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| **Year 10 Term 4 - Maths** | |  | | | | | |
| **Enquiry Question: What function Can model the spread of a pandemic?** | | | | | | | |
| **Unit title: Graphs and Linear Functions**  **Why now?** This unit introduces you to some new idea about the **proportional relationship** between two variables. You first meet **proportion** in **Year 7** and build on this in **Year 8.** This unit shows how **graphs can represent** these relationships and then this is taken further in **Year 10.** | | | | | | | |
| **Knowledge**  Students will know about… | **Application/Skills**  Students will be able to… | | **Vocabulary**  *(Tier 2 and 3)* | **Home**  **Learning** | **Assessment** | **Extra Resources**  **Extended Reading** | **Cultural Capital** |
| 1. Coordinates review 2. What is a function 3. Plotting linear functions 4. Composite and inverse functions 5. The algebra of linear functions and graphs- gradient and intercept 6. What happens when graphs of two linear functions intersect? 7. Real life graphs - distance time and others 8. (extension) Beyond linear functions - plotting and understanding graphs of quadratic functions 9. (extension) more complex functions and their graphs - exponential, reciprocal | 1. Plot graphs using coordinates and a table. 2. Identify the domain and range of a function (inputs and outputs). 3. Explore the properties of linear functions. 4. Explore the properties of non linear functions. | | ***Tier 2***  Function  Linear  Output  input  transformation  ***Tier 3***  Coordinates  Axes  Graph  Domain  Range  Composite | **Pre-classroom:**  Pre-lesson tasks on **google classroom** to get you thinking.  Diagnostic questions  **Post-Classroom:**  Post lessons online tasks:   * My Maths * Google Form Quizzes * Independent learning notes | Summative Assessment at the end of T4. | **Enrichment:**  Explore the artists Barbara Hepworth and Naum Gabo and find pieces of their artwork which **create curves using straight lines.**  Create your own **piece of artwork** | **Cultural Capital:**  Visit your local go karting centre and work out the graphical representation of your journey around the track. |
| **Numeracy**  Product  Sum  Total  Add  Subtract  Difference |