



Academic Year <u>Year; 7</u>	Content. Unit title and brief outline of content.	Skills taught in each unit.	Assessment – what knowledge and skills will be assessed and how?
Rationale	<p>Y7 the focus is on polymers with an emphasis on developing their confidence in using appropriate hand tools, pillar drill and thermo-forming in PVC and PMMA. Students develop an awareness of sustainability issues, biomimicry, CAD/CAM using 2D Design, Health and Safety and effective communication using sketching techniques.</p> <p>Students design and make a thermoformed keyring and blister packaging and a CAD/CAM design and manufactured planner/book marker from card/ bonded polymer felt/ embroidery thread. (Extension Hanging Design)</p> <p>CST – Stewardship and Common Good - Plastics - Use of plastics in the home, origins and production, rubbish and recycling.</p>		
(A) Autumn A	Key Fob <ul style="list-style-type: none"> • Introduction to Health and Safety in a Design and Technology Workshop. • Personal H&S Legal requirements and personal responsibility. • Design layout, use of colour and typography. • Working in laminated thermoplastic (acrylic) and wire to produce a key fob. • BHM - Research into existing product designers/architects or engineers. Questions. 	<ul style="list-style-type: none"> • How to identify personal hazards and what precautions to take. (PPE) • Hand graphic skills: Use of guidelines, typographical design and layout, selection of colour. • Use of hand tools to cut and finish acrylic. • Identification of common synthetic polymers by name and code. • Careers – investigating the work of current designers 	<p>October EMB</p> <p>Based upon GCSE style questions.</p> <p>Personal Health and Safety</p> <p>Workshop tools/equipment-identification and safe usage</p> <p>Typography Skills</p> <p>Common Plastics and their uses</p>
(A) Autumn B	<p>Key Fob continued</p> <ul style="list-style-type: none"> • Use of thermoforming/plastic memory and wire to produce a raised image in the key fob. • Use of card, MDF former and PVC to make blister packaging to promote product. 	<ul style="list-style-type: none"> • How to cut and form steel wire • Use thermoforming techniques to understand plastic memory and forming plastics. • Safe use of pillar drill • Research • Presentation • CAD drawing • Evaluation 	<p>December Oracy</p> <p>Present research into the impact of plastics on the environment and effective recycling. (Team Presentation)</p>



	<ul style="list-style-type: none"> Oracy task to present research into the impact of plastics on the environment and effective recycling. 		
(A) Spring A	<p>Planner Marker/Decoration Design and make a page marker for the planner. Design – Working drawing, template, CAD Drawing.</p> <p>Make- measuring, marking out, cutting and developing sewing skills – linked to Art Textiles. CAM – Card Backing</p> <p>Extension – Design and Model Decoration Use of card modelling, MDF engineered wood, decoration.</p>	<ul style="list-style-type: none"> Use of hand tools to cut and finish card/fabric. Use of CAD/CAM Sketching and annotation. 	<p>January EMB End of project Exam - based upon GCSE style questions. Practical Health and Safety Manufacturing Processes Use of CAD - symbols and designs Plastics symbols and recycling (9 mark)</p>
(B) Spring B	<p>Key Fob</p> <ul style="list-style-type: none"> Introduction to Health and Safety in a Design and Technology Workshop. Personal H&S Legal requirements and personal responsibility. Design layout, use of colour and typography. Working in laminated thermoplastic (acrylic) and wire to produce a key fob. <p>BHM - Research into existing product designers/architects or engineers. Questions.</p>		<p>March EMB Based upon GCSE style questions. Personal Health and Safety Workshop tools/equipment-identification and safe usage Typography Skills Common Plastics and their uses</p>
(B) Summer A	<p>Key Fob continued</p> <ul style="list-style-type: none"> Use of thermoforming/plastic memory and wire to produce a raised image in the key fob. 		<p>June EMB End of project Exam - based upon GCSE style questions. Practical Health and Safety Manufacturing Processes Use of CAD - symbols and designs</p>



	<ul style="list-style-type: none"> • Use of card, MDF former and PVC to make blister packaging to promote product. • Oracy task to present research into the impact of plastics on the environment and effective recycling. 		Plastics symbols and recycling (9 mark)
(B) Summer B	<p>Planner Marker/Decoration Design and make a page marker for the planner. Design – Working drawing, template, CAD Drawing.</p> <p>Make- measuring, marking out, cutting and developing sewing skills – linked to Art Textiles. CAM – Card Backing</p> <p>Extension – Design and Model Decoration Use of card modelling, MDF engineered wood, decoration.</p>		<p>July Oracy Present research into the impact of plastics on the environment and effective recycling. (Team Presentation)</p>