****

**Knowledge Rich Curriculum Plan**

Construction

Unit 1: The Built Environment



| **Year** **Construction**  | **Unit 3** |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* | **Assessment**  |
| **Lesson:** **Roles in the Construction Trades** | * Students will know how to describe activities of those involved in construction projects including: client’s team (client, architect, engineer, quantity surveyor, project manager, designer), contractor’s team (builder/site engineer, site supervisor, safety officer, tradespersons, specialist sub-contractors), statutory personnel (building inspector, town planner, public health inspector), general (administrator, finance officer, public liaison officer, purchasing/procurement officer, catering, security)
* Students will know how to describe responsibilities of those
* involved in construction projects (including those listed above)
* Students will know how to describe outputs of those involved in realising construction projects including: refurbishments and extensions
* Students will know the difference between activities (day to day tasks), responsibilities (health and safety commitments, contractual obligations) and outputs (completed jobs)
 | Statutory – Required or permitted personProcurement – The action of obtaining somethingOutputs – The final phase of a given processActivity – general actions carried out as part of everyday workResponsibilities – general actions carried out that link directly to the safety and security of people on the construction site | * ***Students will need to know what is meant by the term 'team' in a construction project (2 or more people working towards completing a given project***
* ***Students will need to know what is meant by the term 'extension' in a construction context (The act or increasing the footprint or capacity of a building)***
 | Recall/activate starterCold call questioningSSS assessment |
| **Lesson:** **Understanding How Projects are Realised** | * Students will be able to describe processes used in built
* environment development projects including planning (design, project planning, procurement), construction (secure site, site clearance, substructure, superstructure), handover to client (commissioning, handover) and maintenance
* Students will know how to arrange a series of tasks into a sequence, for a stream lined construction project
 | Commissioning – Order or authorise the production of somethingMaintenance – The act of maintaining a product to extend its life span | * ***Students need to already know what is meant by the term 'sequence' (a particular order in which related things follow each other)***
* ***Students will need to know some of the key stakeholders involved in these processes (client, architect, contractors and maintenance team)***
 | Recall/activate starterCold call questioningSSS assessment |
| **Lesson:** **Calculations Required to Realise a Construction Project** | * Students will be able to complete calculations to meet requirements for built environment development projects including: area, volume, percentages, scaling, best value, Tolerances, VAT and tender price.
* Students will know how to calculate necessary resources to realise a construction including plant, labour and materials
 | Tender – Offer or present something formallyTolerances - allowable amount of variation of a specified quantity | * ***Students will already know the basic calculation methods from Unit 2 and KS3 and 4 maths lessons***
* ***Students will need to know the term 'plant' in a construction context (heavy machinery within a factory or site)***
 | Recall/activate starterCold call questioningSSS assessment |
| **Lesson:** **Delays to a Construction Project** | * Students will be able to assess potential effect of internal factors on project success including lack of qualified and certified key personnel, sourcing of finance and security.
* Students will be able to assess potential effect of external factors on project success including penalty clauses, and weather conditions
 | Certified – Officially recognised as holding a certificate for a certain activitySourcing – the act of selecting and managing suppliers | * ***Students will know what is meant by the term impact: a marked effect or influence (both negative and positive)***
* ***Students will have an awareness of how weather can negatively affect an activity***
 | Recall/activate starterCold call questioningSSS assessment |
| **Lesson:** **Interpreting Information** | * Students will know how to Interpret sources of information from documentation including drawings, catalogues, spreadsheets, supplier’s material lists and specifications
* Students will know what is meant by the term 'tolerance' in a construction context (an allowable amount of variation of a specified quantity)
 | Interpret – Draw out information fromSpecifications – Detailed descriptions of materials and choices made for a product | * ***Students will already have a synoptic link from unit 1, which is built upon in this unit***
* ***Students will already have a basic understanding of pricing up a project***
 | Recall/activate starterCold call questioningSSS assessment |
| **Lesson:** **Planning a Built Environment Project** | * Students will know how to sequence and apportion time to processes to be followed when planning a built environment construction project including planning, construction and handover
* Students will be able to use time allocation tools such as gantt charts to show understanding of the task
* Students will know how to set project tolerances when planning for the built environment including time and cost
 | Apportion – Allocate an amount of time to task | * ***Synoptic link from unit two when students plan their own constructions projects. this prior knowledge will allow students to contextualise the task better.***
* ***Students will need to know the correct term for 'apportion' (divide up and share out)***
 | Recall/activate starterCold call questioningSSS assessment |