Stretford Grammar School
Aspirat primo fortuna labori

LEVEL 3 MATHEMATICAL STUDIES (Core Maths)

SPECIFICATION

Level 3 Certificate	AQA	Mathematical Studies Route A – Statistical Techniques 1350A

OBJECTIVES OF THE COURSE

This Level 3 Certificate, Mathematical Studies qualification will consolidate students' mathematical understanding, build their confidence and competence in applying mathematical techniques to solve a range of problems and introduce them to new techniques and concepts that will prepare them for further study and future employment within a broad range of academic, professional and technical fields.

Mathematical Studies aims to prepare students for the mathematical demands of higher education and work where there is a distinct mathematical or statistical element which does not stretch to the requirement for A-level mathematics.

This course will enable students to:

- study a mathematics curriculum that is integrated with other areas of their study, work or interest leading to the application of mathematics in these areas
- develop mathematical modelling, evaluating and reasoning skills
- solve problems, some of which will not be well defined and may not have a unique solution
- solve substantial and real-life problems encountered by adults
- use ICT as an exploratory tool for developing mathematical understanding when solving problems
- develop skills in the communication, selection, use and interpretation of their mathematics
- enjoy mathematics and develop confidence in using mathematics

CONTENT AND ASSESSMENT

The course is divided into two main sections.

The compulsory content covers:

- Analysis of Data
- Maths for Personal Finance
- Estimation
- Critical Analysis of Given Data & Models

The optional content chosen to cover with students is the 2A – Statistical Techniques route and includes:

- Critical Analysis of Given Data & Models
- The Normal Distribution
- Probabilities & Estimation
- Correlation & Regression

The course is studied over one year, usually Year 12, and is examined in the May/June examination period.

Unit	**Title**	**Method of Assessment**	**Exam Length**
Compulsory Content	Paper 1	1 examination including use of Preliminary Materials (released in March)	1 hour 30 mins 60 marks Use of calculator allowed
Optional Content	Paper 2A: Statistical Techniques	1 examination including use of Preliminary Materials and Statistical Tables	1 hour 30 mins 60 marks Use of calculator allowed

METHODS OF STUDY

The course is designed so that students are only required to have a grade 4 in Maths GCSE to access the content. Whilst they will encounter a slightly broader range of techniques than covered in Higher GCSE, they will be familiar with the majority.

Maths is presented in the context of problems and real-life situations, such as calculations around student loans, VAT for traders, and decisions about plant closures based on data. Often these scenarios will not have one "correct" answer, but students are required to think around the optimal solution. Students are expected to work individually and as part of a group. They will be asked to justify decisions, reasoning and mathematical techniques chosen.

Some lessons will be based in an ICT suite to build fluency in use of spreadsheets for calculations and data interpretation.

SPECIAL FEATURES OF THE COURSE

This course has been designed with employers to enable undergraduates and those entering apprenticeships to have confidence in the application of their mathematical skills to the problems and data they will encounter in their work. It is embedded in contexts that young professionals and those studying qualifications with a maths content, such as Geography, Psychology and Economics will be expected to cope with, and situations that individuals and small companies require for financial fluency.

It is an excellent accompaniment to many A Level courses and enables students to keep their maths skills fresh, ready for real-life situations when they are needed.