 **LPS Mathematics: Year 8 Unit 9 – Representing and Interpreting Data**

**Enquiry Question:** **Are all graphs useful?**

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| **Key Topics and Learning Sequence** | | | | | | | | | |
| **= First Steps** | | **= Moving On** | | | **= Stretch** | | **= Challenge** | |
| 1. **Pie Charts** 2. Understanding a pie chart is used to represent a **part-whole relationship** 3. Be able to construct a pie chart by **calculating angles** 4. Explain what you can read from a pie chart 5. Use **multiplicative reasoning** to determine what each sector represents in a pie chart | **2. Line Graphs and Scatter Diagrams**   1. Can draw a **line graph** 2. Explain what you can read from a line graph 3. Can plot a **scatter diagram** 4. Can draw a **line of best fit** on a scatter diagram 5. Describe the **correlation** on a scatter graph 6. Know the difference between **correlation** and **causation**? | | **3. Interpreting Data**   1. Making meaningful **comparisons** between the same visual representations of different data sets. 2. Highlighting **differences** and comparisons between pie charts | | | **4. Data in Context**   1. Can use diagrams to suggest whether data supports an answer to a question 2. Can comment on features such as the **most common response** in a diagram 3. Can comment in more detail about what charts and diagrams show about responses to a question 4. Exploring real **data sets**- including using technology and digital sources | | **5. Data Project**   1. Choosing a good question to investigate. 2. Applying how to collect data to your project 3. Applying how to use charts to represent data in your project. 4. Applying how to interpret charts to answer questions in your project 5. **Communicating your findings** clearly in writing and orally |
| **How does this unit fit into your mathematical learning journey?** | | | | **Further Exploration, Enrichment and Cultural Capital** | | | | | |
| This unit of work builds on ideas of representing data you first learned in **Unit 3 Collecting and Representing Data** but also using multiplicative reasoning that you saw in **Proportional reasoning** in **Year 7** and your knowledge on **angles** from **Unit 5** in **Year 8.** | | | | **Reading:** <https://prek-math-te.stanford.edu/measurement-data/what-children-know-and-need-know-about-data>  **Enrichment:**  What questions or hypothesis can you come up with, that this data could help you to answer?  <https://nrich.maths.org/whatstheweatherlike>  **Cultural Capital:**  Read and interpret as many of the graphs about the UK in this document. Can you list all the different types of graphs used? <https://www.ons.gov.uk/> | | | | | |

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**Date: Initial Thoughts:**

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**Date: New Thoughts:**

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**Date: Final Thoughts:**

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