Year 11 Statistics Learning Map

- TERM 1 -

Scatter Diagrams and Correlations

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Students will begin to look in further detail at the relationships between variables. They will look to interpret from a set of results, as well as understand when it is or is not appropriate to extrapolate gathered or given data. For the first time they will begin to test the strength of a relationship between two sets of data by using Spearman's rank correlation coefficient and Pearson's product moment correlation coefficient.

Time Series

Students will begin looking at data over a given period and identify trends in data. They will calculate moving averages and look for variations in time series. This will lead to making estimations across seasons and making predictions from prior information.
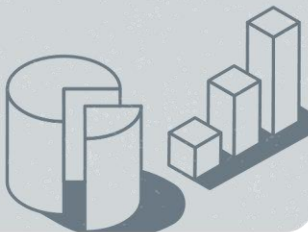
- TERM 2 -

Probability

Probability

Probability will be explored through a means of scenarios and representations. Experimental probability, Exclusive, Exhaustive, Independent and Conditional probability will all be explored, and students will be able to identify the type of event or events that is occurring and what this means for the data.
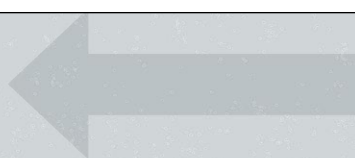
Index Numbers

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In this unit, Index Numbers will be explored, and students will begin to explore real life applications for RPI, CPI and GDP as well as look as Chain Base Index Numbers over a given period. They can then calculate the rate of change. This will give students a deeper appreciation for the real life uses of their knowledge.

- TERM 3 -

Probability Distributions

Probability Distributions

Students will finish their GCSE content by calculation of and interpretation of binomial and normal distributions as well as explore quality assurance measures and control charts. They will learn about standardised scores and how they relate to the mean average.

Students will complete a statistical enquiry –

- **Define a hypothesis to be investigated.**
- **Decide data to collect.**
- **Plan a strategy on how to process and represent data.**
- **Generate diagrams to represent data.**
- **Generate statistical measures.**
- **Analyse diagrams and calculations.**
- **Draw conclusions relating to hypothesis –**
    - **Discuss reliability.**
    - **Identify weaknesses.**
    - **Suggest improvements.**

Make refinements.

LINKS TO PRIOR LEARNING

This incorporates the skills used in Term 2 in year 10 for representing and analysing data. They will be doing so with further statistical measures now.

LINKS TO PRIOR LEARNING

This builds upon the students understanding of collecting data from Term 1 in Y10. They will need to know the effects of probability and what it means for their data collection.

LINKS TO PRIOR LEARNING

This builds upon Term 3 of Year 1, summarising data. They will be summarising their data and quality assuring their data analytics. This will be finalised with a full-scale statistical enquiry – encompassing the entire GCSE content.