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| Year 8 | **Topic: Unit 5 – Real life graphs**  **Period:** Spring 1 |
| **Overview of topic:**  Students will build on their knowledge from year 7 and from earlier in year 8 (unit 3) in dealing with graphs, and extend it to include more complex graphs, charts and tables, and looking at how graphs are often less ‘perfect’ when dealing with real-world data.   * Conversion graphs * Distance-time graphs * Line graphs * Further line graphs * Real-life graphs * Curved graphs | |
| **Key** **knowledge:**   * A conversion graph converts values from one unit to another. * In a distance–time graph   + the vertical axis represents the distance from the starting point   + the horizontal axis represents the time taken. * On a distance–time graph the gradient (steepness) of the line represents the speed of the journey. * The steeper the line, the faster the speed. * The shape of a line graph shows whether a quantity is increasing or decreasing. * Understand that a graph may show seasonal or other variations, but still show an upward or downward trend * Line graphs can help you identify trends in the data. The trend is the general direction of change, ignoring individual ups and downs. * A linear graph is a single straight line. * A non-linear graph is not a single straight line. * You can interpret graphs from real-life situations by reading values and suggesting what they mean | **Key skills:**   * Draw, use and interpret conversion graphs * Interpret a distance–time graph * Draw a simple distance–time graph * Draw and use graphs to solve distance–time problems * Draw and interpret line graphs * Draw and interpret line graphs and identify trends * Draw and interpret linear and non-linear graphs from a range of sources * Draw and interpret curved graphs from a range of sources   **Key vocabulary:**   |  |  | | --- | --- | | Tier 2 | Tier 3 | | * Conversion * Vertical * Horizontal * Gradient * Quantity * Variations * Trend * Data * Interpret | * Graph * Linear * Non-Linear | |
| **Co-curricular opportunities:** Data handling skills are a vital key skill across multiple other areas of study including Science, Geography, PE and many others. The ability to assess the reliability of a source has similar implications to analysing source material in History and English | **Key reading skills taught and key texts:**  Clarify – identify key vocabulary in questions and be fluent in understanding the meanings  Question – from a worded question, what Maths is required to be done in order to get a solution?  **Wider Reading Opportunities/Links:** |
| **How can I use this information at home?**   * Conversation starters with your children to discuss their learning * Support your child in carrying out independent research around the topic * Visit your local library (or BorrowBox), museums, or other locations to explore the topic * Promote books/other texts that explore this topic (see reading section) * Help your child to learn the key vocabulary * Encourage practice and consolidation through completion of homework, SparxMaths times tables and using other online learning platforms * Encourage them to practice their mathematical skills in a variety of everyday situations wherever the opportunity arises. | |