Curriculum Map

Subject: **Design and Technology** Year: **7**

|  | **Table tennis bat project** | **Food Preparation and Nutrition** |
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| **Content** | Introduction to design skills and development.  Introduction to design terminology such as form and function.  Introduction to design companies such as Alessi  Use of anthropometric data.  Iterative development of designs  Introduction to timbers properties and uses.  Introduction to Health and safety in the workshop through making skills such as:  Use of saws  Use of files  Use of sanding machines  Use of finishes | Food Preparation and Nutrition is one area within Design and Technology. Students need to understand how ingredients work together, introducing Food Science and Cooking Methods. It will teach more challenging food preparation skills and develop confidence and understanding of nutritional and sustainable food products. |
| **Skills** | **Research skills:**  Product analysis - focussing on form and function.  **Design skills**  Sketching, shading, and annotating of design ideas to communicate clearly to others.  **Making skills**  Focussing on mastery of basic making skills and developing confidence in the workshop, resulting in a high quality outcome. | **Skills and techniques**  Identify hazards using knives, how to use them and avoiding food poisoning and cross contamination.  Identify what is a healthy lifestyle and the Eatwell guide.  Develop an understanding of cooking techniques and cooking methods. Use knowledge on how to prepare, cook and present,  using the correct cooking method, combining, and shaping the food product. |
| **Assessment** | 1. Mid unit assessment of research/design work, self, peer and teacher assessed  2. End of topic test using self-marking google form.  3. End of topic self/peer/teacher assessment of practical outcome using set descriptors. | 1. Kitchen and knife safety assessment 2. Weighing and measuring 3. Self, peer and teacher assessed practical. 4. Teacher assessment of all practical work -prepare cook and present. 5. End of topic test/rotation google form. 6. Written/theory marked with feedback. |

Curriculum Map

Subject: **Design and Technology** Year: 8

|  | **Sustainable Architecture** | **Food Preparation and Nutrition** |
| --- | --- | --- |
| **Content** | Conducting primary and secondary research into different aspects of buildings and Modernism.  Developing the key skills of technical drawing and modelling ideas.  Students will analyse the constraints and possibilities of the challenge and write their own brief for the unit, setting requirements that need to be met which will later be used for students to assess their success against.  Their brief will then be used to investigate several possible avenues of research to then draw inspiration from.  Technical drawing and CAD skills will then be used to iterate and refine students' ideas into concepts.  A final concept will be chosen and then a scale block model produced using CAD and laser cutting to illustrate their idea from modelling board.  In groups students will then present their final concepts to each other and self-assess their success in this unit against the brief/specification they generated at the start of the project. | The aim is for students to focus on practical skills. Develop a thorough understanding of nutrition, food provenance and the working characteristics of food materials/ingredients.  The students gain confidence to help with family dinners and snacks to make them healthier. |
| **Skills** | **Research skills:** Using a range of primary and secondary research techniques.  **Design skills:** Sketching, shading and annotating of design ideas to communicate clearly to others.  Use of technical drawing techniques used by professional Architects.  Developing use of CAD (digital 3d design) skills through Autodesk Tinkercad program.  **Making skills:** Focussing on developing modelling skills resulting in a high quality CAD/CAM outcome to create a concept model to an expected level of accuracy. | **Skills and techniques**  Identify Hazards, use the knife correctly - Bridge hold and claw grip.  Understand the all in one method in cake making and the cooking method. Baking portion and temperature control. Use of the electric hand whisk. Melting method using the hob. Skills in combining, chilling and decorating and using alternative healthier ingredients. Awareness of bacteria- cross contamination.  Knife skills, using the oven and wrapping Tortillas.  Use knowledge and understanding of the Eatwell Guide, to introduce combining hob ingredients together. Reducing stock into Risotto rice. Using a high-risk food product - Chicken. Using knowledge and understanding. Cross contamination - coloured boards. Knowledge of environmental and sustainability issues. |
| **Assessment** | 1. Mid unit assessment of research/design work, self, peer and teacher assessed  2. End of topic test using self-marking google form.  3. End of topic self/peer/teacher assessment of practical outcome using set descriptors. | 1. Use knowledge and skills to prepare and cook dishes of your own choice. Teacher assessment of practical and written work. Evaluate.  2. End of topic/ rotation test Google form.  Written work/theory marked with feedback. |

Curriculum Map

Subject: **Design and Technology** Year: **9**

|  | **Sustainable lighting** | **Jewellery design** | **Food Preparation and Nutrition** |
| --- | --- | --- | --- |
| **Content** | Applying knowledge learnt in KS3 design and technology so far.  Gaining knowledge of the GCSE design and technology course sections on mechanical systems and renewable energy content.  learning about the production of polymers and their impact on the environment.  Designing and making a sustainable product to meet a user's needs.  Developing knowledge of sustainability related to energy generation using solar, hydro and wind power. | Understand how to complete detailed research into the work of others including design movements including information such as (artists, designers, design companies, architects), **dates** to give historical context to the movement, **images or sketches** of key structures or patterns.  Students learn about origins of metals, useful properties, and how to cut, shape and finish metal products using tin snips, junior hacksaws, files, wet and dry and enamel. How to apply decorative features such as etching, engraving and enamelling.  Developing knowledge and practical understanding of safe metal manufacturing processes in the workshop. | Students begin to understand what healthy eating means and what exactly does that mean for the student’s family and friends. Making decisions. Recognises sociocultural influences, availability, production processes, diet and healthy choices. Life Skills are learnt throughout, therefore they are able to make choices on affordable and nutritional products to feed themselves and others in later life: with the knowledge and understanding how to balance dishes safely and prepare hygienically. |
| **Skills** | **Researching skills**  Identifying the needs of a user.  **Design Skills:** Designing for users' needs, 2d, 3d sketching techniques.  Development and modelling of design ideas.  Developing students' use of Computer Aided Design.  Developing students making skills with a focus on mechanical systems and creating a prototype wind turbine model using recycled polymers. | **Research Skills**  Research design styles/movements and existing designer’s work  **Design and Communication Skills:** Practise sketching technique, drawing in 3d including Isometric, 1 and 2 point perspective  Making skills: Introduction to making using metalwork tools and equipment safely including; marking out, cutting, shaping, filing and heat treatment and enamelling. | **Skills and Techniques**  Assessment of cutting skills. Develop hygiene and safety rules in the preparation area for good food hygiene. 4Cs focus on nutrients required for a healthy balanced diet and why they are needed in the body.  Develop understanding how to use more complex ingredients and cooking methods .  Develop techniques in making different pastries.  Skills rolling, shaping, chilling.  Develop knowledge and understanding of the issues associated with cross- contamination. Awareness of what are high risk food products. Using skills to demonstrate safe and hygienic preparation of vegetables and meat. Using knife skills and precision and accuracy, temperature control. Develop the use of sensory descriptive words, use of the hob, frying skills, sauce making .  Develop knowledge and understanding of cake making - high risk product -eggs. Making skills and techniques. Folding - ribbon test 3 seconds. |
| **Assessment** | 1. Mid unit assessment of research/design work, self, peer, and teacher assessed  2. End of topic self/peer/teacher assessment of practical outcome using set descriptors. | 1. Design and Communication Skills assessed through completed design page mid unit. 2. End of topic theory assessment using Google form 3. Making assessment of completed outcome against set criteria including; accuracy, quality of finish ability to work independently. | Practical assessment throughout the course.  End of course assessment using Google form. |