



**LATHOM**  
HIGH SCHOOL

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# Curriculum Overview

## Design Technology

## Food Preparation & Nutrition

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 7	<p>DT: Design and Make Project: Disney Toy - Jitterbug</p> <p><b>Knowledge:</b> Analysis of brief, identification of customer, choice of theme and product research, sketching ideas, Computer Aided Design.</p> <p><b>Key Skills:</b> Analysis, primary research, drawing and rendering skills, use of CAD (2D Design) and scaling images.</p>	<p>DT: Design and Make Project: Disney Toy - Jitterbug</p> <p><b>Knowledge:</b> Modelling and prototypes, electronics theory.</p> <p><b>Key Skills:</b> Choice of modelling materials and equipment, use of Electronic Graphic images, modelling techniques, electronic circuits and soldering theory.</p>	<p>DT: Design and Make Project: Disney Toy - Jitterbug</p> <p><b>Knowledge:</b> Soldering, workshop tools and equipment, soldering practical.</p> <p><b>Key Skills:</b> H&amp;S in the workshop, soldering techniques, use of hand tools and machine tools, material properties adhesives, product assembly, evaluation.</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Food hygiene, H&amp;S in the kitchen, Eatwell Plate. Practical lessons include: Muffins, small cakes, Victoria Sponge.</p> <p><b>Key Skills:</b> Routines and disciplines in the food room, introduction to equipment, recipes and H&amp;S. Cake making methods and techniques.</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Nutrition, health food choices, planning a healthy packed lunch. Practical lessons include: Pasta salad, savoury rice, Ragu Sauce.</p> <p><b>Key Skills:</b> Introduction to nutrition and sources, functions of nutrients within the body, healthier choices. Knife skills, use of the hob, blending and sauce making.</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Scone recipe modification, increasing the vegetables in Pizza. Practical lessons include: Pizza and scones.</p> <p><b>Key skills:</b> Understanding the function of ingredients in scones, cooking methods, menu modification, planning a dish.</p>
Year 8	<p>DT: Design and Make Project: Mechanical Toy – Cam Toy</p> <p><b>Knowledge:</b> Cam and lever theory, cam modelling, CAD design ideas. Knowledge of mechanisms and motion,</p>	<p>DT: Design and Make Project: Mechanical Toy – Cam Toy</p> <p><b>Knowledge:</b> Idea development through modelling. Introduction to Isometric drawing.</p>	<p>DT: Design and Make Project: Mechanical Toy – Cam Toy</p> <p><b>Knowledge</b> Making Cam Toy, evaluation of final product.</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Making pastry, fatless sponge cake, factors influencing food choice, dietary needs of adolescents. Practical lessons</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Vegetarianism, cultures and religions, School meal standards. Practical lessons include: Tuna &amp;</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Nutritional and GDA labelling. Energy and nutrients Practical lessons include: Planned dish, fruit biscuits, Carrot Cake.</p>

