THE ARNEWOOD SCHOOL
KEY STAGE 4 CONSTRUCTION

Implementation

Students will build on their existing skills learnt in KS3 to complete higher skill level practical projects while being introduced to the impact of the construction industry. Students will learn about developing a client's design brief and producing initial sketches for proposed ideas.

BTEC First Level 1/2 in Construction and the built environment

Year 9

Term	Curriculum focus	Landmark Assessment
Autumn 1	Students will be introduced to a variety of different wood working joints. Students will learn about the different sectors of construction and the economic and social impact of the industry	Unit 3 coursework Assignment 1 – Understanding the work of the construction industry
Autumn 2	Students will be introduced to a client's requirement to extend a workshop. Students create a design brief and priorities design requirements.	The completion of the 4-joint box. Assignment 2 section 1 – Design requirements
Spring 1	Students will learn a variety of drawing techniques to be used to present concept ideas for a construction project. Different architectural styles will be looked at from the local area to help to generate appropriate designs.	Unit 3 coursework Assignment 2 section 2 – architectural styles
Spring 2	Students develop their workshop skills further through the making of an IPad stand. Students apply the drawing skills that they have learnt to produce a number of concept ideas to meet the client's requirements for an extension to a workshop.	Unit 3 coursework Assignment 2 section 2 – concept ideas
Summer 1	Students develop their finishing skills through the making of an IPad stand Sustainability, material use and construction techniques are considered in relation to concept ideas.	The completion of the IPad stand

Summer 2	Through evaluation of ideas in relation to design requirements, students produce a final design for the workshop project. Students will be introduced to Unit 6 – carpentry and joinery in construction	Unit 3 coursework to be completed in full.

Co-Curricular: Students will have to calculate floor areas, work to scale use and use mood boards to support idea generation. Sustainability will be considered along with different styles of construction, both current and of the past will be investigated.

Year 10

Term	Curriculum focus	Landmark Assessment
Autumn 1	Students will be introduced to a variety of different tools and equipment used for carpentry tasks. Students will mark out and cut joints for their tool boxes.	Unit 5 coursework Assignment 1 – Selection of tools
Autumn 2	Students will justify the selection of tools, materials and equipment for particular tasks. They will continue to develop their skills in in the workshop through accurately assembly their tool box.	Unit 5 coursework Assignment 1 – Justifying the selection of tools
Spring 1	Students will explain the safe use and storage of carpentry and joinery tools, materials and equipment. Students will investigate different finishes considering their properties and application.	Unit 5 coursework Assignment 1– safe use and storage of tools
Spring 2	Students carry out a risk assessment before starting their practical assessment. Students will consider hazards, risks and control measures to reduce the risk. Safe working practice and the use of PPE's will be considered throughout their practical work.	Unit 5 coursework Assignment 2– Production of a Risk assessment
Summer 1	Students are to measure and mark out four different types of joints for a 300 x 300mm timber frame to a given specification. Students are to cut and assemble to frame and will be assessed on the accuracy of the outcome.	Unit 5 coursework Assignment 3 – Production of timber frame to a specification
Summer 2	Using site visits students will focus on construction processes, techniques and the requirements of a modern low-rise residential building.	Unit 1 Examination - Requirements of a low-rise building

Co-Curricular: Students will have to work with numbers and measurements to mark out evaluate completed work using tolerances. English skills will be developed through writing up course work and producing a risk assessment.

Year 11

Term	Curriculum focus	Landmark Assessment
Autumn 1	Recap of the requirements of a modern low-rise residential building. Students will look at sustainability and methods of achieving it. The advantages and disadvantages of common structural forms will be examined, and students will learn the correct terminology.	Unit 1 Examination - Requirements of a low-rise building - Common forms of construction
Autumn 2	Students will learn about preconstruction work, both desk based and site based preconstruction. Students will explore sub-structure groundworks and how superstructures are construction, focusing on the construction of walls, floors and roofs.	Unit 1 Examination - Preconstruction - Substructure groundworks - Superstructure construction
Spring 1	Revision for unit 1 Construction Technology examination. Students will use mathematical techniques to solve construction problems. Students will apply algebraic and graphical methods to solve two practical construction problems.	Unit 1 Examination - External examination Unit 2 course work - Algebraic and graphical methods
Spring 2	Students will solve a practical construction problem using trigonometric mensuration and algebraic methods. Students will examine and learn about the effects of forces and temperature change on materials used in construction.	Unit 2 coursework - Trigonometric mensuration and algebraic methods. - Effects of forces and temperature change on materials
Summer 1	Students will examine and discuss how two different construction materials behave under load in practical construction contexts. Students will also look at the effect of extremes of temperature change upon two different construction materials.	Unit 2 completed coursework assessment
Summer 2		

Co-Curricular: Students will look at the principles of sustainability and the different ways of contributing to its achievement. Students will learn how scientific and mathematical techniques can be used to solve construction problems.