Design Technology: Curriculum map

YEAR GROUP:	Year 8			
Rationale:	The year 8 Design Technology curriculum is designed to develop the resilience and independent learning abilities of our pupils as well as building on prior KS3 knowledge. It continues to provide them with an enhanced knowledge of the different specialist areas of Design Technology including Food, Graphics, Textiles and Engineering Materials. 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 4 different material areas in Design Technology over the course of the year. Each project will be taught over 9/10 weeks (approx. 15 hours).			
Topic/ Project	**TEXTILES** **'Phone cushion'**	**GRAPHICS** **'Drawing techniques'**	**ENGINEERING MATERIALS** **'Bio Light'**	**FOOD** **'Snack Pot'**
Knowledge	During this project, pupils will develop their knowledge of how to use a theme to create a mobile phone cushion, for a chosen client. They will develop their knowledge on creating patterns and the process of sublimation printing. Through a range of hand and machine-based techniques, they will learn how to assemble a part accurately to create a successful outcome	During this project, pupils will develop an understanding 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 knowledge of how to use a theme to create a mobile phone cushion, for a chosen client. They will develop their knowledge on creating patterns and the process of sublimation printing. Through a range of hand and machine-based techniques, they will learn how to assemble a part accurately to create a successful outcome	During this project, pupils will develop their knowledge and understanding of health and safety in the kitchen. They will develop knowledge on healthy eating and how they could adapt their diet to be healthier. They will also develop understanding on food safety including high and low risk foods along with the key temperatures that are needed for bacteria to grow. Pupils will also gain understanding on food provenance including food to fork and food miles.
Skills	**Design investigation skills** Pupils will use a theme to develop designs for both a printed and appliques side to their phone cushion. They will focus research on a chosen client. **Practical skills** Pupils will learn how to use the sewing machine safely and accurately to construct the outer parts of their cushion. They will develop their accuracy of hand stitching using the applique method and combine it with sublimation printing to create their surface decoration.	**Design investigation skills:** Pupils will develop their visual drawing techniques and creativity through a range of technical drawing disciplines, free hand sketching, designing from inspiration, shading and tone, isometric drawing and shading to show materials. **Practical skills** Pupils will develop their visual drawing techniques and creativity through a range of technical drawing disciplines. They will discover single- and double-point perspective drawing, estimated perspective drawing, isometric drawing and design. They will enhance these abilities by creating structured tasks suited to each discipline.	**Design investigation skills:** Pupils will learn how to use their research on biomimicry, materials and electronic components to develop a mini light design. They will learn the importance of using a range of research to aid design. **Practical skills** They will develop skills in the workshop using traditional workshop tools and CAD/CAM to create the light casing. They will again electronics-based skills as the work with a circuit component to form the light. They will learn how to combine a range of materials and components successfully to create a working light.	**Health application skills:** *(within the food SOW we cannot use design investigation as this is not part of the national curriculum, there we have made adaptations changing the heart from design/creativity to health*) Pupils will learn how eating premade, processed food can impact on their health. They will learn how items that they buy can easily be made from fresh ingredients to reduce intake of things such as salt, sugar and additives. Pupils will also look at how to perform a sensory analysis and evaluate foods they have made. **Practical skills** Pupils will develop a wider 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 and hob and Pupils will understand how to select and prepare several ingredients and combine process in order to make more complex food outcomes. A large emphasis will be placed on food hygiene standards and safety.
Formative Assessments	Each project has a range of formative assessment point where pupils are given feedback and opportunity to improve. This formative feedback links directly to the project but also to summative exam-based assessment within the present year or the following year.			
	Knowledge and understanding Pupils will receive formative feedback on the knowledge bank questions within the booklet. They will be given opportunity to address this feedback this will help them to recognises areas of strength and of knowledge that need further revision before the summative written exam. **Creativity** Pupils will receive formative feedback on their photoshop design. They will be given opportunity to address this feedback and make improvements before printing and summative marks for creativity are completed. **Skills** Pupils will receive formative feedback on their sewing machine samples. This will enable them to address this feedback and make improvements on their hand stitch before or during the final making process	**Knowledge and understanding** Pupils will receive formative feedback on the knowledge bank questions within the booklet. They will be given opportunity to address this feedback this will help them to recognises areas of strength and of knowledge that need further revision before the summative written exam. **Creativity** Pupils will receive formative feedback on their single point and double point perspective drawings. They will be given opportunity to address this feedback and make improvements before printing and summative marks for creativity are completed.	**Knowledge and understanding** Pupils will receive formative feedback on the knowledge bank questions within the booklet. They will be given opportunity to address this feedback this will help them to recognises areas of strength and of knowledge that need further revision before the summative written exam. **Creativity** Pupils will receive formative feedback on their design ideas and development relating to bio mimicry. They will be given opportunity to address this feedback and make improvements before marks for creativity are completed. **Skills** Pupils will be given formative and verbal feedback on their practical outcomes with a focus on quality of cut and quality of soldering. This will give them sufficient time to adjust and modify their practical outcome.	**Knowledge and understanding** Pupils will receive formative feedback on the knowledge bank questions within the booklet. They will be given opportunity to address this feedback this will help them to recognises areas of strength and of knowledge that need further revision before the summative written exam. **Heart** Pupils will receive formative feedback on the planning meals for different food groups task and a dish evaluation. They will be given opportunity to address this feedback and make improvements before summative marks for the health strand are completed. **Skills** Pupils will complete a skills audit but doing a RAG rating on skills for each dish they make, they will receive formative feedback on the skill audit. This will enable them to address this feedback and make improvements when cooking future dishes.

