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**Knowledge Rich Curriculum Plan**

Year 11 Higher – Algebra 2



| **Lesson/Learning Sequence** | **Intended Knowledge:**  *Students will know that…* | **Tiered Vocabulary** | **Prior Knowledge:**  *In order to know this students, need to already know that…* | **Assessment** |
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| **To learn how to find the equation of a straight line** | * Students will know how to find the equation of a given straight line and write it in the form y = mx + c * Students will know how to find the gradient and y-intercept for a straight line representing a real-life situation and exp |  | * Students will need to know how to calculate gradient between two coordinates | Exam Prep 3 |
| **To learn how to find the equation of a straight line from coordinates and find the equation of parallel lines** | * Students will know how to determine the equation of a straight line from two pairs of coordinates * Students will know that parallel lines have the same gradient * Students will know how to find the equation of a straight line that is parallel to another given line * Students will know how to solve more complex problems involving parallel lines | **Parallel –** parallel lines are two lines that are side by side and have the same distance continuously between them. | * Students will need to know how to calculate gradient * Students will need to know how to solve linear equations in the form a + x = c where a and c are integers or fractions | Exam Prep 3 |
| **To learn how to find the equation of perpendicular lines** | * Students will know that the gradients of two perpendicular lines are negative reciprocals of one another * Students will know how to find the equation a straight line that is perpendicular to another given line * Students will know how to solve more complex problems involving perpendicular lines | **Perpendicular –** at a right angle to  **Reciprocal** – The reciprocal of a number is 1 divided by the number | * Students will need to know how to find the reciprocal of an integer * Students will need to know how to find the reciprocal of a fraction | Exam Prep 3 |
| **To learn how to solve linear simultaneous equations** | * Students will know how to solve linear simultaneous equations or find estimates to their solutions given two straight lines drawn on a graph * Students will know how to solve linear simultaneous equations by drawing two straight lines and identifying the x- and y- values for the point of intersection * Students will know how to use elimination to solve linear simultaneous equations algebraically * Students will know how to solve linear simultaneous equations representing a real-life situation and interpret the solution in the context of the problem | **Simultaneous –** occurring, operating, or done at the same time.  **Simultaneous equations –** equations involving two or more unknowns that are to have the same values in each equation.  **Linear Equation –** an equation between two variables that can be written in the form y=mx+c. Linear equations give a straight line when plotted on a graph. | * Students will need to know how to solve linear equations * Students will need to know how to substitute into formulae | Exam Prep 3 |