

Felpham Community College – Key Stage 3 Overview

Subject: Maths	Year: 7	Leader: M Ballantyne
Autumn Term 1	Activities	G & T Opportunities
Topic: Grand designs	Number and picture sequences, making predictions, finding rules in words and algebra.	G&T generate non-linear and linear sequences without diagrams and find rules.
Frozen	Four operations (+ - x ÷) with whole numbers and negative numbers. Mental and formal written methods. Use of inequality symbols. Choose correct operation.	G&T include multi step problem solving activities.
Tiling	Transformations; reflection, rotation, translation & enlargement. Coordinates in all four quadrants.	G&T formal transformations with Cartesian coordinates. Use correct mathematical language.
		Assessment Plans Topic assessment.
Literacy/Numeracy /ICT Tiling – ICT using GSP a modelling software package which can be used to create and transform tiles.		

Autumn Term 2	Activities	G & T Opportunities
Topic: Aliens	Place value, rounding, reading, ordering decimals, decimal calculations, estimating calculations.	G&T Standard form.
Reactions	Form a hypothesis, collect own data, compare two distributions, calculate and choose suitable averages (MMMR), draw and interpret graphs.	G&T analysing and interpreting statistics in detail and context.
Ratio	Understanding and writing ratios, simplifying ratio, dividing in a given ratio.	G&T problem solving using ratio.
		Assessment Plans Topic assessment / class test.
Literacy/Numeracy/ICT Reactions – Literacy skills can be developed through the writing of a hypothesis and analysis/interpretation of data.		
<u>G&T consistent use of mathematical language.</u>		

Spring Term 1	Activities	G & T Opportunities
Topic: Mission impossible	Consider the correct order of operations. Calculate using BIDMAS, including using powers.	G&T Laws of indices.
Colin carpenter	Discover angles rules, identify types of triangle. Consider congruence. Use a compass or a protractor to construct triangles, and right-angles.	G&T construct regular shapes, simple proofs of angle rules, solve more complex multi-step angle problems.
		Assessment Plans Topic assessment.
Literacy/Numeracy/ICT Mission impossible – the difference between a basic and scientific calculator is stressed		
<u>G&T give concise justifications when using angle rules.</u>		

Spring Term 2	Activities	G & T Opportunities
Topic: Puzzles	Introduce algebraic notation. Form and solve linear equations, collect like terms, multiply out brackets.	More complex algebraic manipulation including multiplying brackets by a negative and expanding double brackets.
Pizza	Identifying fractions, equivalent fractions, ordering fractions, calculating with fractions (+and -) with same denominators and different denominators.	Solve problems involving a mixture of fractions, decimals and percentages.
Fairground	Using language associated with probability, finding probabilities, comparing probabilities, consider experimental and theoretical probabilities.	Devise 'and', 'or' rules for probabilities, use tree diagrams.
		Assessment Plans Topic assessment / class test.
Literacy/Numeracy/ICT Pizza – Numeracy skills in context developed.		

Summer Term 1	Activities	G & T Opportunities
Topic: Function machines	Generate coordinate from simple rules, plot graphs of equations and functions, negative numbers.	Explore properties of straight line graphs, plot quadratic graphs.
Bank Manager	Use both calculator and non – calculator methods to find percentages. Express amounts as percentages.	Use multipliers to calculate percentage changes.
Gnomes homes	Draw and identify 3D solids, create nets, draw plans and elevations of solids. Calculate volume and surface area.	Volume and surface area of a prisms or other solids, use Pythagoras. Area and circumference of circles.
		Assessment Plans Topic assessment.
Literacy/Numeracy/ICT Function machines – ICT using Autograph to compare straight line graphs.		

Summer Term 2	Activities	G & T Opportunities
Newspapers	Collect and present data, find averages, compare 2 sets of data. Mean from frequency table.	Analysing and interpreting statistics in detail and context.
Holidays	Time, converting and using metric units, reading scales, creating conversion graphs. Problem solving for journeys.	Planning a journey across time zones.
		Assessment Plans Topic assessment / End of year exam.
Literacy/Numeracy/ICT Newspapers – Literacy discuss paragraphs, punctuation.		

Website / Resources <http://vle.mathswatch.co.uk> www.kangaroomaths.com (Kenny's pouch)
<http://www.bbc.co.uk/schools/ks3bitesize>