

# High Tunstall College of Science Curriculum Intent

## Unit 1: Construction Technology



### Learning Aim A— Understand the structural performance required for low-rise Construction

	Design & Technology	Progress		
Topic	Key ideas (Requirements for low-rise Construction)	R	A	G
Structural performance required for low-rise Construction	Performance requirements: Strength and Stability			
	Performance requirements: Thermal and Sound Insulation			
	Performance requirements: Fire and Weather Resistance			
	Sustainability: Purpose; Methods; and Materials			
	Structural form: Cavity Wall and Cross-Wall Structure			
	Structural form: Structural and Timber-Framed Construction			

Lesson	Learning Focus	Assessment	Key Words
1	Introduction to Unit 1: Learning Aim A and the formal examination process. How buildings are built to show strength and stability	Live marking/Formal examination	Construction, Strength, Stability, Self-weight, Live load, Dynamic load, Dead load
2	How buildings are insulated against heat loss and meet their required sound resistance	Live marking/Formal examination	Thermal, Sound, Insulation, Purpose, Types, Location
3	How buildings protect against fire whilst maintaining structural integrity and resist weather elements	Live marking/Formal examination	Fire resistance, Fire barriers, Structural integrity, Purpose, Materials, Location
4	Purpose and methods of sustainability within construction activities	Live marking/Formal examination	Sustainability, Purpose, Methods, Energy, Conservation, Greenfield, Brownfield, Recycle
5	Sustainable building materials and how they are used to ensure building sustainability	Live marking/Formal examination	Sustainability, Hemp, Lime, Sheep's Wool, Straw, Timber, Aluminium
6	Traditional Cavity-wall construction methods (Including sketching)	Live marking/Formal examination	Load-bearing, Brickwork, Blockwork, External Render
7	Cross-wall construction methods (Including sketching)	Live marking/Formal examination	Load-bearing, Connecting floors, Prefabrication, Accommodation
8	Structural construction methods (Including sketching)	Live marking/Formal examination	SIPS, Brickwork, Blockwork, Render, Panel function
9	Timber-framed construction methods (Including sketching)	Live marking/Formal examination	Membranes, External finish, Formation of openings
10	Formative assessment (Using past examination questions covering Unit1: Learning Aim A)	Live marking/Formative Assessment & Deep Marking grid/Formal examination	Formal, Examination, Objectives
Assessment task (Formal Examination)	<u>Formal Examination:</u> <ul style="list-style-type: none"> <li>65 Marks</li> <li>1 hour and 15 minutes</li> <li>Objectives: Multiple choice, short answers, extended writing questions and sketching techniques</li> <li>First attempt in January; second attempt in May</li> <li>Highest mark is allocated as Unit 1 grade (L1P/L2P/L2M/L2D)</li> </ul>		