



# THE ARNEWOOD SCHOOL

## KEY STAGE 5

### CONSTRUCTION



## Implementation

This qualification has been developed in consultation with employers and professional bodies and provides the essential knowledge, understanding and skills that will allow the student to progress in the construction sector.

BTEC Level 3 National Extended Certificate in Construction and the built environment

### Year 12

Term	Curriculum focus	Landmark Assessment
Autumn 1	Students will learn about different structural forms such as portal frames, in-situ concrete, timber frame, structural insulated panels, traditional and modular construction. They will consider their use for a given scenario.	Unit 4 coursework Assignment 1 – The different structural forms used in low-rise building projects.
Autumn 2	Students will examine foundation design and construction. They will look into soil investigation and types foundation. They will go on to study the construction of types of walls, floors, roofs and internal finishes.	Unit 4 coursework Assignment 2 – Foundation and Superstructure design and Construction.
Spring 1	Students will examine external works associated with construction projects. This includes foul and surface water drainage, utility services, roads and footpaths and sustainable urban drainage systems.	Unit 4 coursework Assignment 3 – External works associated with construction projects
Spring 2	Students will examine the tasks involved and the factors that influence the design process. Student will consider client requirements, site information, planning and statutory constraints, environments and social constraints and budget and economic factor.	Unit 2 Construction Design External 12 hour controlled assessment.  Mock assessment
Summer 1	Students develop their skills in designing to a project brief using a variety of hand drawing techniques and computer aided design. They will investigate sustainable construction techniques and apply them, along with their knowledge of construction methods, to their designs.	Unit 2 Construction Design External 12 hour controlled assessment.  Design assignment





Summer 2	Revision of construction design principles and designing skills.  An Introduction to Unit 5 Health and Safety in Construction	Unit 2 Construction Design External 12 hour controlled assessment.  External assessment
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### **Year 13**

Term	Curriculum focus	Landmark Assessment
Autumn 1	Students will learn about the legislative duties of employers and employees and the application of health and safety related legislation controls in construction. They will consider how education and training improves standards of health and safety.	Unit 5 coursework Assignment 1 – Understand how health and safety legislation is applied to construction operations
Autumn 2	Students will learn to identify hazards and assess risks. They will produce a safe system of work for a given construction operation and a risk assessment to include a method statement with effective control measures.	Unit 5 coursework Assignment 2 – Development of safe systems of work
Spring 1	Students will examine how safe systems of work are reviewed and evaluate the procedures that follow an accident to improve future safety.	Unit 5 coursework Assignment 3 – Reviewing safe systems of work.
Spring 2	Students will study the properties, degradation and the manufacturing of construction materials. They will investigate the effects of temperature change on construction materials and their structural behavior under load. Students will also use maths to solve practical construction problems.	Unit 1 Construction Principles External exam  Mock assessment
Summer 1	Students will investigate the impact of heat, light and sound on human comfort and the scientific principles of sound relative to its intended use. The scientific principles of lighting levels will be studied.	Unit 1 Construction Principles External exam
Summer 2	Revision of construction principles theory.	Unit 1 Construction Principles External exam

### **Co-Curricular:**

Students will have to apply mathematics and scientific principles to solve construction problems. Site and environmental constraints will need to be considered. Design skills will be developed using a variety of drawing and communication techniques.

