

	Y7	Y8	Y9
Product Design	<p>Bird House\Cardboard Chair (Sustainability and design)</p> <p>Students will undertake two projects in year seven, the first looking at Designing and prototyping. This project will include understanding structural integrity from triangulation to the use of girders beams and columns and working through forces in everyday objects. The module completes with the students making a chair from cardboard. The second project, Environment and sustainability looks at Environmental, social and economic issues including the 6 Rs this moves through material, choices, design working towards making a birdhouse from recycled materials, research around Bird habitat allows an informed making and design process.</p>	<p>Electronics\ Mechanical systems (One-off Production)</p> <p>In the first of the two projects the students will work through basic electronics and circuits the final aim of the project is to make a lantern with a design movement in mind, The second project looks at cams, gears and pulleys The Students make a Cam driven toy and finish taking a look at forces, some of the skills learn are listed below</p> <ul style="list-style-type: none"> Identifying primary and secondary stakeholders Using CAD within the design process Soldering and building a basic electronic circuit Understanding Gear ratios and their uses 	<p>Electronic Systems \Joining methods</p> <p>In the first of our two booklets we learn about electronic systems adding functionality to everyday items we then move on to look at what makes electronic systems and how they are programmed we focus on the BBC Microbit and work through a set of practical projects</p> <p>As we start our material project, we look at a range of materials including emerging and smart materials, we see how they are manufactured as we end the project making a picture frame from soft wood along with an acrylic phone stand</p>