# WJEC Level 3 Certificate in Statistical Problem Solving using Software

Statement of purpose

The WJEC Level 3 Certificate in Statistical Problem using Software is an Applied General qualification.

In 2013, a report by the Royal Statistical Society and Institute and Faculty of Actuaries observed that data on an unprecedented scale impacts on every aspect of everyday life. In academic disciplines where statistics was once a marginal, they claim it is now central and a core consideration.

The objective of this qualification is to assist the understanding of the problem-solving cycle of planning, collecting, processing and discussing in meaningful contexts and to use statistical software to process real data sets. It has been specifically designed to be taught in schools and colleges to equip learners aged 16-19 with a broad range of skills empowering them to successfully negotiate statistical problems in Higher Education or the world of work.
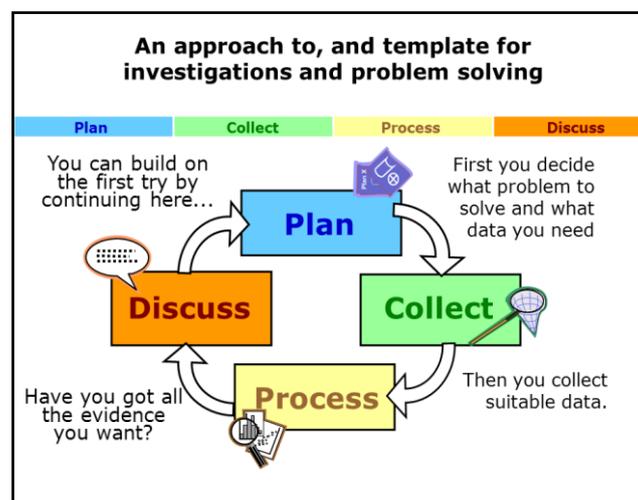
The Problem Solving Approach - resource from the Royal Statistical Society Centre for Statistical Education, Plymouth University

Learners who follow this qualification will study one unit. Assessment is via a controlled assessment and an external examination which will give them opportunity to:

- use the problem solving cycle to solve problems
- use statistical software to process real data sets
- interpret and analyse statistical output
- develop the skills of project-based research, development and presentation.

This qualification was originally developed in collaboration with colleagues from Mathematics in Education and Industry (MEI) and the Royal Statistical Society Centre for Education (RSSCSE) based at Plymouth University.

This new programme answers many of the issues raised in three pivotal reports –

- The Advisory Committee on Mathematics Education (ACME) report 'Mathematical Needs: Mathematics in the workplace and in higher education' in June 2011,

- The Royal Statistical Society and The Actuarial Profession's report 'The Future of Statistics in our Schools and Colleges' published in January 2012

- The Royal Statistical Society and Institute and Faculty of Actuaries' report 'A world full of data. Statistics opportunities across A-level subjects' published in October 2013

Progression

This WJEC Level 3 Certificate in Statistical Problem Solving Using Software has been designed to support learners as they progress from Key Stage 4 and GCSE learning on to other higher level qualifications. This qualification can be studied alongside other academic or vocational qualifications supporting progression from any study at level 2.

There are no previous learning requirements for this specification. Any requirements set for entry to a course based on this specification are at the school/college's discretion.

This specification builds on subject content which is typically taught at Key Stage 4, in particular GCSEs in Mathematics and/or Statistics. Learners will be taken beyond the descriptive use of statistics at GCSE, so that they will be able to use statistics to aid decision-making across numerous disciplines including humanities, psychology, sociology, sciences and business at level 3. It will also prepare those learners that wish to progress to Higher Education to study for qualifications which have embedded quantitative/statistical elements.

The qualification also supports adult learners with an interest in the subject, or those currently working within a role where statistical analysis is required.

Employability

The qualification furnishes learners with good statistical skills as well as hands-on experience using real data sets related to a subject they may be studying or a job which they are interested in.

Examples of occupations that offer opportunities for suitability qualified individuals include: Actuary, Forensic statistician, Environmental statistician, Government statistician, Medical statistician, Pharmaceutical statistician, Market research statistician, Sports statistician, School teacher, University lecturer and Statistical consultant.