# Product design/Food technology Year 7 Long Term Plan

Key: Recap/Retrieval

Gatsby Benchmarks

Rigour (Vocabulary/Disciplinary knowledge/Reading)
Cultural Capital/SMSC
Numeracy
Cross Curricular

| Week/ Lesson | Term | Topic | Knowledge | Skills<br>Complex activity:<br>Writing genre: |
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| 1 | **Autumn T1 PROJECT 1** ***Summative Assessment dates TBC** | Initial Assessment (2 lessons) | • Understanding of pupils Prior Knowledge | The Assessment covers: Creating a Brief, Product analysis, materials and their properties, Design Question |
| 2 | | Health & Safety in the Workshop<br><br>Resistant Materials – Wood 1 | • Understanding how to work safety in the workshop<br>• Understand the origins, sources and applications of wood | Use information in order to **work safely** under supervision in the workshop.<br><br>Be able to **apply** the knowledge and answer theory based questions on the topic of materials and properties. |
| 3 | | Resistant Materials – Wood 2<br><br>Creating an initial design render wood for a project. iterative design explained. | • Understand the origins, sources and applications of wood<br><br>• How to render a product to look like wood. | Be able to **apply** the knowledge and answer theory based questions on the topic of materials and properties.<br><br>Design and render simple shapes to manipulate the appearance of wood. |

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| 4 | | Research and Product Analysis | • Know how to collate secondary research.<br>• Understand and explain clients' needs and wants.<br>• Understand Form, Fit and Function | Writing genre:' Understanding the clients needs' ( *Literacy focus*) introduction to environmental consideration |
| 5 | | Writing a Specification<br><br>One point perspective drawing technique. | • Understand how to write a specification using ACCESS FM<br>• Understand one point perspective and its application | Be able to **create** a specification using the given acronym ACCESS FM<br><br>Be able to draw a one point perspective drawing of simplistic shapes. |
| 6 | | Design Ideas 1<br><br>Two point perspective drawing | • Apply research and specification to produce a range of creative design ideas<br>• Understand two point perspective and its application | Be able to use the specification to **annotate** the initial design ideas.<br><br>Be able to draw a simple shape in two point perspective, using accurate measurements. |
| 7 | | Design Ideas 2<br><br>Recall Two point perspective and rendering skills. | • Develop design ideas with annotation and discussion.<br>• Recap specification ( Formative Test) Two point perspective. | Complex activity: Technical Drawing (Preparation for CAD/*Numeracy focus*) |
| 8 | | Computer Aided Design | • Introduction to CAD software. Google sketch up/2d design<br>• Understand the use of CAD in the workplace. | Writing genre:' The impact of Technology' (Literacy *focus/SMSC focus)*<br><br>Be able to explain the positive and negative aspects of using CAD. |
| 9 | **Autumn T2** | Computer Aided Design | • Development of CAD skills | Be able to use CAD to draw a simplistic product. Use the software with support and be able to use the basic tools **independently.** |
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| 11 | | Practical Making model making | • Know how to evaluate ideas in order to develop independent | Use basic materials to develop one of the initial ideas. Use tools safely and accurately, |

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| 12 | | Practical Making model making | decision-making and problem solving skills through iterative design.<br><br>● Know how to create ordered evidence of making through a diary or photos. | Develop the initial idea using slightly more advanced materials and tools, focus on accuracy of measurements and proportion. |
| 13 | | Practical Making re design | | Be able to analyse an idea and develop this in order to create an improved idea. |
| 14 | | Practical Making final model | | Use tools safely and accurately in order to produce a final outcome.<br>Review the outcome by comparing it to the specification. |
| 15 | | Evaluation<br><br>Design improvements | ● Evaluate the outcome against the design specification showing clear strengths and areas to develop. | Use the specification to be able to evaluate the final product and be able to design appropriate improvements to the final product on paper. |
| 16 | **Spring T1**<br>Project 2 | Resistant Materials – Polymers 1<br><br>Creating an initial design render polymer for a project. iterative design re call. | ● Understand the origins, sources and applications of polymers<br>● How to render a product to look like polymers. | Be able to **apply** the knowledge and answer theory based questions on the topic of materials and properties.<br><br>Design and render simple shapes to manipulate the appearance of polymers.. |
| 17 | | Resistant Materials – Polymers 2<br><br>Recall and increased complexity 2 point perspective. | ● Understand the origins, sources and applications of polymers<br>● Weekly recap ( Formative Test) | Be able to **apply** the knowledge and answer theory based questions on the topic of materials and properties.<br><br>Be able to draw a simple shape in two point perspective. |
| 18 | | Research and Product Analysis | ● Understand and explain clients' needs and wants.<br>● Understanding scales of production | Writing genre:' **Understanding how products are manufactured commercially**' ( ***Literacy focus/Real World focus***) |
| 19 | | Writing a Specification | ● Developing a more detailed specification using ACCESS FM | Be able to **create** a specification using the given acronym ACCESS FM |

