Statistics Curriculum Intent and Overview

To develop the next generation of statisticians to be able to collect, analyse, interpret and present data and make sense of data in the real world.

Focus	Intent
Understanding	To develop understanding of the statistical enquiry cycle: collecting, interpreting, analysing and presenting data and how this, along with quality assurance, retail price index and making predictions impacts industry and economics.
Enquiry	To analyse and challenge the reliability of data in real life and in the media such as government statistics.
Embedding knowledge	To develop retrieval skills to embed cumulative knowledge.
Progress Tracking	To closely monitor and track student progress to ensure every student makes at least expected progress.
Academic Achievement	To continuously improve on the examination success for all our students.
Inspiration	To inspire the next generation of statisticians to be able to understand and challenge data in every-day life, in the media and in life beyond De La Salle School

	Autumn Term	Spring Term	Summer Term
Year 10	**Collection of Data** ● Describing data ● Grouping data ● Primary and secondary data ● Populations ● Petersen capture-recapture formula ● Random sampling ● Non-random sampling ● Stratified sampling ● Collection of data ● Questionnaires and interviews ● Problems with collected data ● Controlling extraneous variables ● Hypotheses ● Designing investigations	**Processing and Representing Data** ● Tables ● Two-way tables ● Pictograms ● Bar charts ● Stem and leaf diagrams ● Pie charts ● Population pyramids ● Choropleth maps ● Frequency polygons ● Cumulative frequency charts ● The shape of a distribution ● Histograms ● Misleading diagrams ● Choosing the right format **Summarising Data** ● Averages ● Transforming data ● Geometric mean ● Weighted mean ● Measures of dispersion ● Standard deviation ● Box plots and outliers	**Scatter diagrams and correlation** ● Scatter graphs ● Correlation ● Causal relationships ● Line of best fit ● Interpolation and extrapolation ● Spearman's rank correlation coefficient ● Pearson's product moment correlation coefficient **Time Series** ● Line graphs and time series ● Trend lines ● Variations in a time series ● Moving averages ● Estimating seasonal variations and making predictions

		• Skewness • Comparing data sets • Making estimates	
Year 11	**Probability** • Experimental probability • Using probability to assess risk • Sample space diagrams • Venn diagrams • Mutually exclusive and exhaustive events • The general addition law • Independent events • Tree diagrams • Conditional probability **Index Numbers** • Index numbers • RPI, CPI AND GDP • Chain based index numbers • Rates of change **Probability Distributions** • Binomial distributions • Normal distributions • Standardised scores • Quality assurance and control charts	Focused revision of topics identified from mini mocks and mock exams	Preparation for Exams