



# The Oldershaw School

BTEC in Applied Science- HOD: Miss A Brennan

## Course Outline & Exam Ratio

The Qualification consists of 3 mandatory units and 1 optional unit. (2 externally assessed and 2 internally assessed) These are spread over 2 years. The course is studied over 2 years and follows the Edexcel Specification.

Unit 1: Principles and Applications of Science (Year 12) External Exam

A. Periodicity and properties of elements - A1 Structure and bonding in applications in science, A2 Production and uses of substances in relation to properties

B. Structure and functions of cells and tissues - B1 Cell structure and function, B2 Cell specialisation, B3 Tissue structure and function

C. Waves in communication - C1 Working with waves, C2 Waves in communication, C3 Use of electromagnetic waves in communication

Unit 2: Practical Scientific Procedures and Techniques (Year 12 and Year 13) Internal Coursework

A. Undertake titration and colorimetry to determine the concentration of solutions, B. Undertake calorimetry to study cooling curves, C. Undertake chromatographic techniques to identify components in mixtures, D. Review personal development of scientific skills for laboratory work.

Unit 3: Science Investigation Skills (Year 12 and Year 13) External Exam

A. Planning a scientific investigation, B. Data collection, processing and analysis/interpretation, C. Drawing conclusions and evaluation, D. Enzymes in action, E. Diffusion of molecules, F. Plants and their environment, G. Energy content of fuels, H. Electrical circuits.

Unit 8: Physiology of Human Body Systems (Year 13) Internal Coursework

A. Understand the impact of disorders of the musculoskeletal system and their associated corrective treatments, B. Understand the impact of disorders on the physiology of the lymphatic system and the associated corrective treatments, C. Explore the physiology of the digestive system and the use of corrective treatments for dietary-related diseases.

## Progression Routes

The Extended certificate in Applied Science is designed for learners who are interested in learning about the scientific sector alongside other fields of study, with a view to progressing to a wide range of higher education courses, not necessarily in applied science. It is to be taken as part of a programme of study that includes other appropriate BTEC Nationals or A Levels. (It is equivalent to the same learning hours as 1 A level).

## Enrichment Opportunities

Year 12 and 13 are encouraged to visit university labs to complete titrations using grade A equipment. There is also access to Gas Chromatography equipment and Scanning Electron Microscopes. LJMU provide access to labs for basic titrations to be completed. External NHS speakers are invited to speak about disease prevention and disease control in hospital settings.

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*\*this course will only run subject to government accreditation and funding*