these plans, but as these are specific to Brislington Enterprise College (BEC)and have many hyperlinked resources, just the outline plans are included here.

The resources referenced are the Secondary National Strategies ‘Targeting Level 5’ materials available from the DCSF website www.standards.dcsf.gov.uk

Notes:

- Two units are designed to be covered in a fortnightly cycle of lessons
- Starters will be used to address basic number skills (see SoW for a list of objectives to be addressed by the starters)
- One of the T5 *Top-ten mental tests* (X1, X2…to X5; Y1 to Y5; Z1 toZ5) will be done each week, with pupils recording the outcomes on the self-assessment sheet.
- KS3 test questions (from T5 Add-Ons) need to be used on a regular basis as assessment in the plenary
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TERM 3 w/ b	Outline of unit content		TERM 4 w/b	Outline of unit content
1/1/07	<u>Shape & Space - Transformations</u> ▪ Coordinates in 4 quadrants. ▪ Recognise symmetries of 2D shapes. ▪ Transformation of 2D shapes using reflection, rotation and translation.		26/2/07	<u>Number - Fraction and percentage</u> ▪ Fractions of quantities ▪ Finding a percentage of a quantity ▪ Knowing and using simple fractions as percentages ▪ Linking fractions, decimals and percentage
8/1/07	<u>Number - Decimals</u> ▪ Place value (incl x 10, 100 etc) ▪ Use known facts to derive unknown facts ▪ Add and subtract numbers with up to 2 decimal places ▪ Fractions and decimals		5/3/07	<u>Handling data -Probability</u> ▪ Equivalence of fractions ▪ Probability
15/1/07	<u>Handling Data</u> ▪ Interpret tables and charts, incl. bar charts, pictograms, simple pie-charts, two-way tables and timetables ▪ Mean, median, mode and range		12/3/07	<u>Algebra - Equations and straight line graphs</u> ▪ Solving simple linear equations ▪ Plot and draw a line graph from a table of values and interpret these.
22/1/07	<u>Shape & Space – Perimeter & Area</u> ▪ Representing 3D shapes in 2D, incl. nets ▪ Area and perimeter of 2D shapes, including area of a triangle		19/3/07	<u>Shape & Space - Angle properties</u> ▪ Measure and draw angles ▪ Names of types of angles and triangles ▪ Use angle properties of straight lines, full turns and triangles to solve problems
29/1/07	<u>Number & Algebra – Number Properties</u> ▪ Factors, multiples and primes ▪ Squares, square roots ▪ Directed number ▪ Sequences, to include triangular numbers		26/3/07	<u>Number - calculation</u> ▪ Multiply and divide whole numbers, up to 3 digit by 2 digit ▪ Solve word problems <u>Number and measure – metric units</u> ▪ Convert one metric unit to another ▪ Use metric units in context ▪ Add and subtract decimals with up to 2 decimal places in the context of measure.
5/2/07 → end of term 3	<u>Algebra – Formulae and substitution</u> ▪ Forming algebraic expressions, incl. simple formulae ▪ Substitution of positive integers in simple formulae ***END of term assessment.***		TERM 5 (2 weeks) ▪ To include 2 SATS mental tests (1 test in 1/2 lesson each week) Use KS3 test questions at level 5 to re-visit topics that have caused difficulty in terms 3 and 4.	

Starter activities

The starter activities should be used to address key number skills e.g.

- Multiplication and associated division facts (to 10 x 10)
- Multiplying and dividing by 10, 100 and 1000 - whole numbers → decimals
- Doubling and halving (to include x and ÷ by 4 and 8)
- Add and subtract 2 and 3 digit numbers mentally (or using a number line)
- Simple fractions and percentages of quantities
- Knowing simple fraction, decimal and percentage conversions
- Using a thermometer to add or subtract a negative number (not subtracting of a negative!)
- After teaching the Area and Perimeter unit, constant revision of the difference between the two is needed

  Likewise :
  - factors, multiples, primes and squares
  - mean, median, mode and range
  - conversion of one metric unit to another
  - properties of angles and triangles
  - fractions of quantities
  - percentage of quantities