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| | | create an initial model using cardboard | • Use tools and equipment independently | use the tools independently and with a degree of Accuracy. |
| 20 | | Design Ideas 1<br><br>resistant materials Metal | • Apply research and specification to produce a range of creative design ideas | Be able to **apply** the knowledge and answer theory based questions on the topic of materials and properties. |
| 21 | **Spring T2** | Design Ideas 2<br><br>resistant materials metal | • Develop design ideas with annotation and discussion. | Complex activity: **Presentation of Design Ideas (Literacy/Oracy Focus)**<br>Be able to **apply** the knowledge and answer theory based questions on the topic of materials and properties. |
| 22 | | Computer Aided Design | • Development of CAD skills | Be able to explain the positive and negative aspects of using CAD. |
| 23 | | Computer Aided Design | • Development of CAD skills | Be able to use CAD to draw a developed product. Use the software with support and be able to use the basic tools **independently.**<br>CAD careers opportunities |
| 24 | | Practical Making | • Develop independent decision-making and problem solving through iterative design.<br>• Develop a quality product using on-going evaluation<br>• Produce well-ordered evidence of making through a diary or photos.<br>Recap Metal ( Formative Test) | Use a range of materials to develop one of the initial ideas. Use tools safely and accurately, |
| 25 | | Practical Making | | Develop the initial idea using slightly more advanced materials and tools. |
| 26 | | Complete model and Evaluate | • Use the design specification to evaluate the model against the design criteria. | Literacy skills |

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| 27 | **Summer T1** | Personal Hygiene | • Explain why good personal hygiene and general cleanliness is important in the kitchen.<br>• Suggest ways to keep self and the kitchen area hygienic.<br>• Evaluate the consequences of poor personal hygiene (linked to bacterial growth). | Literacy<br>-Verbal communication to make educated points and form opinions<br>-Use of key terms to create accurate sentences summarising the topic. |
| 28 | | Health and safety | • Understand and be able to explain why health and safety is important in the kitchen.<br>• Identify hazards and risks in a kitchen environment.<br>• Evaluate the consequences of poor health and safety and suggest ways to prevent accidents.<br>Recap personal hygiene | Health and Safety<br>As the lesson naturally is set up to be 'hazardous', ensure all students are fully aware they will come across hazards in the room. Apply common sense and limit risk by not creating unnecessarily dangerous hazards.<br>Numeracy -Organising data, students could prioritise risks using mathematical thinking |
| 29 | | Food safety | • Identify the ways ill health can be caused linked to food.<br>• Describe common types of food poisoning.<br>• Describe the symptoms of food induced ill health and how to prevent this from happening. | Food safety |
| 30 | | Danger zone | • Accurately identify critical temperatures linked to food poisoning bacteria, e.g. the 'Danger Zone'.<br>• Describe how bacteria multiplies and identify high/low risk foods.<br>• Suggest ways to store and prepare food safely to prevent bacterial growth. | Numeracy<br>Multiplication of bacteria<br>Plotting data on graphs |

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| | | | Recap food safety | |
| 31 | | Knives and Equipment | • Be able to identify small scale kitchen equipment.<br>• Be able to correctly match equipment to its job and give reasons why?<br>• Be able to demonstrate how to use knives safely and show a range of chopping techniques. | Numeracy<br>Division, portioning when slicing/dicing<br>Proportion |
| 32 | | Fruit salad practical | • Follow health and safety procedure at all times, demonstrating respect for self and others.<br>• Measuring and weighing ingredients accurately.<br>• Using skills and techniques effectively to produce a high quality outcome. | Cross curricular – science - Enzymic Browning<br>Numeracy -Timing in experiment<br>Follow health and safety procedure at all times, demonstrating respect for self and others. |
| 33 | | Fruit crumble practical | • Be able to measure and weigh ingredients accurately. Using skills and techniques effectively to produce a high quality outcome.<br>Recap knives and equipment | Follow health and safety procedures at all times, demonstrating respect for self and others. |
| 34 | | Types of vegetables | • Know and understand the value of different fruit and vegetables in the diet.<br>• Know how to store, prepare and cook vegetables correctly to avoid food contamination and vitamin loss.<br>• Be able to plan meals that incorporate a range of fruits and vegetables. | Literacy<br>-Recall of key words in written tasks<br>-Explanation using key words and technical language |

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| | | | • Link prior knowledge of cross contamination to identify ways to store, prepare and cook vegetables safely. | |
| 35 | | Carbohydrates | • Understand the role of carbohydrates in the diet.<br>• Be able to distinguish between complex and simple carbohydrates<br>• Understand which are healthier alternatives and suggest these in meal planning.<br>Recap vegetables | Activity.<br>Complete worksheet using knowledge share from PowerPoint. |
| 36 | | Vegetable risotto practical | • Follow health and safety procedures at all times, demonstrating respect for self and others.<br>• Measuring and weighing ingredients accurately.<br>• Using skills and techniques effectively to produce a high quality outcome. | Numeracy<br>-Time management, using the clock<br>-Working in grams, ml, kg (conversion to oz. more able)<br>-Weighing and measuring<br>-Working with temperature<br>-Proportion of ingredients in recipes<br>-Portioning dishes<br>-Calculating dish cost and profit (extension) |
| 37 | | Types of fish | • Identify different types of fish and fish dishes.<br>• Explain accurately the quality check points when purchasing fresh fish.<br>• Confidently describe the safe storage, preparation and cooking of fish to prevent spoilage. | How many other fish/fish dishes do you know? Why should we eat fish? Why shouldn't we eat fish (links to SMSC, vegan/vegetarianism/sustainability) dependent on group ability. |
| 38 | | Vegetarian Fish Goujons | • Follow health and safety procedures at all times, demonstrating respect for self and others. | |

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| | | | • Be able to measure and weigh ingredients accurately.<br>• Using skills and techniques effectively to produce a high quality outcome.<br>Recap vegetarian diets | |
| 39 | | Fibre. | • Be able to identify food sources of dietary fibre.<br>• Be able to explain fully the role of fibre in a healthy diet.<br>• Be able to suggest ways to include more dietary fibre in my diet.<br>Recap types of fish | Numeracy<br>-Timings of tasks, using time management wisely<br>-Reference Intake (NHS guidelines) |
| 40 | | Assessment | • Food safety<br>• Personal Hygiene<br>• Equipment<br>• Carbohydrates and Fibre | |