Statistics
Key Stage 4

Intent

The ability to make sense of data is an essential skill for working life and full citizenship in a modern society. Economies increasingly are data dependent and use data-intensive technologies, for example: government, finance, manufacturing, health, education, media, banking, retail, science and sports. The world is awash with data. It is estimated that 2.5×10^{18} bytes of data are created every day. GCSE Statistics develops key transferable skills which students take into their other studies and their wider lives

During Key Stage Four students study: Collection of data, Processing and representing data, Summarising data, Scatter diagrams & correlation, Time series, Probability, Index numbers, Probability distribution. All students begin studying the higher curriculum content, however, where necessary, students may move to a Foundation pathway if this will support them in making better progress.

Our Statistics curriculum aims to encourage students to develop statistical fluency and understanding through:
- using statistical techniques in a variety of authentic investigations, using real world data in contexts such as, but not limited to, populations, climate, sales etc.
- identifying trends through carrying out appropriate calculations and data visualisation techniques
- the application of statistical techniques across the curriculum, in subjects such as the sciences, social sciences, computing, geography, business and economics, and outside of the classroom in the world in general
- critically evaluating data, calculations and evaluations that would be commonly encountered in their studies and in everyday life
- understanding how technology has enabled the collection, visualisation and analysis of large quantities of data to inform decision-making processes in public, commercial and academic sectors
- applying appropriate mathematical and statistical formulae,

Implementation *(How is your subject taught and assessed at KS4?)*

➢ The Statistics SoW was written to follow the 8 units of work identified in the Pearson Edexcel Scheme. This follows the Data Handling Cycle.
➢ Students are taught one topic per lesson.
➢ Students complete a baseline assessment at the beginning of the course. Each unit of work ends with a formative assessment using exam style questions to test their knowledge of the content covered. Students then also complete end of Year summative assessments to monitor progress over time.
➢ Time is built in post-assessments to review previous content.
➢ Statistics lessons start with recall questions on previous content and test understanding of vocabulary.
➢ Lesson content is delivered alongside developing students' ability to answer long exam questions.
➢ Questioning will be used to check understanding, draw out misconceptions and encourage deeper thinking. Pupils will use key vocabulary to explain and reason.
➢ Mini whiteboards will be used for guided practice and to check understanding.
➢ Reasoning skills developed through verbal and written work.
➢ Plenaries are used to review learning and as an opportunity to do GCSE questions.
➢ Teachers will use a variety of real life examples to explain Statistical content.
➢ Whole class feedback is used to support students (forward facing feedback).

Impact *(What are the results in your subject at the end of KS4? What pathways can/ have students taken as a result of success in your subject at the end of KS4?)*

Effective teaching will lead to students acquiring, retaining and applying curriculum knowledge in the classroom and beyond.

All students will make good progress in Statistics and achieve, at least, their target grade. Students will access their desired KS5 courses, which are likely to include subjects with a high Statistical content.