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| **Key Topics and Learning Sequence** | | | | | | |
| **= First Steps** | **= Moving On** | | **= Stretch** | | **= Challenge** | |
| 1. **Drawing conclusions from charts and graphs** 2. How to **read** information from **graphs** and **charts** 3. **Writing** about what a **bar chart** or **vertical line chart** shows 4. **Writing** about what a **pie chart** shows 5. **Writing** about what a **line graph** shows | 1. **Problems with data representations** 2. Be able to **critique** the integrity of chosen **scales** on bar and vertical line charts 3. Understand the **limitations** of **pie charts**, and investigate adapted infographics 4. Explore the impact of **anomalies** and **outliers** | 1. **Comparing charts and graphs** 2. Compare **bar charts** (including **dual** and **stacked**) 3. Compare **pie charts** (including scaled pie charts) 4. Compare **box plots** 5. Compare a range of **infographics** | | 1. **Trends over time** 2. Look at scatter graphs, lines of best fit, **correlation and causation** 3. Line graphs and **trend lines** 4. **Cyclical variation** and trends over time 5. **Moving averages** and trends | | 1. **Data in Context** 2. **Interpret** data in the **context** of **racial inequality** in society 3. **Interpret** data in the **context** of **other inequalities** in society 4. **Interpret** data in the **context** of **climate change** |
| **How does this unit fit into your mathematical learning journey?** | | | **Further Exploration, Enrichment and Cultural Capital** | | | |
| This unit of work builds on work you did in **Year 9 on averages** where you looked at different ways of **representing data.** Here we extend that into being able to **critically interpret** the ways data is presented and being able to **draw conclusions** from data **and communicate** that clearly and mathematically. | | | **Reading:**  Read The Art of Statistics by David Spiegelhalter (in school library)  **Enrichment:**  Watch the Royal Institution Christmas lecture from 2021 on how COVID changed science  **Cultural Capital:**  Visit the Florence Nightingale museum in London to see how she used data and statistics to transform nursing and health care <https://www.florence-nightingale.co.uk/> | | | |

**LPS Mathematics: Year 10 Unit 3 - Interpreting and Reasoning with Data**

**Enquiry Question:** “**Should you always believe a graph or chart?”**

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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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