Summative Assessments	Pupils will be assessed at the end of every project. Each pupil will be assessed on the Design Technology strands Head, Heart, Hands and an average for each project will contribute to the overall progress level alongside the high stakes test. This will be compared to their target pathway to monitor pupil progress.			
	Knowledge and understanding Pupils will be assessed on the quality of written communication within the booklet and the completed knowledge bank questions. **Creativity** Pupils will be assessed on the photoshop print design they have created and their response to formative feedback given. **Skills** Pupils will be assessed on the final product outcome. Including: The safe use of tools and equipment The overall accuracy and finish The suitability and quality of the print.	**Knowledge and understanding** Pupils will be assessed on the quality of written communication within the booklet and the completed knowledge bank questions. They will also be assessed on their accurate use of drawing equipment. **Creativity** Pupils will be assessed on creativity of each design task for each discipline. **Skills** Students will be largely assessed on the development of their basic drawing skills and the accuracy of each drawing technique. They will be assessed on the accurate use of drawing tools, ie, pencil, ruler, fine liner, protractor.	**Knowledge and understanding** Pupils will be assessed on the quality of written content within the booklet and the completed knowledge bank questions. **Creativity** Pupils will be assessed on the quality of design that links to the main area of Biomimicry. **Skills** Pupils will be assessed on the accuracy and safe use of equipment in the workshop. They will be assessed on quality of soldering along with the overall finish of their final outcome.	**Knowledge and understanding** Pupils will be assessed on the quality of written content within the booklet and the completed knowledge bank questions. **Health** Pupils will be assessed on their understanding of sensory analysis, and planning meals for different food groups. Pupils will also complete a written evaluation on 2 dishes having the opportunity to respond to formative feedback. **Skills** Pupils will be assessed on the final product outcomes and the RAG rating of skills. Pupils will be assessed on the ability to use the oven and hob safely and the ability to demonstrate high level skills such as roux making, scone making (rubbing in method). Pupils will also be assessed on the ability to adhere to health and safety and food safety and hygiene.
	All pupils will sit summative written examination that test arrange of design and technology-based knowledge and understanding at the two points within the year in line with the school assessment policy. These will be combined 50/50 with the average project grades to create an overall grade.			
Homework	**Preparation** Pupils will be given tasks in order to prepare them for activities in the following lessons. *Print off photoshop* *Take and print a picture of your final product.* **Practice** Pupils will be given knowledge-based questions as homework for retrieval practise and to practise exam question technique. *Completion of knowledge bank questions or feedback on knowledge bank questions.* **Extension** Pupils will be given homework's that will give them time to address feedback and improve knowledge and understanding alongside overall work. *Addressing of feedback on booklet pages.*	**Preparation** Pupils will be given tasks in order to prepare them for activities in the following lessons: *Developing complex shapes in single point perspective* *Creating a 2 point perspective drawing.* **Practice** Pupils will be given knowledge-based questions as homework for retrieval practise and to practise exam question technique. *Completion of knowledge bank questions or feedback on knowledge bank questions.*	**Preparation** Pupils will be given research tasks in order to prepare them for activities in the following lessons Research images that can relate to products that have used Biomimicry as a foundation for the design. **Practice** Pupils will be given knowledge-based questions as homework for retrieval practise and to practise exam question technique. *Completion of knowledge bank questions or feedback on knowledge bank questions.* **Extension** Pupils will be given homework's that will give them time to address feedback and improve knowledge and understanding alongside overall work. Develop design ideas linking to Biomimicry.	**Preparation** Pupils will be given the task of preparing and bringing in ingredients for practical lessons. *Select your choice of ingredients and bring in apron and container for next practical lesson.* **Practice** Pupils will be given knowledge-based questions as homework for retrieval practise and to practise exam question technique *Completion of knowledge bank questions or feedback on knowledge bank questions during lesson.* **Extension** Pupils will be given homework's that will give them time to address feedback, improve knowledge and understanding, and that enhances their current subject knowledge in a way that allows them to improve. *Complete written evaluations on chosen dishes.*
	The aim of homework in Design and Technology is to reinforce learning and skills developed in the classroom, providing students with an opportunity to practice and deepen their understanding independently. All homework will be related to the previous lesson or will prepare students for the upcoming lessons. Any homework set will be uploaded to Arbor, pupils will be given minimum of 5-7 days to complete homework in line with the whole school homework policy.			