

High Tunstall College of Science Curriculum Intent

Unit 1: Construction Technology



Learning Aim B— Explore how sub-structures are constructed

	Design & Technology	Progress		
Topic	Key ideas	R	A	G
Iterative design process	Preconstruction work: Desk-based preconstruction			
	Preconstruction work: Site-based preconstruction			
	Sub-structure Groundworks: Hazards associated with groundworks			
	Sub-structure Groundworks: Control of Water and Earthwork support			
	Sub-structure Groundworks: Function and details of a foundation			
	Sub-structure Groundworks: Details of a ground floor			

Lesson	Learning Focus	Assessment	Key Words
1	Introduction to Unit 1: Learning Aim B. Desk based preconstruction— Legal requirements, planning and programmes of work	Live marking/Formal examination	<i>Preconstruction, legal requirements, scheduling, Health & Safety Executive</i>
2	Site-based preconstruction—demolition & clearance, enabling work, site set-up	Live marking/Formal examination	<i>Demolition, Recycling, Brown-field, Greenfield, Services</i>
3	Sub-structure groundworks—hazards, control of water and earthwork supports	Live marking/Formal examination	<i>Groundworks, Excavation, Collapse, Overburden, Proximity</i>
4	Sub-structure groundworks—functions of a foundation. Foundation detailing: Strip & deep strip; Raft; Short bored piles; Trench/Mass fill	Live marking/Formal examination	<i>Groundworks, Foundation, Strip, Deep Strip, Raft, Short bored piles, Trench/Mass fill</i>
5	Types of foundation: Strip and deep strip. Advantages, disadvantages, use with ground, sketching	Live marking/Formal examination	<i>Foundation, Strip foundation, Deep strip foundation</i>
6	Types of foundation: Raft. Advantages, disadvantages, use with ground, sketching	Live marking/Formal examination	<i>Foundation, Raft foundation</i>
7	Types of foundation: Short bored piles. Advantages, disadvantages, use with ground, sketching	Live marking/Formal examination	<i>Foundation, Short bored piles foundation</i>
8	Types of foundation: Trench/Mass fill. Advantages, disadvantages, use with ground, sketching	Live marking/Formal examination	<i>Foundation, Trench/Mass fill foundation</i>
9	Understanding Ground floors: design and construction; solid & suspended floors; Damp proof coursing	Live marking/Formal examination	<i>Groundworks, Ground floor, Damp Proof Course (DPC), Damp Proof Membrane (DPM)</i>
10	Formative assessment (Using past examination questions covering Unit1:Learning Aim B)	Live marking/Formative Assessment & Deep Marking grid/Formal examination	<i>Formal, Examination, Objectives</i>
Assessment task (Formal Examination)	<u>Formal Examination:</u> <ul style="list-style-type: none"> 65 Marks 1 hour and 15 minutes Objectives: Multiple choice, short answers, extended writing questions and sketching techniques First attempt in January; second attempt in May Highest mark is allocated as Unit 1 grade (L1P/L2P/L2M/L2D) 		