

Y10/11 Design and Technology – 60 minutes

Lesson plan

Curriculum Link: Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations. Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations.

Learning Objective: To explore job roles linked to ways in which Architects can create imaginative and functional design solutions as part of the KS4 Design and Technology curriculum.

Learning Outcomes:

- To understand the creative discipline of architecture.
- To understand ways in which architecture can have a positive impact on society.
- To understand how knowledge of other job roles can help realising a new housing project.

Success Criteria:

1. **Describe** – What do Architects do?
2. **Understand** - The issues related to affordable housing in the UK today and alternative solutions being developed to benefit communities.
3. **Apply** – Create a proposal and design sketches for an intergenerational living social housing project.
4. **Analyse** – What other jobs or skills are relevant for this challenge?
5. **Reflect** – What skills did you enjoy in the task? What roles that you looked at today need those skills?

Timings	Activity	Details	Resources
3 mins	Starter – What do you see?	In pairs: Students discuss 2 learnings from the bar chart (<i>for example, there has been a gradual decrease in the building of housing over the past 20 years and the provision of additional homes was currently below 10,000 a year in 2018</i>) Ext: How does this impact your generation? (<i>Housing shortages is a real issue for the next generation and will have an impact on young people leaving home and living by themselves</i>) Facilitator might want to spend a moment before talking through what the bar chart is telling them (<i>Numbers of additional homes being built annually over the period 1990 up to 2018</i>)	Slide 3
2 mins	Introduction – What's the problem?	Facilitator to ask a student to read out the statement on the board. Ask pairs to discuss why they think this is a problem. (<i>The UK is facing a housing crisis due to</i>	Slides 4,5



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		<p><i>a shortage of homes, as well as soaring rent and house prices. As a result of the increasing costs of renting many people have been made homeless and forced to live in hostels or sleep rough. The reason for this fall is that not enough homes are being built to replace those being taken out of the social housing stock.) See slide notes for more detail</i></p> <p>Get feedback, all answers welcome.</p> <p>The Challenge <i>'Help Patrick research and develop ideas for Intergenerational Housing that is affordable and supports a diverse community effectively'</i></p> <p>So, who are the kinds of people who might want to tackle this problem? Introduce the challenge for the students today and the role of an Architect.</p>	
5 mins	Describe – What do Architects do?	<p>Introduce the role of an Architect</p> <ul style="list-style-type: none"> • Show the video embedded in the PowerPoint (link here) • Ask students to feedback their answers to what skills an architect needs (<i>For example, creativity and design skills, problem solving, mathematics, computer skills and legal knowledge</i>) and examples of the way these skills are applied, (<i>for example, drawings and sketches in both 2D and 3D, developing scale models and prototypes</i>). 	Slide 6 Video
5 mins	Understand – The issues related to affordable housing in the UK today and alternative solutions being developed to benefit communities.	<p>Introduce the idea of Intergenerational Living through the development, Buccleuch House in Hackney.</p> <ul style="list-style-type: none"> • Show the video embedded in the PowerPoint (link here) <p>Analyse and share ideas in response to the video asking students, what the key aims of intergenerational living. (<i>For example, providing solutions to isolation, an ageing population and improving community living</i>) and examples of how Buccleuch House achieved this, (<i>for example</i></p>	Slides 7, 8



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		<p><i>providing outside space at the rear of the property for the elderly resident that was south facing and quiet).</i> <i>See slide notes for more details</i></p> <p>All contributions welcome. This could be done in several ways depending on the class – hands up/pick a person/write ideas on a mini whiteboard/discuss with the person next to you and feedback to the class.</p> <p>Following this, carry out the A-Z activity to get students to expand on their initial observations to record more benefits of this housing model.</p>	
25-30 mins	<p>Apply – Create a proposal and design sketches for an intergenerational living social housing project.</p>	<p>Challenge tasks Help Patrick research and develop ideas for Intergenerational Housing that is affordable and supports a diverse community effectively.</p> <p>Students to work through the following tasks:</p> <ul style="list-style-type: none"> • Develop ideas for possible housing solutions, by mind mapping each area of the brief. • Consolidate your ideas into a short-written proposal of between 150 – 200 words that explains the design concept and your own innovative approach. <i>Time allowing, invite some students to share their ideas and proposals with the group</i> • Create concept visuals for the housing project selecting 2 of the 4 options suggested to present your ideas. • Use your proposal to guide you and include annotation. <i>Imagery of examples of architectural design sketching, plans and moodboard are provided on slides 12 and 13</i> 	<p>Slides 9, 10, 11, 12, 13</p> <p>Worksheet 1 (printed)</p>
10 mins	<p>Analyse – What other jobs or skills are relevant for this challenge?</p>	<p>Now that specifications and initial concept designs have been created, return to Anya’s challenge – ‘I ...</p> <p>Give students the selection of job roles and descriptions.</p> <p>Focus is on how students justify inclusion of job role. For those that could be involved students need to say</p>	<p>Slides 14, 15, 16, 17, 18, 19</p> <p>Worksheet 2 (optional)</p>



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		<p>how they would be involved and why knowledge of architecture would be beneficial.</p> <p><i>Depending on the class this can be done in one of two ways. Either:</i></p> <ol style="list-style-type: none"> <i>Teacher uses the accompanying slides to describe the different roles to the whole class. Have a class discussion to think about the answers to the questions.</i> <i>OR if students are working at different paces within the class, then give worksheet 2 to students that are ready to start. The worksheet has the same descriptions as the PowerPoint slides so students can use these to make their own decisions and fill in the worksheet.</i> 	
5 mins	Reflect – What skills did you enjoy in the task?	Students should reflect on these questions individually and make a note of their answers.	Slide 20
	Optional extensions if more time or can be set as homework	<p>Task 1</p> <p>Carry out a land use survey of your local area by completing the following activities: Identify a 1-mile route from your school/home printing a map of the area to take with you Record the land use of properties along the route using the following code:</p> <ol style="list-style-type: none"> Residential Retail Industrial Professional or Commercial Recreation or Leisure Public Buildings Open Space <p>Present your findings in a bar chart to analyse your findings. Which categories are most prominent?</p> <p>Task 2</p> <p>Take a walk around your local area and identify buildings or vacant properties that are not in use or derelict. Take photographs and/or drawings of the building in its current state before creating your own redesign, developing them into new social housing solutions.</p>	Slide 21



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		Share your work on social media with the tag, <i>#RightToRegenerate</i>	
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