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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***FunctionLinearOutputinputtransformation***Tier 3***CoordinatesAxesGraphDomainRangeComposite | **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**ProductSumTotalAddSubtractDifference |