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| **Title of unit:** | Statistical Inquiry |
| **Overview of unit:** | Averages  Sampling  Data trends  Estimating population sizes |
| **Cross-curricular/ extra-curricular links:** | Business Studies – sampling/market research; producing and interpreting averages and charts  Geography - analysing population data to explore and compare lifestyles  PE – design data collection sheets, collect and record real data, find the averages, compare and draw conclusions  Science – record results in tables – choose appropriate form and design data collection sheets |
| **Literacy/**  **numeracy links:** | Worded problems/exam questions  Keywords displayed on all PPts - Data, average, mode, median, range, mean, interquartile range, upper/lower quartile, estimate, (grouped) frequency table, sample, random, systematic, stratified  Written plenaries |

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| **Grade:** | **Learning objective:** | **Resources:** |
| **1** | Find the mode and median for an odd set of numbers. | [Averages](https://www.piximaths.co.uk/averages-mode-median-mean-range) |
| **2** | Work out the range for a set of numbers.  Find the median for an even set of numbers.  Calculate the mean for a set of numbers. | [Averages](https://www.piximaths.co.uk/averages-mode-median-mean-range) |
| **3** | Compare the mean and range of two distributions. | [Averages](https://www.piximaths.co.uk/averages-mode-median-mean-range) |
| **4** | Use a variety of sampling methods.  Classify types of data.  Design and use data collection sheets and questionnaires. | [Sampling](https://www.piximaths.co.uk/sampling) |
| **5** | Draw and interpret a time series graph.  Calculate the mean from a frequency table.  Use stratified sampling methods. | [Frequency polygons](https://www.piximaths.co.uk/frequency-polygons)  [Moving averages](https://www.piximaths.co.uk/moving-averages)  [Averages from tables](https://www.piximaths.co.uk/averages-from-frequency-tables)  [Sampling](https://www.piximaths.co.uk/sampling) |
| **6** | Estimate the mean from grouped data.  Find the modal group and location of the median from grouped data. | [Averages from tables](https://www.piximaths.co.uk/averages-from-frequency-tables) |
| **7** | Estimate population sizes using the Petersen capture-recapture model | [Petersen capture-recapture](https://www.piximaths.co.uk/petersen-capture-recapture) |
| **8** |  |  |
| **9** |  |  |