Lesson Plan. Lesson 3, Careers in the Built Environment Sector: Key Stage 4

Programme: Future Place- Liveable Exeter and Building Greater Exeter	
Lesson Title: Careers in the Built Environment	**Lesson Type: Classroom Based with additional resources and use of technology**
Time: Designed for a 40 minute lesson, with optional and adaptable activities, for longer lessons or homework, so that you can use these resources to suit your class needs.	

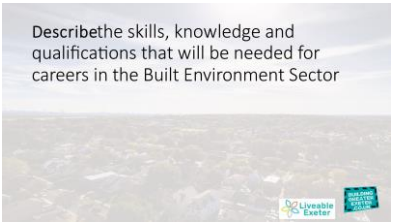
Overall aim of the session:	The aim of this lesson is to explore careers in the Built Environment Sector and issues facing it like climate change and sustainability.
Learning Outcomes: By the end of the session, delegates will be able to:	1. **Identify** what the Built Environment sector is and future job prospects within it 2. **Describe** the skills, knowledge and qualifications that will be needed for careers in the Built Environment Sector 3. **Analyse** current key issues include tackling climate change through better design, practices and use of materials building more homes in a way which helps communities
Resources:	Blank career Sheet CLIMANIA board game
How are Functional Skills (Literacy, Numeracy, ILT) embedded in this session?	Literacy will be used through reading profiles. Alongside this there are some texts to read and comprehend. Numeracy is used looking at salaries and ILT through videos.
How is equality & diversity embedded in this session?	All learners will be given equal chance to participate in the session and all session activities. The session will discuss equality and diversity throughout.

Objective	Activity	Teacher Notes/Consolidation	Resources
Project Outline and Context	n/a	**How can Exeter grow in such a way that it is resilient for the challenges of the future?** Liveable Exeter and Building Greater Exeter have developed an activity to help students understand how cities are developed to be resilient for the future climate. The activity can be broken down into different lengths depending on time available and provides students with the opportunity to learn about city development, come up with their own ideas and suggestions for Exeter in the future and discover more about the different career paths in this sector. Teacher training for these lessons can be arranged. Employees from Building Greater Exeter are available to deliver this activity, and with notice, planners, architects and construction companies, both local and nationwide.	 

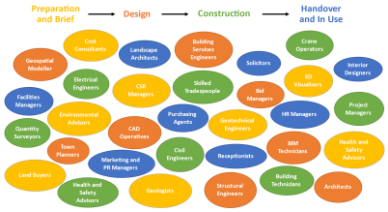
Introduction	**Discussion activity** Ask Students: 'What is the Built Environment ? Create a discussion and consolidate with the following slide.	'All forms of buildings (residential, industrial, commercial, hospitals, schools), all economic infrastructure (above and below ground) and the urban space and landscape between and around buildings and infrastructure.	
Learning Objectives	Share the Learning Objectives for the lesson with students: **Students will be able to:** 1. **Identify** what the Built Environment sector is and future job prospects within it 2. **Describe** the skills, knowledge and qualifications that will be needed for careers in the Built Environment Sector 3. **Analyse** current key issues include tackling climate change through better design, practices and use of materials building more homes in a way which helps communities	n/a	

Baseline Activity (Optional)	Identify student's prior knowledge. What jobs do you think are in the Built Environment Sector ? This will be revisited at the end of the lesson to show progress made.	Use a whiteboard to capture current knowledge and revisit this at the end of the lesson to identify lessons learnt.	
Identify what the Built Environment sector is and future job prospects within it	**Information** Read through the information on the slide There are a number of professionals involved within this sector, including engineers, architects, surveyors, urban designers and planners. There may also be project managers, lawyers and other admin staff involved to help the projects run more smoothly.	The Built Environment sector is about the design, construction and management of our human-made surroundings. Projects can range from building a single home to multimillion pound large-scale projects such as building a new infrastructure or eco-town. This industry is not only about materials, engineering and architecture, but also has a cultural element: you may be building new neighbourhoods or effecting existing communities. For this reason, work in the industry can become highly political and emotive.	 Career videos

	Career video Use the clips to introduce some jobs in the Built Environment Sector . The videos are embedded in the slides but the links below are available: Careers in Construction - Darren Davies, Managing Director, J&D Bricklaying - YouTube Careers in Construction - Tom Taylor, Degree Apprentice, Kier Construction - YouTube (1) Careers in Construction - Emma Osmundsen, Managing Director, Exeter City Living - YouTube As students are watching the video clips, ask them to identify what is required to be qualified in each of the jobs selected and also which of these job prospects inspires them the most. There are a number of additional job prospects on the following website if students would like to explore these further: Building Greater Exeter - YouTube		    Careers in Construction - Darren Davies, Managing Director, J&D Bricklaying - YouTube

