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| **Year 8 – Design Technology 2024-25** |
| **Curriculum intent** | Design Technology is about viewing the world around us. To look at where we are now in the 21st century, and where we could be in the future. To know about past and present designers, inventors and innovators and aspire to become people that design and shape the world. In an increasingly technological society we aim to encourage students to think independently and be creatively when working on a problem. We intend to teach students to be problem solvers in a safe learning environment and explain that making mistakes is okay, and part of the development of process. To build upon theory using research and ideas across all subjects and then apply it to solve real world issues. Design Technology is an inspiring practical subject using a broad range of subject knowledge such as mathematics, science, engineering, computing, food science and art. High-quality We aim to empower students to become the people who will solve the issue of tomorrows world. For example, climate change and the quality of life. Design Technology education makes an essential contribution to the creativity, culture, wealth and well-being of the human race and how we can help the world around us. The Technology Department includes both Design Technology and Food. It aims to develop our students’ curiosity and understanding of the world around them through the products they use and the food they eat. The ‘hands-on’ practical aspects of the course serve to develop our students’ skills and confidence with both workshop processes and kitchen equipment. They find how to use equipment safely and appropriately and how to select materials or ingredients according to their specific properties and uses.Creativity and problem solving underpin the ethos of our design and planning work and a core part of this is studying the approach of well-known and important chefs or designers. Students are also challenged to think about their social and environmental responsibilities e.g. concerning the origin, production, use, disposal and wastage of materials, food and other natural resources. |
| **Rotational** | **Design Technology – Product Design**You will be learning about the basic hand and power tools within the design technology department through the production of a Pewter Casting. Throughout the brief you will learn to safely use all the tools required and also to use some elements of digital software graphical packages, 3D CAD and CAM, as well as learning about casting techniques. | **Food Technology**In this topic students will learn about the methods of heat transfer. They will demonstrate a secure knowledge of how these affect the sensory attributes of different foods. They will demonstrate how to safely cook with High-Risk foods to ensure the control of bacteria. |
| **Knowledge** | * How to use both hand and power tools safely and confidently within the workshop
* The difference between renewable and non-renewable energy
* The process required for CAD/CAM to be operated
* Materials properties – MDF (Medium-Density Fibreboard) and Pewter (metal alloy)
* How to evaluate their success
 | * Different methods of heat transfer and explain how these effects the sensory attributes of foods.
* Why critical temperatures are important in terms of reducing the risk of food poisoning.
* Different wet and dry cooking methods
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| **Skills** | * Design Ideas
* Computer-aided design
* Computer-aided manufacture
* Power Tools
* Hand Tools
* Casting
 | * Food Safety practices
* Preparation techniques
* Knife techniques
* Cooking techniques
* Using the oven & hob
* Presentation techniques
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| **Assessments** | Practical assessment, ongoing theory assessments. | Practical assessment, ongoing theory assessments. |
| **Enrichment**  | <https://learning.sciencemuseumgroup.org.uk/resources/?subject=design-and-technology> | Watch Great British Bake off. Students will have an opportunity to cook based on National Pie Day based dish in the after-school club. |