	<p><b>Key Skills:</b> Developing 2D Design software knowledge, creative thinking.</p>	<p><b>Key Skills:</b> Creating working models, considering proportion, model evaluation, theory of isometric drawing, hand drawing and CAD skills.</p>	<p><b>Key Skills:</b> Marking out and cutting, moving mechanisms, gluing and pinning.</p>	<p>include: Sausage Rolls, Swiss Roll.</p> <p><b>Key Skills:</b> Function of ingredients, fats, flour &amp; gluten. Using eggs as a raising agent, making cake without fat, research nutritional needs of a teenager.</p>	<p>Broccoli Pasta, Macaroni Cheese, Tagliatelle.</p> <p><b>Key Skills:</b> Identify types and reasons of vegetarianism, understand different beliefs and food traditions, government requirements when designing school meals.</p>	<p><b>Key Skills:</b> Follow a school food plan, food labelling requirements, sources of energy.</p>
Year 9	<p>DT – Theory and Practical Project (Jewellery Box)</p> <p><b>Knowledge:</b> COSSH, Types of wood and wood joints, 3D sketching and rendering, CAD isometric technical drawing, glues and adhesives.</p> <p><b>Key Skills:</b> Making a product using all the skills and theory studied: different wood joints, using different rendering techniques to simulate materials, producing a 3D visual, properties and uses of adhesives.</p>	<p>DT – Theory and Practical Project (Jewellery Box)</p> <p><b>Knowledge:</b> Marking out Jewellery box sides and joints. Power tools and functions, Properties of Pewter and Pewter Casting, types of metals.</p> <p><b>Key Skills:</b> Using a hand router to create top and bottom, using the Flamefast to create a pewter knob.</p>	<p>DT – Theory and Practical Project (Jewellery Box)</p> <p><b>Knowledge:</b> Types and properties of plastic, bending and forming, casting and moulding. Designing for the laser cutter, laser cutter theory. Assembly of product.</p> <p><b>Key Skills:</b> Using a strip heater, vacuum former to create a tray (making a former). Tapping and threading, decorating.</p> <p><b>Ext. Bug Project (Modelling)</b></p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Sources and function of Protein, Eggs used in cooking, Vitamins and their functions, Sugars in food. Macro and Micro Nutrients. Practical lessons include: Quiche, egg custard, beef burgers.</p> <p><b>Key Skills:</b> Understanding the structure and investigating the uses of eggs. Design dishes to enhance vitamins for specific purposes, understand the types of sugar and their effect.</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Carbohydrates, fibre in a healthy diet, dietary fats, fats and oils, cooking methods. Practical lessons include: Spaghetti Bolognese, lasagne, bread based Pizza/Calzone.</p> <p><b>Key Skills:</b> Planning and cooking a dish that contains complex carbohydrates and fibre. Investigate the types of fat in diets and types of fat and oils in cooking.</p>	<p>Food Technology : Practical Cooking and theory</p> <p><b>Knowledge:</b> Bread making, raising agents, pastry (shortcrust), enzymic browning chemical reaction in fruit. Practical lessons include: Knife skills (carrots and onions), fruit tart, bread loaf/buns/platted loaf, Chelsea buns.</p> <p><b>Key Skills:</b> Study the functions and ingredients in bread, experiment with the conditions required for Yeast growth, avoid enzymic browning when cooking with fruit. Advanced knife skills – preparing vegetables.</p>

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Year 10 DT	<p>DT</p> <p><b>Knowledge:</b> Industry, Automation &amp; robotics, Enterprise, Sustainability, Maintenance, effect society and culture has on product development, Market Push &amp; Pull technologies.</p> <p><b>Key skills:</b> Investigate new technologies, new innovations in business. Understand environmental issues affecting product manufacturing, design for maintenance, identify the forces that affect the development of products.</p>	<p>DT</p> <p><b>Knowledge:</b> Social, moral &amp; cultural influences on design, Production techniques &amp; systems, modelling and prototyping, energy generation, alternative energy sources.</p> <p><b>Key skills:</b> Understand the effect society and culture has on product development, use of CAD and computer systems, using models to develop products. Identify the source of non-sustainable fuels (coal, gas, oil) and sustainable sources (wind, wave, solar).</p>	<p>DT</p> <p><b>Knowledge:</b> Smart and modern materials, Energy storage, Natural world, analysing existing products, Computer Aided 3D Design.</p> <p><b>Key skills:</b> Look at smart and nano technologies, use the natural world as a design influence, use ACCESSFM as an analysis tool. Learn to use Google Sketchup and TinkerCad to 3D model.</p>	<p>DT</p> <p><b>Making Project: House Number</b> Situation/brief Analysis Product Research Product Analysis Client Profile Research Analysis Design Criteria Design Ideas Design Development Modelling CAD/Working Drawings Final Product</p> <p><b>Key skills:</b> Utilising research, planning and design skills. Further practise using tools in the workshop during modelling.</p>	<p>DT</p> <p><b>DT NEA style TASK</b></p> <p>(Previous Year's Contextual Challenge)</p> <p><b>Key skills:</b> Utilising research, planning and design skills. Further practise using tools in the workshop during modelling.</p>	<p>DT</p> <p>DT NON-EXAM ASSESSMENT (NEA)</p>
Year 11 DT	<p>NON-EXAM ASSESSMENT (NEA)</p> <p><b>Knowledge:</b> Analysis of the Contextual Challenge, Researching Existing Products. Research a chosen category. Analyse Existing</p>	<p>NON-EXAM ASSESSMENT (NEA)</p> <p><b>Knowledge:</b> Create a range of annotated initial ideas, ideas justified against the Design Criteria. Further Research.</p>	<p>NON-EXAM ASSESSMENT (NEA)</p> <p><b>Knowledge:</b> Model making based on drawn design ideas. Develop modelling. Develop ideas further.</p>	<p>NON-EXAM ASSESSMENT (NEA)</p> <p><b>Knowledge:</b> Prototype final designs, evaluations and photographs</p>	Exam Revision	

