

Product design/Food technology Year 9 Long Term Plan

- Key:
- Recap/Retrieval
 - Rigour (Vocabulary/Disciplinary knowledge/Reading)
 - Gatsby Benchmarks
 - Cultural Capital/SMSC
 - Numeracy
 - Cross Curricular

Week/ Lesson	Term	Topic	Knowledge	Skills
1	Autumn T1 Project 1 *SUMMATIVE ASSESSMENT dates TBC	Summer Project Review	<ul style="list-style-type: none"> Introduction to Robotics and CAD/CAM 	Complex activity: Writing genre: Be able to describe the links between Cad/CAM and Robotics. Be able to explain the positive impact robotics and cad cam has had on the industry.
2		Automation Lean Engineering	<ul style="list-style-type: none"> Understand the development and impact of automation Understanding CAD/CAM/CNC applications in the real world Understanding the impact of Lean Manufacturing/ FMS/JIT. 	Complex activity: Apply Kaizen/Lean Engineering to a problem. (Career links to Real world solutions) Be able to respond to detailed questioning on the topic.
3		Contextual Challenge Research	<ul style="list-style-type: none"> Identify key contextual areas Identify problems and potential design solutions Analyse clients' needs and wants. Analyse primary, secondary and work of others to inform design strategies. 	Writing genre: ' My key designer' (Literacy focus)

4	Design Specification Initial ideas	<ul style="list-style-type: none"> Developing a client focussed specification using relevant research. Apply research and specification to produce a range of creative design ideas 	Complex activity: Producing a range of design ideas (Disciplinary Knowledge)
5	Initial/Developing ideas. Developing Ideas	<ul style="list-style-type: none"> Understand how to effectively annotate ideas Develop a final design idea (Reteach design skills) 	Effective use of keywords (vocabulary)
6	Modern Materials Smart materials	<ul style="list-style-type: none"> Recognise a range of modern materials Describe how modern materials improved functionality Define a smart material Recognise a range of smart Materials Understand how the functional properties of a range of smart materials can be changed by external stimuli Recap specification	Complex activity: Producing a high quality 3D model (Disciplinary Knowledge)
7	CAD (3D Modelling)	<ul style="list-style-type: none"> Develop independent decision-making and problem solving through iterative design. Develop a quality product using on-going evaluation Recap (CAD)	Gatsby Career links to the manufacturing industry Using Cad in the car manufacturing factories.
8	Practical Making	<ul style="list-style-type: none"> Accurate recording of manufacturing stages 	Writing genre: 'Writing a Manufacturing Specification (Literacy focus/SMSC)

9	Autumn T2	practical Making	<ul style="list-style-type: none"> Ongoing evaluation and iterative improvements 	
10		Practical Making	<ul style="list-style-type: none"> Testing of alternative appropriate materials, tools and techniques 	
11		Practical Making	<ul style="list-style-type: none"> Ongoing research and evaluation to fulfilling client needs 	
12		Practical Making	<ul style="list-style-type: none"> Recognise how to quality assure a product 	Gatsby Benchmark No.4: External Trip to Harry Potter Studios
13		SUMMATIVE ASSESSMENT (DD 2)		
14		Testing and Evaluation Improvements	<ul style="list-style-type: none"> Analyse, Test and Evaluate final outcome considering specification and client needs and wants Identify potential product improvements. Suggest how to make the product commercially viable 	Complex activity: Critical Product Analysis (Literacy/SMSC)
15	Final Presentation	<ul style="list-style-type: none"> Develop communication skills in presenting a final product 	Complex activity: Presentation of Final Prototype Ideas (Literacy/Oracy Focus)	
16	Spring T1 Project 2 Food technology	Health and safety	<ul style="list-style-type: none"> To develop and understand and be able to explain why health and safety is important in the kitchen. To develop and identify hazards and risks in a kitchen environment. To develop and evaluate the consequences of poor health and safety and suggest ways to prevent accidents. 	<p>Literacy</p> <p>Learners read and scribe Recording data Forming sensory analysis Using adjectives Vocabulary building Verbal communication to make educated points and form opinions.</p> <p>Numeracy</p> <p>Timing (egg cooking) Measuring (water)</p>

