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**Mathematics Faculty**

**Year 10 Higher – Autumn Term 2**

**Unit 4 Overview - Representing and Interpreting Data**

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| **Topic** | **Key Ideas** | **Progress** | | |
| **R** | **A** | **G** |
| **Representing and Interpreting Data** | I can understand the limitations of sampling and recognise representative samples. |  |  |  |
| I can plot and interpret time-series graphs. |  |  |  |
| I can construct and interpret histograms. |  |  |  |
| I can construct and interpret cumulative frequency diagrams. |  |  |  |
| I can construct, interpret and compare box and whisker plots. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Understanding the limitations of sampling. Recognising representative samples. (CM clips 281 & 282) | Formative assessment strategies e.g. MWBs, whole class questioning, Diagnostic Questions, SLOP time with self-assessment, Live Marking etc.  Assessment is also supported with our use of ILOs, set through Century Learning, Corbettmaths, Dr Frost Maths and Justmaths.  Finally, units are assessed through skills checks and half termly assessments, as part of our Assessment Calendar in Mathematics. | sample, population, limitation, representative, bias, random, stratified |
| **2** | Plotting and interpreting time-series graphs. | time series, plot, interpret, trend, value, predict |
| **3** | Constructing scatter graphs. Using lines of best fit to estimate unknown values (CM clips 165 – 168) | scatter graph, plot, interpret, correlation, positive, negative, line of best fit, interpolation, extrapolation, estimate |
| **4** | **Calculating an estimate of the mean and finding the interval containing the median for a grouped frequency distribution (CM clips 52 & 55)** | average, mean, median, frequency, grouped, interval, estimate |
| **5** | Constructing histograms with equal class intervals. | histogram, interval, class width, frequency, construct |
| **6** | **Constructing and interpreting histograms with unequal class intervals** (CM clips 157 - 159) | histogram, class width, frequency, frequency density, median, interval |
| **7** | **Constructing and interpreting cumulative frequency diagrams** (CM clips 153 & 154) | cumulative frequency, construct, interpret, median, quartile, interquartile range |
| **8** | Calculating quartiles and the inter-quartile range from a set of data. **Constructing box and whisker plots** (CM clip 149) | quartile, interquartile range, median, box plot, value |
| **9** | Interpreting and comparing box and whisker plots (CM clips 149 & 150) | quartile, interquartile range, median, box plot, value, compare |