	<p>Products. Creating a Client Profile. Summary of Research. Writing a Design Criteria</p> <p><b>Key Skills:</b> Analyse Contextual Challenge. Create a research mood board of existing products. Analyse the Project. Research a chosen category. Sketch early ideas, render and annotate. Creatively write a situation &amp; brief. Choose 4 interesting products and analyse using ACCESSFM. Imagine a suitable client and describe them in detail. Review research and explain how it will help produce design ideas. Write a design criteria using ACCESSFM based on findings.</p>	<p>Development of Ideas</p> <p><b>Key Skills:</b> Sketch, draw (2D &amp; 3D), render with colour and describe a range of ideas. Compare the design ideas against the Design Criteria. Research an idea further and use research to sketch and develop ideas.</p>	<p>Prototyping on the laser. Review materials needed for making. Photograph all models</p> <p><b>Key Skills:</b> Use a selection of modelling materials to produce a 3D model of an idea. Modify or create further models using the same or different materials or sketch modifications before remodelling. Use CAD to produce isometric and orthographic, b/w and colour scale drawings. Use 3D modelling software. Draw each component for production on the laser or by hand in CAD. Write a list of materials needed to manufacture a prototype.</p>	<p><b>Key Skills:</b> Use knowledge and equipment to produce a range of prototypes identifying a final solution. Photograph and evaluate against Design Specification</p> <p>Final product and final evaluation not required</p>		
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<b>YEAR 10 Food Preparation &amp; Nutrition</b>	<p>Food Preparation &amp; Nutrition</p> <p><b>Knowledge:</b> Life stages/Eatwell Guide, nutrition reinforcement (Macro, Micro Nutrients), Diet related diseases, Sensory Testing, Special Diets, High Skills(deboning), Poultry, Red Meat, Fish in our diet. Practical lessons include: Main course for a lifestyle, chicken &amp; chorizo, meatballs, Special diet dish, deboned chicken dish, red meat dish, filleting fish.</p> <p><b>Key skills:</b> Analyse Dietary advice through life, BMI, balanced diet. Research Fats, carbohydrates, protein and minerals (advanced), how to carry out and record Sensory Analysis, types of test. Debone chicken, consider other types of Poultry, researching meat cuts and uses, marinating meat. Buying, preparing and</p>	<p>Food Preparation &amp; Nutrition</p> <p><b>Knowledge:</b> Pastry, food manufacturer's legal requirements, food spoilage, food provenance, sustainable food production, food miles, seasonality, sustainable farming, organic food, free range farming, food waste, food packaging. Practical lessons include: fats in pastry experiment, savoury flan/quiche, Genoese sponge, bread based pizza, Christmas cooking.</p> <p><b>Key skills:</b> Use of fats in pastry. Study mould and enzymic browning. Investigate and research global factors that affect food production and delivery.</p>	<p>Food Preparation &amp; Nutrition</p> <p><b>Knowledge:</b> Sustainability, food processing, food additives, cooking methods, Eggs continued, pasta making – types of flour, time plans, caramelisation. Food practical lessons include: Lemon Meringue Pie, pasta making – Ravioli, Bakewell Tart, Caramelisation Experiment.</p> <p><b>Key skills:</b> Appreciate the effects of climate change/land shortage, food manufacturing processes. Use of colourings and stabilisers in foods. Experiment with cooking vegetables, testing eggs (gelatinisation). Learn to produce a time plan. Experimenting with caramelisation.</p>	<p>Food Preparation &amp; Nutrition</p> <p><b>Knowledge:</b> Vegetarianism, nutritional analysis, raising agents, choux pastry Practical lessons include: Vegetarian dish, Scone Experiment, Choux Pastry product – Eclairs, Profiteroles. Easter cooking.</p> <p><b>Key skills:</b> Undertake nutritional analysis and create nutritional labels, use FOOD4APC, discover the effect of different raising agents on products, make Choux pastry.</p>	<p><b>Food Preparation &amp; Nutrition</b></p> <p><b>FP&amp;N NEA 1 style FOOD INVESTIGATION TASK</b></p> <p>Investigate the ingredients used in bread making</p> <p>Or</p> <p>The flavour and texture of pastry is important. Investigate the functional and chemical properties of ingredients used to make shortcrust pastry.</p> <p><b>Key skills:</b> Investigation skills, research skills, design and planning skills, utilising baking skills and analysis of finished product.</p>	<p>Food Preparation &amp; Nutrition</p> <p><b>FP&amp;N NEA 2 style FOOD PREPARATION TASK</b></p> <p>Plan, prepare and cook and present a range of dishes using a variety of skill from the Mediterranean culinary tradition. Present two final dishes.</p> <p><b>Key skills:</b> Investigation skills, research skills, design and planning skills, utilising baking skills and analysis of finished product.</p>

