The Bemrose School Curriculum

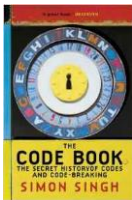## Curriculum Overview: Year 9 Maths https://whiterosemaths.com/resources?year=year-9

The school uses the White Rose Maths scheme in math in Year 9

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Straight line graphs Forming and solving equations Testing conjectures	Three dimensional shapes Construction and congruency	Reasoning with number Using percentages Maths and Money	Reasoning with geometry Rotation and translation Pythagoras theorem	Enlargement and similarity Ratio and proportion	Probability Algebraic representation
Links to prior learning Plotting simple straight-line graphs Forming and solving linear equations **Stretch and Challenge Enquiry** When two lines are perpendicular, why must one gradient be positive and one be negative? How many terms will there be in the initial expansion of three binomials?	**Links to prior learning** Properties of 2D and 3D shapes Area of 2D shapes Constructing polygons **Stretch and Challenge Enquiry** How do you identify a pyramid? How many cones would fit into a cylinder of the same dimensions?	**Links to prior learning** Standard form HCF/LCM Fractions, decimals and percentages **Stretch and Challenge Enquiry** Why increasing a number by a % and then decreasing the answer by the same % doesn't get you back to the original number? What is the difference between simple and compound interest?	**Links to prior learning** Angles Properties of shapes Symmetry and reflection Squares and square roots **Stretch and Challenge Enquiry** What does it mean for a point or a line to be invariant? What is the greatest distance between the vertices of a cube?	**Links to prior learning** Simple transformations Ratio and scale Speed, distance and time graphs **Stretch and Challenge Enquiry** Which scale factor produces a larger shape -2 or $\frac{1}{2}$? Is the graph of an inverse proportion relationship linear or non-linear? Why?	**Links to prior learning** Probabilities of single and combined events Straight line graphs **Stretch and Challenge Enquiry** Why do we multiply probabilities along the branches of a tree diagram but add the probabilities of the outcomes? How can you check the solution to a pair of simultaneous equations?

Equipment Needed	Wider Reading	Family activities
Scientific calculator Pair of compasses Ruler Pencil Protractor **Homework** Smart Phone, Tablet, Laptop, Desktop, Wi-Fi Sparx Maths	**The Code Book by Simon Singh** The Code Book is a history of man's urge to uncover the secrets of codes, from Egyptian puzzles to modern day computer encryptions. As in Fermat's Last Theorem, Simon Singh brings life to an astonishing story of puzzles, codes, languages and riddles that reveals man's continual pursuit to disguise and uncover, and to work out the secret languages of others.	Maths games https://nrich.maths.org/9465 Try online GCSE papers at https://www.onmaths.com/ https://www.mathsgenie.co.uk/AQApapers.html A guide to parents https://www.aqa.org.uk/maths-digest/maths-blog/supporting-students-a-parents-perspective Free Maths Resources https://mathsbot.com/gcseMenu https://corbettmaths.com/contents/ https://gridalgebra.com/free