



### Subject: Design Technology

### Journey To School

Overarching Topic:			
<p>Why is this topic being studied at this time?</p> <p>How does it fit into the wider subject curriculum?</p>	<p><b>Ultimate Questions:</b> Students will be asked to tackle problems or frustrations which they identify with in relation to their own, or others', journey to school. This makes the introduction of this project relatively straightforward, because the context is relevant to every student. Students will be challenged to consider what factors contribute to making someone's journey to school a challenge, and how can they, with a limited set of resources develop a working solution?</p> <p>Given the nature of the context, it is likely that most students will readily identify a number of problems or frustrations about their own journey to school. It is important that they recognise diversity – discussions about the journey to school should acknowledge that it will not be the same for everyone, because of factors such as distance, method of transport, mobility, home circumstances and personal perceptions. Students may want to consider challenges that others face, rather than their own needs.</p> <p><b>Joining up:</b> Students will learn to be considerate not only of different user needs but develop the necessary skills to evaluate what factors influence and inform peoples experiences of travel. In so doing students will go onto develop the skills and build awareness and understanding of design fixation and its pitfalls alongside how to be innovative and original designers by considering a variety of design influences. These attributes will prepare learners for Year 9 end of term unit and prepare them for their GCSE NEA.</p>		
	Essential	Core	Ambitious
<p><b>The Big Questions</b> (What questions will students be able to answer upon mastery of the topic?)</p>	<ul style="list-style-type: none"> <li>- How can we use real design techniques to solve real problem?</li> <li>- How can we analyse and apply iterative design processes?</li> <li>- What skills are needed to produce design solutions?</li> <li>- What are a users' needs and wants?</li> </ul>	<ul style="list-style-type: none"> <li>- How can we produce functioning prototypes?</li> <li>- How can we recognise diversity in design?</li> <li>- Are we able to analyse how effective a design solution is?</li> <li>- What information do we need from a user to begin meeting their needs and wants?</li> </ul>	<ul style="list-style-type: none"> <li>- Can we develop iterations of design ideas through modelling and testing?</li> <li>- How might we be able to communicate design ideas more effectively?</li> <li>- How can I avoid design fixation and develop innovative and original design solutions?</li> </ul>

The Key Skills/ Techniques	The sophistication and application of skills will become more advanced as students' progress through the essential, core and ambitious knowledge	
	Skill/Technique	How will this skill be developed?
	User Researching	Students will research and analyse a user, their needs and identify problems they encounter in their journey to work that must be overcome. This will be done using secondary research methods.
	Sketching/Designing skills	Students will develop a broad range of design ideas through sketching to communicate their understanding of originality and innovation and its role in being a contemporary designer.
	Modelling & Prototyping	Students will use modelling materials such as paper and card to quickly develop simple ideas before developing them into prototypes with more complex materials and skills.
	CAD & CAM	Students will learn about the relevance of CAD in developing prototypes and how CAM can be used to help produce accurate and time-bound outcomes that can be translated to mass-production.
	Evaluation and Iteration	Students will develop the skills to present and communicate design ideas, being selective and resourceful in creating effective and engaging presentation techniques. Students will learn how to use the <i>iterative</i> design process to propose developments to their final idea.