	cooking of fish.					
<b>YEAR 11</b> <b>Food</b> <b>Preparation</b> <b>&amp; Nutrition</b>	<p><b>NON-EXAM ASSESSMENT (NEA2) -TASK 2 FOOD PREPARATION TASK</b></p> <p><b>Knowledge:</b> Analysis of the Contextual Challenge, Prior Knowledge, Plan research. Research relevant information. Summary of research Select 10 dishes Practical lessons: Appropriate dishes</p> <p><b>Key Skills:</b> Identify what needs to be researched. Use different sources to research various relevant topics. Summarise and prioritise the information. Select 10 dishes that suite the brief and explain reasons for choice.</p>	<p>NON-EXAM ASSESSMENT (NEA2) -TASK 2 FOOD PREPARATION TASK</p> <p><b>Knowledge:</b> Chose <b>3 Trial Dishes to make.</b> Document choice Make dish and write up. Evaluate</p> <p><b>Key Skills:</b> Evaluate 10 dishes and choose 3 to make. Explain reasons for choice, list of skills, cooking methods and ingredients for each. Photograph and use sensory testing to evaluate.</p>	<p>NON-EXAM ASSESSMENT (NEA2) -TASK 2 FOOD PREPARATION TASK</p> <p><b>Knowledge:</b> Chose <b>2 Final Dishes to make in exam.</b> Document choice</p> <p><b>Key Skills:</b> Explain reasons for choice, skills required, cooking methods to be used, ingredients needed, Nutritional value, cost and Food Provenance</p>	<p>NON-EXAM ASSESSMENT (NEA2) -TASK 2 FOOD PREPARATION TASK</p> <p><b>Knowledge:</b> <b>Time Plan</b> <b>Making of 2 Final Dishes</b> Evaluation incl. Nutritional analysis</p> <p><b>Key Skills:</b> Create a time plan of the dishes being made including H&amp;S and hygiene points. Make and present dishes in exam conditions, photograph. Use FOOD4APC to produce a nutritional analysis and costing. Detail improvements.</p>	Exam Revision	