

"Our curriculum is designed to help students truly master mathematics, so they can apply their skills in unfamiliar situations whenever needed. Topics from the same content areas have been grouped together to form mastery half terms. More time is spent teaching fundamentals to avoid reteaching in later years."

Spring 2: Represent and reason with data	
Skills	<ul style="list-style-type: none"> ● Find the mean, median mode and range from raw datasets ● Use the mean, median and mode to compare data sets ● Use an average plus the range to compare datasets ● Find the mode, median and mean from tables and graphical representations (not grouped) ● Classify and tabulate data ● Conduct statistical investigations using collected data ● Construct scatter graphs ● Examine clusters and outliers ● Use a scatter graph to plot a line of best fit ● Use a line of best fit to interpolate and extrapolate inferences
Knowledge	<ul style="list-style-type: none"> ● Understand the difference between an average and a measure of spread ● Have an understanding of when one average may be more appropriate than another ● Begin to understand the data handling cycle informally ● Explore methods of data collection including surveys, questionnaires and the use of secondary data ● Appreciate the difference between discrete and continuous data ● Recognise the differences between univariate and bivariate data, and how they may be represented ● Analyse the shape, strength and direction to make conjectures for possible bivariate relationships
Rationale	<p>This module explores a variety of methods of presenting data, with an emphasis on interpretation as well as production.</p> <p>In the first unit, learners study univariate data. The unit presents a series of inquiry questions and students make hypotheses in relation to these. Each of the statistical methods taught in this unit are used to construct an argument for or against some given hypotheses. Students begin by considering different ways of representing a data set such as in tables, bar charts, pictograms, line graphs and pie charts. Students organize data into different frequency distributions. Misleading graphical representations of the data are presented and critiqued. In the second part of this unit, students begin to look at statistical measures and interpret these in terms of the data. Students calculate the mean, median, mode and range of ungrouped and grouped data. Time is spent discussing the different measures of centrality.</p> <p>In the second unit of the half term, students extend their understanding of statistical diagrams and measures to bivariate data. Students present the data in tables and in a scatter graph. They examine relationships between point to make simple inferences about association and covariation. The difference between correlation and causation are introduced and the idea of an explanatory variable.</p>