Department: Core Maths	Year 12

Plan Of Learning For The Year (Unit/Topic/Project Context)

Half Term 1
- Personal finance: percentages recap; income tax, national insurance; VAT; exchanging currency.

Half Term 2
- Fermi estimation and accuracy.
- Sampling and data: primary and secondary data; quantitative and qualitative data; census, population and sampling methods.

Half Term 3
- Representing and interpreting data: graphical representations including bar charts, box plots and stem-and-leaf diagrams; mean and standard deviation; percentiles and cumulative frequency; histograms.

Half Term 4
- Saving and borrowing: inflation; budgeting; student loans; loans and mortgages; AER and APR; interest rates.

Half Term 5
- Critical analysis: spreadsheet modelling; building a simulation; communicating mathematical approaches and solutions.
- Correlation and regression: scatter diagrams; outliers and product-moment correlation coefficient; correlation and causation; regression lines.

Half Term 6
- Normal distribution and confidence intervals: variation in measurements; properties of a normal distribution; using normal distribution to calculate probabilities; modelling with a normal distribution; confidence intervals.

Feedback, Retrieval & Assessment	Super curriculum opportunities / extra-curricular activities	Cultural Capital, SMSC, Careers and Futures
• Self and peer assessment • On-going formative assessment during lessons by teacher • Student/teacher one-to-one discussions • Regular use of the Integral platform for homework • Regular use of Integral section tests for homework • Regular use of past papers after Feb half term	• Wider reading, especially in current affairs journalism: how is data presented? Is it manipulated or presented objectively? How does government policy affect people's personal finances? Etc • 'More or Less' podcast from Radio 4/BBC Sounds • Use of Integral to explore the course – we won't have time for all the rich activities in class. • New York Times 'What's going on with this Graph?'	• Understanding how personal finance works: how much of your salary you can expect to keep; how to make an informed decision about when and how to borrow money wisely. • Careful consideration of the ways that data can used and misused in wider society to enlighten, persuade, manipulate and deceive. • Detailed use of software such as spreadsheets which are essential to the workplace.

Common misconceptions	Connecting New Knowledge	Challenge for all
• Reverse percentage errors e.g. when finding VAT from the final price. • Confusing measures of spread with measures of central tendency. • Believing that correlation implies causation (it doesn't!)	• Regular revisiting of existing concepts in new contexts • The role of existing knowledge percentages in many different aspects of new learning. • Use of technology to enhance learning.	• Knowledge Organisers used to give an overview of the learning that will take place and a chance to review the learning that has taken place prior to assessments • Regular use of scaffolds and structured practice