				Recording data Analysing data
17		Sorbet Practical	<ul style="list-style-type: none"> Follow health and safety procedures at all times, demonstrating respect for self and others. Measuring and weighing ingredients accurately. Using skills and techniques effectively to produce a high quality outcome. Recap health and safety 	Literacy Reading and following methods Learners will use verbal communication to make educated points and form opinions Use of key words and technical vocabulary Sensory analysis using adjectives Numeracy Time management, using the clock Working in grams, ml, kg (conversion to oz. more able) Weighing and measuring Working with temperature Proportion of ingredients in recipes Portioning dishes Calculating dish cost and profit (extension)
18		Gluten	<ul style="list-style-type: none"> Determine the relative differences in gluten content between different types of flour. Establish the impact this has on the structure of baked products. Use scientific experimentation to support conclusions. 	
19		Pasta Practical (Tagliatelle)	<ul style="list-style-type: none"> Know health and safety procedures at all times, demonstrating respect for self and others. Measuring and weighing ingredients accurately. 	Follow health and safety procedures at all times, demonstrating respect for self and others.

			<ul style="list-style-type: none"> Using skills and techniques effectively to produce a high quality outcome. 	
20		Pasta Practical (Lasagne)	<ul style="list-style-type: none"> Know health and safety procedures at all times, demonstrating respect for self and others. Measuring and weighing ingredients accurately. Using skills and techniques effectively to produce a high quality outcome. 	Follow health and safety procedures at all times, demonstrating respect for self and others.
21	Spring T2	Dish blue print	<ul style="list-style-type: none"> Research nutritional needs of others. Plan dishes based on research and make justified choices. Link and explain how food science will factor in dishes Explain and justify cooking methods linked to ingredients and nutrient retention. 	Literacy Learners read and scribe Reading and contextualising, research Making justifications, using arguments Vocabulary building Verbal communication to make educated points and form opinions
22		Dish blue print continued		
23		ASSESSMENT - Practical Prepare and cook dish	<ul style="list-style-type: none"> Know the health and safety procedures at all times, demonstrating respect for self and others. Know how to use equipment accurately Using skills and techniques effectively to produce a high quality outcome. 	Demonstrate the ability to follow health and safety procedures at all times, demonstrating respect for self and others. Measuring and weighing ingredients accurately.

24		Methods of cookery	<ul style="list-style-type: none"> • Explain the chemical reactions that occur when cooking foods via different methods. • Suggest ingredients they can be used for. • Examine and explain how the sensory properties and nutrition of food changes when cooked by different methods. 	Literacy Learners read and scribe Reading and contextualising Making justifications, using arguments (experiments) Vocabulary building Verbal communication to make educated points and form opinions Mathematics
25		Job roles	<ul style="list-style-type: none"> • Identify different job roles within the industry, both guest and non-guest facing. • Know the reasons why establishments have a varied staff team, advantages/disadvantages. 	Explain the skills and qualities required to perform each job role well. Evaluate the reasons why establishments have a varied staff team, advantages/disadvantages. Gatsby Career links.
26		Introduction to GCSE Options.		
27	Summer T1	<i>GCSE Content</i>		
28		<i>GCSE Content</i>		
29		<i>GCSE Content</i>		
30		<i>GCSE Content</i>		
31		<i>GCSE Content</i>		
32		<i>GCSE Content</i>		
33	Summer T2	<i>GCSE Content</i>		
34		<i>GCSE Content</i>		
35		<i>GCSE Content</i>		

36		<i>GCSE Content</i>		
37		<i>GCSE Content</i>		
38		<i>GCSE Content</i>		
39		<i>GCSE Content</i>		
40		<i>GCSE Content</i>		