

LEARNING EXPERIENCES – MODERN METHODS OF CONSTRUCTION

This template is designed to be generic to both exam boards

Title of module	Modern Methods of Construction (MMC)				
Unit (s)	Elements of Units 2, 3 and 4 – sustainability issues of design, materials and processes	Level	2	Ref	2-04
Aim and objective	For students to develop an understanding and appreciation of the place of, and the reasoning why MMC are increasingly being used in a style and form that supports the issue of sustainability in term of materials, manufacturing and design based on aesthetics and energy consumption.				
Intended outcomes	<ol style="list-style-type: none"> 1. A foamboard model of a sustainable home showing the design influences that make it sustainable. 2. The results of tests carried out on a range of traditional and modern materials and construction techniques. 3. A technical drawing showing a cross section through a house designed using MMC & sustainable materials. (CAD preferable but not essential) 4. A study of SIPS (Structural Insulated Panel Systems) to show how they are designed produced and installed. 5. Present a case for; why MMC should be used rather than traditional methods or the place of traditional construction over MMC. 				
Approximate duration	Variable – suggested time would be 25glh + visits and talks etc				
Applied learning opportunities	Visit the Innovation Park at the Building Research establishment at Watford. http://www.bre.co.uk/page.jsp?id=962 Visit a construction site that is using MMC Ask a construction professional to visit college to inform students about the different skills and techniques required to build using MMC Visit the Smart Life centre in Cambridge. http://www.smartlife.org.uk				
Teaching tips	Students actually find that creating foamboard models harder than anticipated, so skill development and the teaching of it is relevant here. Obtain models of housing developments that developers have used as a marketing ‘tool’ for prospective buyers.				
PLT’s opportunities The opportunities given here are examples. By referring to the specific PLT criteria	Creative thinkers	Ask questions to extend their thinking			
	Effective participants	Present a persuasive case for action			
	Independent enquirers	Analyse and evaluate events or problems from different perspectives.			

under each heading, deliverers will find further opportunities to develop the learning potential.	Reflective learners	Communicate their learning in relevant ways for different audiences
	Self managers	
	Team workers	Show fairness and consideration to others. Provide constructive support and feedback to others
Resources and environment required	<p>Kingspan at http://www.century.ie/index.asp Jabsip at http://www.vencel.co.uk/products/building/index.asp Contact Link-Ed for further information and contacts, stating your specific line of enquiry. Please refer to 4 accompanying PDF files produced by the BRE on MMC. A multi-material workshop and materials testing laboratory Range of materials for testing purposes Computer suite with CAD software A multi-use drawing office Seminar room for listening to guests.</p>	
Further learning opportunities	<p>Unit 3 has many requirements that could be built into this learning experience. Module on 'Building a house'</p>	
Assessment method, including peer and self assessment For further information regarding the exact spec criteria that can be met, please refer to separate spreadsheet schedule	<p>The units addressed under this scheme are assessed internally through project work. At the time of writing Tony Groom is enquiring from the exam boards as to whether or not projects that cross units can be entered for final assessment/grading. Once this issue has been clarified, further information can be provided.</p>	
Differentiation opportunities	<p>This is a challenging learning experience if all outcomes are addressed fully. Some students may well require support in terms both understanding the technical aspects and implementation. Prompt questions could be provided for those requiring this level of support. This could extend to writing frames in which they just insert the answers. If no prior knowledge and/or skills has been gained in the area of technical drawing and/or CAD then this will need to be provided.</p>	
Functional Skills connections	Maths	<p>Model a situation Use appropriate mathematical procedures Find results and solutions Interpret results and consider accuracy of them</p>

	English	Present information....clearly Select and use different types of text Read and summarise... information... form different sources
	ICT	CAD Word based report
Homework opportunities	Learners can be given information on SIPs which they have to study at home and use the information found in the next lesson as the basis of their report	