

Year Group: KS3 (Year B)

Term: Summer 2

Maths: Data Handling and Measures of Location

Key Concepts	SMSC & British Values	Lesson Objectives	Key Vocabulary
<p>The data handling cycle: collect, represent, interpret, compare and conclude. Data types: discrete and continuous data. Choosing appropriate charts: tables, tally charts, bar charts, line graphs and pie charts. Reading and constructing line graphs and pie charts accurately. Scale, proportion and frequency in data representation. Mean as an average and as a fair share value. Interpreting averages in context and comparing data sets using statistical language.</p> <p>Prior Knowledge</p> <p>Read and write whole numbers, including place value. Add, subtract, multiply and divide small whole numbers. Interpret and use simple tables, tally charts and bar charts. Recognise fractions, decimals and percentages. Measure using common units of length, mass, time and money.</p> <p>Cross-Curricular Links</p> <p>Science: recording results, comparing outcomes, identifying patterns in investigations. Geography: climate data, population data, fieldwork results and survey findings. Computing: collecting, entering and displaying data using digital tools. PSHE: class surveys, wellbeing questionnaires and interpreting results responsibly.</p>	<p>Moral: discussing the importance of honesty, accuracy and fair presentation of data. Social: collaborating in data collection, listening to others' interpretations and comparing ideas respectfully. Cultural: exploring data from different contexts, communities and real-world examples. British values: democracy: using surveys and class votes to collect data fairly. British values: rule of law: following agreed rules for collecting, recording and presenting data accurately.</p> <p>Assessment</p> <p>Baseline checks on interpreting tables, charts and graphs. Ongoing hinge questions on reading scales, identifying trends and selecting suitable graph types. Short retrieval tasks on frequency, total, range and average. End-of-unit assessment using unfamiliar data sets to interpret charts, calculate the mean and explain conclusions.</p> <p>Adaptations</p> <p>Use simplified, familiar contexts and smaller numbers where needed. Provide partially completed graphs, tables and scaffolds for scale reading. Pre-teach vocabulary with visual supports and worked examples. Allow use of number lines, multiplication tables and calculation grids for mean. Reduce cognitive load by limiting the number of data points in early lessons.</p>	<ol style="list-style-type: none"> Identify the stages of the data handling cycle and organise data into a frequency table. Interpret frequency tables and represent data. Read and interpret scales on graphs accurately. Construct line graphs from a set of data. Interpret line graphs and describe trends. Solve problems using line graphs and data from real contexts. Understand the purpose of pie charts and interpret simple pie charts. Interpret pie charts using fractions, percentages. Compare pie charts and explain what the data shows. Recognise how scaling affects the interpretation of pie charts and graphs. Construct pie charts with support and interpret the completed chart. Understand the meaning of average and calculate the mean of a small data set. Calculate the mean from data and interpret it in context. Compare the mean with other measures of location in simple contexts. Interpret and solve problems involving the mean and average. Select and justify suitable representations and averages for a data set. Apply the data handling cycle, interpret graphs and calculate the mean to solve mixed problems. <p>Links to Future Learning</p> <p>Using algebraic representations to model relationships between variables. Constructing and interpreting more complex graphs and tables in KS3. Applying statistical understanding in GCSE-style problem solving.</p>	<p>data data handling cycle collect represent interpret conclude frequency frequency table tally chart graph line graph pie chart scale axis label title sector proportion total average mean sum divide trend compare conclusion statistical language</p>

Possible Enrichment:

Create a mini statistical report with charts, averages and written conclusions. Compare data from different classes or year groups and present findings to an audience.