			[Careers in Construction - Tom Taylor, Degree Apprentice, Kier Construction - YouTube] [(1) Careers in Construction - Emma Osmundsen, Managing Director, Exeter City Living - YouTube]
Describe the skills, knowledge and qualifications that will be needed for careers in the Built Environment Sector	**Case study Activity** **Quantity Surveyor** Career profile: use the slide to explain the skills and education that a Quantity Surveyor needs.	During this section, we are going to explore some further careers within the Built Environment Sector. There is a website with a number of different resources to use as part of this exercise. If IT is unavailable then you can print some of the job profiles in advance to use as part of this activity • My name is *Bethany* and I work in *Quantity Surveying*. • Within my role I *manage the cost of a project throughout all the stages of design and construction and make sure a client is paying a fair amount.*	 

		• The key skills I find useful for my role are *good communication and negotiation skills, work well in a team, skills in excel and measuring buildings.* Education and career path University of Reading: Quantity Surveying BSs – 2011-2014 Work experience Mace Commercial Management - 2013 Joined the Mace Graduate Scheme – 2014 Promoted to Assistant Manager – 2015	**Careers In Construction (Construction Jobs List) | Go Construct** 
	Career Profile Activity Use the blank Career Profile sheet to create your own job profile for one of the Built Environment Careers identified on the Go Construct website.		

	Ask students to explore a job role of interest or one that they have never even heard of before. Walk Through of the process that a new build goes through and the jobs involved in the process. This slide builds as you explain the process to learners and it will again start to identify roles that they might not have previously heard of.	There are 4 different stages to creating a Built Environment and a number of different jobs and responsibilities are involved within this process. “The first stage is preparation. This is about making sure the project is possible and can be done. This is through planning out what you would like to build, where, why and how much you have to spend.” For example, the preparation for the project we just looked at – the Shard, was key. “The second stage is Design, many jobs came into play during these very early stages, including Designers, Engineers, Quantity Surveyors and Project Managers. The design of the shard was unique: What do you think a Project Manager does? Somebody who manages the whole team and makes sure everyone sticks to the plan for getting the project built. How about an Engineer?” “Stage three, Construction. During this time it is all about getting ready to start the construction	**Blank Career Profile sheet** **Careers In Construction (Construction Jobs List) | Go Construct** 

		work. So many things can be done, including demolition to flatten the land and preparing for construction to start." This was a very challenging part of the Shard project because… "After all the stages of planning now we're on to stage four, construction! This is where all the hard work and number of roles come together." "And lastly stage four, Handover and in use- this is where the finished project is given back to the client." Management of the facility.	
Analyse current key issues include tackling climate change through better design, practices and use of materials building more homes in a way which helps communities.	**Climania- The Climate Action Game** Before starting the game- introduce the definition of Retrofit. This will help to provide some familiarity with the game before it starts. **Put students into small groups to play the Climania game. The game is outlined below and all information is also available in the Teacher Resource Pack.** Climania focuses on the built environment and its relationship to climate change. Climania is free to print and play.	Retrofitting means 'providing something with a component or feature not fitted during manufacture or adding something that it did not have when first constructed'. It is often used in relation to the installation of new building systems, such as heating systems, but it might also refer to the fabric of a building, for example, retrofitting insulation or double glazing. Resources need printing in advance Use the information guide to decide how best to play the game with the amount of students Explain what retrofit means (this is in the guidance)	 Retrofitting Definition Retrofitting means 'providing something with a component or feature not fitted during manufacture or adding something that it did not have when first constructed'. It is often used in relation to the installation of new building systems, such as heating systems, but it might also refer to the fabric of a building, for example, retrofitting insulation or double glazing. Lets Play! 

	OBJECTIVE: The objective of the game is to reach the centre of the board, with a completely retrofitted property before the set time decided runs out. In the process you will learn about retrofitting buildings and urban planning to achieve climate change mitigation and adaptation goals. EQUIPMENT: The game consists of a foldable A2 game board; a glossary; a rule book; a number of green, amber, red and joker cards; 6 retrofit property cards; 35 retrofit elements fitting together as a puzzle. You will need up to 6 pawns or counters. PREPARATION: Set out the board flat, distribute the cards facing down on their marked positions on the board. The youngest player distributes the properties at random. Players position their counters at the corresponding start field. TIME: Players race against rising temperatures to retrofit their properties and reduce their energy consumption. Players agree on the game's duration before the game starts. We recommend a minimum of 30 minutes for two players and to add 10 minutes for every extra player. You will need a watch to count the time. The youngest person acts as the timekeeper reminding the rest.		**CLIMANIA board game resources.** You will need: The game rules The Glossary of Terms The Question Cards Retrofit Cards The Board

Revisit Baseline Activity (Optional)	Revisit baseline mind map and add something new learnt in a different colour		

Session evaluation and reflection:	
STOP	
START	
CONTINUE	