

## 5/7 Year Curriculum Plan: Design & Technology

Half Term	Autumn 1							Autumn 2							Spring 1						Spring 2						Summer 1						Summer 2						
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
<b>Year 7</b>	<b>Drawing skills:</b> Oblique Projection Crating Method Rendering to show materials Tone, texture and line weight Organic 3D shapes <b>The work of others</b> Design Eras Famous Designers Companies							<b>DMP: Pencil pot</b> Design process Tools and equipoment Timbers and boards- classifications and working properties Methods of fabrication							<b>DMP: Pencil pot</b> CAD/CAM Timbers and boards specialist knowledge Papers & Boards						<b>DMP packaging project</b> (designing) Die cutting Surface developments and nets						<b>DMP packaging project (making)</b> Packaging standards Product Analysis Design Specifications						<b>Graphic Design Skills project</b> Fonts and tyface Branding, logos and corporate identity Grid method						
<b>Year 8</b>	<b>Drawing Techniques – Isometric</b> Sketching, crating, tonal rendering, shading and lining in technique							<b>Pop up card DMP-</b> Working properties of paper and card Levers and linkages Mechnaisms (paper and card) World religions/ culture							<b>Design Theory</b> Properties and characteristics of materials Timbers Polymers Papers and Boards Social, economic and environmental issues CAD/CAM						<b>Phone holder</b> ACCESSFM Generating and commiunicating design ideas Timbers Polymers Marking out/ tolerance						<b>Phone holder</b> Tools and Machinery Health and Safety Smart Materials						<b>Phone Holder – Polymers</b> Analysis and evaluations Market forces						
<b>Year 9</b>	<b>Drawing Techniques</b> Isometric Sketching and crating Tonal rendering, material rendering and lining in techniques 1, 2 and 3 point perspective drawing							<b>Drawing Techniques</b> Isometric Sketching and crating Tonal rendering, material rendering and lining in techniques 1, 2 and 3 point perspective drawing							<b>Lighting project- DESIGNING</b> Design briefs and specifications Technical principles- prorties of materials Design and making principles- working with timber; workshop tools and equipment. Electronic components and PTM circuits						<b>Lighting project- MAKING</b> Design briefs and specifications Technical principles- prorties of materials Design and making principles- working with timber; workshop tools and equipment. Electronic components and PTM circuits						<b>Lighting project- EVALUATING</b> Design briefs and specifications Technical principles- prorties of materials Design and making principles- working with timber; workshop tools and equipment. Electronic components and PTM circuits						<b>Smart material key fob-</b> Smart and modern materials Polymers Jigs and formers Forming plastics						
<b>Year 10</b>	<b>3.1 Core technical principles</b>							Communication of design ideas- drawing, sketching and presentation							<b>3.2 Specialist technical principles</b>						<b>3.3 Designing and making principles</b>						<b>AO1 Identify, investigate &amp; outline design possibilities (section A)</b>						<b>AO1 Identify, investigate &amp; outline design possibilities (section B)</b> <b>A02 Design &amp; make prototypes that are fit for purpose Generating design ideas (section C)</b>						

Year 11	A02 Design & make prototypes that are fit for purpose Generating design ideas (section C) A02 Design & make prototypes that are fit for purpose Developing design ideas (section D)	A02 Design & make prototypes that are fit for purpose Realising design ideas (section E) AO3 Analysing & evaluating (section F)	Revision as per QLA of mock: 3.1 Core technical principles 3.2 Specialist technical principles 3.3 Designing and making principles	Revision as per QLA of mock: 3.1 Core technical principles 3.2 Specialist technical principles 3.3 Designing and making principles		
Year 12	<p><b>Unit 1 Technical Principles:</b> Materials and their applications; Classification of materials; Methods for investigating and testing materials; Performance characteristics of materials.</p> <p><b>Unit 2 Design &amp; Making principles:</b> Mini project: CAD/ CAM</p>	<p><b>Unit 1 Technical Principles:</b> Elastomer, polymers, composites, smart material, enhancement of materials, Forming, redistribution and addition processes.</p> <p><b>Unit 2 Design &amp; Making principles:</b> Mini project: sketching/ visual communication</p>	<p><b>Unit 1 Technical Principles:</b> The use of finishes, fixings and adhesives, Modern industrial and commercial practice, Digital design and manufacture.</p> <p><b>Unit 2 Design &amp; Making principles:</b> Mini project: modelling</p>	<p><b>Unit 1 Technical Principles:</b> Protecting designs and intellectual property, The requirements for product design and development, Health and safety.</p> <p><b>Unit 2 Design &amp; Making principles:</b> Mini project: CAD/CAM</p>	<p><b>Unit 1 Technical Principles:</b> Design for manufacturing, maintenance, repair and disposal, Feasibility studies, Enterprise and marketing in the development of products, Design communication.</p> <p><b>Unit 2 Design &amp; Making principles:</b> NEA: Identify, investigate &amp; outline design possibilities</p>	<p><b>Unit 2 Design &amp; Making principles:</b> Designers methods and processes; design theory; How technology and cultural changes can impact on the work of designers; design processes; Critical analysis and evaluation.</p> <p><b>Unit 2 Design &amp; Making principles:</b> NEA: Identify, investigate &amp; outline design possibilities</p>
Year 13	<p><b>Unit 1 Technical Principles:</b> Revision (Inc. Design &amp; Making principles theory).</p> <p><b>Unit 2 Design &amp; Making principles:</b> NEA: Identify, investigate &amp; outline design possibilities Design &amp; make prototypes that are fit for purpose</p>	<p><b>Unit 1 Technical Principles:</b> Revision (Inc. Design &amp; Making principles theory).</p> <p><b>Unit 2 Design &amp; Making principles:</b> NEA: Identify, investigate &amp; outline design possibilities Design &amp; make prototypes that are fit for purpose</p>	<p><b>Unit 1 Technical Principles:</b> Revision (Inc. Design &amp; Making principles theory).</p> <p><b>Unit 2 Design &amp; Making principles:</b> NEA: Design &amp; make prototypes that are fit for purpose; Analyse &amp; evaluate</p>	<p><b>Unit 1 Technical Principles:</b> Revision (Inc. Design &amp; Making principles theory).</p> <p><b>Unit 2 Design &amp; Making principles:</b> NEA: Analyse &amp; evaluate</p>		