SUBJECT: Design and Technology

Year Group	**YEAR 9**			
Rationale:	The Y9 Design Technology curriculum is designed to develop the resilience and independent learning abilities of our pupils as well as building on prior KS3 knowledge and introducing content to support future GCSE studies. It continues to provide them with an enhanced knowledge of the different specialist areas of Design Technology including; Food, Graphics, Textiles and Product Design. The curriculum is designed to build pupils' confidence in how to work through the design and make process, using a wide variety of materials, tools, techniques and equipment.			
	Pupils will rotate around 5 different material areas in Technology over the course of the year. Each project will be taught over 8 weeks (12 hours).			
Topic/ Project	**GRAPHICS ‘Music Festivals’**	**TEXTILES ‘Mobile phone Cushion’**	**CAD/CAM ‘Child-friendly Clock’**	**FOOD ‘Around the world foods’**
Knowledge	During this project, pupils will develop an under-standing of how to use a culture theme to develop a festival brand and logo as well as range of merchandise. Through a range of drawing based and CAD practical tasks, they will learn how to develop ideas using client opinions. They will also develop their 3D drawing techniques to design merchandise items.	During this project, pupils will develop their know-ledge of how to use a theme to create a cushion. They will develop their knowledge on creating patterns and consideration towards seam allowances. Through a range of hand and machine based techniques, thy will learn how to assemble a cushion accurately.	During this project, pupils will develop their know-ledge of 2D Design and CAM machinery. They will develop ideas to suit a client from the children category. They will learn about the importance of planning manufacture in order to be efficient and accurate during the making and assembling process.	During this project, pupils will develop their know-ledge and understanding of health and safety in the kitchen. They will develop and build on skills from previous projects to include and combine more complex processes such as butchering meat, marinating and bread making, They will develop scientific food knowledge about what happens to ingredients during different cooking processes.
Skills	**Design Investigation Skills** Pupils will use a cultural theme to develop their visual drawing tech-niques and creativity through free hand sketching, designing from inspiration, shading and tone, isometric drawing and shading to show materials. **Practical skills** Pupils will develop their CAD skills using Adobe Photoshop and Illustrator to produce successful logo ideas. They will build on skills from previous project to create more complex designs using a wider range of tools	**Design Investigation Skills** Pupils will use a theme to develop a range of cushion ideas suitable for the client. They will develop their knowledge on Textiles materials and their properties. They will be able to plan out patterns in order to construct a 3D outcome. They will develop their knowledge on Textiles materials and their properties. **Practical skills** Pupils will develop their accuracy of hand stitching using the applique method. They will learn how to combine both hand and machine sewing to create a successful final outcome. They will develop their sewing machine skills to ensure they can work independently, safely and accurately to construct their cushion.	**Design Investigation Skills** Pupils will learn how design considering the wants and needs of a child/ parent. They will use client research to influence and inspire their clock designs. They will learn how to develop these using SCAMPER and feedback. **Practical skills** Pupils will learn how to operate the laser cutter safely including selecting the correct print options and material placement. Pupils will learn how to use the vinyl cutter to create extra detail and how to assemble different materials together accurately.	**Design Investigation Skills** Pupils will learn how different ingredients react to cooking process and impact on recipes. They will learn how to evaluate food outcomes in relation to the scientific properties of the ingredients. **Practical skills** Pupils will develop a wider and more complex range of practical skills by completing a range of focused practical food tasks. They will gain more independence when using key kitchen equipment such as the oven, hob and mixers. Pupils will understand how to select and prepare a number of ingredients and the different methods of processing. A large emphasis will be placed on food hygiene standards and safety

Assess-ments	**Pupils will be assessed at the end of every project. Each pupil will be assessed on the Research, Design, Make and Evaluation strands and an average for each project will contribute to the overall pathway. This will be compared to their target pathway to monitor pupil progress**.			
	Research: Pupils will be assessed on the analysis of a range of research based around cultures, festival logos, merchandise and client research. **Design:** Pupils will be assessed over a range of sketching and CAD designing tasks to create a final logo/ merchandise design. Pupils will be assessed on accuracy, presentation of design development work and annotation techniques. **Evaluation:** Pupils will be assessed on the evaluation of their final logo. They will be assessed on their use of technical vocabulary and their awareness of strengths, areas for improvement and modifications.	**Research:** Pupils will research into a theme and client. They will be assessed on the quality of communication and the information presented. **Design:** Pupils will be assessed on their initial cushion ideas and knowledge of construction techniques. Assessment will focus on creativity, quality of ideas/ annotation and presentation techniques. **Make:** Pupils will construct their cushion using both hand stitching and the sewing machine. They will be assessed on their independence, safety and accuracy. **Evaluation:** Pupils will be assessed on their final cushion and ability to test and evaluate this suggesting future ways to improve quality and construction.	**Research:** Pupils will conduct research around wants and needs of the client. They will be assessed on the quality of communication and the information presented. **Design:** Pupils will be assessed on both the hand sketches produced and the challenge of the design on 2D Design. Assessment will be focused on the accurate transfer of the design onto 2D design and generation of parts. **Make:** Pupils will be assessed on the understanding of how to use the laser cutter and vinyl cutter safely and the quality of their finished product. **Evaluation:** Pupils will be assessed on the evaluation of their final clock. They will be assessed on their use of technical vocabulary and their ability to suggest modifications after testing and peer feedback.	**Research:** Pupil will be assessed on the quality of analysis completed on a range of research tasks based on dietary requirements and scientific food knowledge **Design:** Pupils will be asked to adapt and design recipes based around their scientific and cooking knowledge. **Make:** Pupils will be assessed over a range of different practical cooking activities. The assessment will focus on the child's ability to independently, safely, and accurately use a range of kitchen equipment whilst maintaining high levels of food hygiene. **Evaluation:** Pupils will be assessed on the evaluation of their final food products. They will be assessed on their use of technical vocabulary and ability to complete scientific analysis of the different food products.