Curriculum Plans: Year _____ (Subject)

	Topic	Knowledge: By the end of the unit students will know:	Skills: What skills will students have developed by the end of this unit?	Key terms: What new key terms and vocabulary will be learnt in this unit?	Summative Assessment: How will pupils be assessed in this unit?
Michaelmas 1	Data Collection	D1.1 appreciating the difference between qualitative and quantitative data including the difference between discrete and continuous quantitative data D1.2 appreciating the difference between primary and secondary data including the use of secondary data that have been processed e.g. grouped D1.3 collecting quantitative and qualitative primary and secondary data D2.2 appreciating that improving accuracy by removing bias and increasing sample size may cost/save both time and money D2.3 inferring properties of populations or distributions from a sample, whilst knowing the limitations of sampling D2.1 appreciating the strengths and limitations of random, cluster, stratified and quota sampling methods and applying this understanding when designing sampling strategies	• Identify advantages & disadvantages of sampling methods	**Census. Stratified Sampling. Bias** **Cumulative frequency. Box plots. Histograms**	

	Percentages	F2.1 interpreting percentages and percentage changes as a fraction or a decimal and interpreting these multiplicatively F2.2 expressing one quantity as a percentage of another F2.3 comparing two quantities using percentages F2.4 working with percentages over 100% F2.5 solving problems involving percentage change including percentage increase/decrease and original value problems E1.2 selecting and using appropriate mathematical techniques for problems and situations F7.2 setting up, solving and interpreting the solutions to financial problems	• solving problems involving percentage change including percentage increase/decrease and original value problems including simple and compound interest		
	Fermi estimation	E2.1 making fast, rough estimates of quantities which are either difficult or impossible to measure directly F1.1 substituting numerical values into financial expressions (including bank accounts)	• making fast, rough estimates of quantities which are either difficult or impossible to measure directly		

	Representing data	F1.4 finding approximate solutions to problems in financial contexts D3.1 calculating/identifying mean, median, mode, quartiles, percentiles, range, interquartile range, either from raw data or from cumulative frequency diagrams, stem-and-leaf diagrams or box plots D3.2 interpreting these numerical measures and reaching conclusions based on these measures E1.2 selecting and using appropriate mathematical techniques for problems and situations D3.1 calculating/identifying mean, median, mode, quartiles, percentiles, range, interquartile range, either from cumulative frequency diagrams or box plots D3.2 interpreting these numerical measures and reaching conclusions based on these measures E1.2 selecting and using appropriate mathematical techniques for problems and situations D4.1 constructing and interpreting diagrams for grouped discrete data and continuous data and know their appropriate use	• Using and interpreting a variety of statistical diagrams • Understanding student loans and mortgages		

		- cumulative frequency graphs D4.1 constructing and interpreting diagrams for grouped discrete data and continuous data, knowing their appropriate use and reaching conclusions based on these diagrams including histograms with equal and unequal class intervals C1.1 criticising the arguments of others C2.1 summarising and report writing C3.1 comparing results from a model with real data C3.2 critical analysis of data quoted in media, political campaigns, marketing etc - questions will concentrate on the analysis of numerical and graphical data - numerical data will normally be given in tabular or spreadsheet form			
	Loans and APR	E1.2 selecting and using appropriate mathematical techniques for problems and situations F4.1 student loans and mortgages Annual Percentage Rate (APR)			

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Michaelmas 2	Exchange rate Compound interest & AER	F7.1 the effect of inflation Retail Price Index (RPI), Consumer Price Index (CPI) F7.2 setting up, solving and interpreting the solutions to financial problems, including those that involve compound interest using iterative methods F7.3 currency exchange rates including commission F7.4 budgeting E1.2 selecting and using appropriate mathematical techniques for problems and situations F3.1 simple and compound interest Annual Equivalent Rate (AER) F3.2 savings and investments	• Understanding the effect of inflation currency exchange • Setting up, solving and interpreting the solutions to financial problems	**RPI & CPI commission** savings and investments Annual Equivalent Rate	
	Taxation	F6.1 Taxation: income tax, National Insurance E1.2 selecting and using appropriate mathematical techniques for problems and situations	• Understanding income tax and national insurance		

	Correlation & Regression	S7.1 recognising when pairs of data are uncorrelated, correlated, strongly correlated, positively correlated and negatively correlated S7.2 appreciating that correlation does not necessarily imply causation - understanding the idea of an outlier S8.1 understanding that the strength of correlation is given by the pmcc S8.2 understanding that pmcc always has a value in the range from – 1 to + 1 S8.3 appreciating the significance of a positive, zero or negative value of pmcc in terms of correlation of data	• recognising when pairs of data are uncorrelated, correlated, strongly correlated, positively correlated and negatively correlated		
Lent 1	Calculating variance Normal distribution	Know and use the formula for variance S1.1 knowledge that this is a symmetrical distribution and that the area underneath the normal 'bell' shaped curve represents probability knowledge that approximately 2/3 of observations lie within 1 standard deviation of the mean and that approximately	Calculating Variance & Standard Deviation for raw data and from frequency tables Understanding the Normal distribution.		

		95% of observations lie within 2 standard deviations of the mean S2.1 use of the notation N (mu, sigma squared) to describe a normal distribution in terms of mean and standard deviation use of the notation N(0, 1) for the standardised normal distribution with mean = 0 and standard deviation = 1 S3.1 using a calculator or tables to find probabilities for normally distributed data with known mean and standard deviation the finding of an unknown mean or standard deviation by making use of percentage points will not be required S4.1 understanding what is meant by the term 'population' in statistical terms S4.2 developing ideas of sampling to include the concept of a simple random sample from a population S5.1 knowing that the mean of a sample is called a 'point estimate' for the mean of the population			

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		C1.1 -presenting logical and reasoned arguments in context -criticising the arguments of others C2.1 communicating mathematical approaches and solutions			
Lent 2	Confidence intervals Preliminary material	S6.1 confidence intervals for the mean of a normally distributed population of known variance using (sigma squared)/n confidence intervals will always be symmetrical the confidence level required and the sample size will always be stated C1.1 -presenting logical and reasoned arguments in context -criticising the arguments of others C2.1 communicating mathematical approaches and solutions Study the material released by exam board	confidence intervals for the mean of a normally distributed population of known variance using σ^2/n confidence intervals Understand the preliminary material and how to complete a variety of plausible exam questions		
Trinity 1	Exam practice and Revision	Complete a number of past papers including mock exam under exam conditions			Mock examination
Trinity 2	Course finished				