



2021-22 CURRICULUM MAP FOR DT YEAR 8

<p>HALF TERM 1: Food Technology - Carbohydrates</p> <p>KQ1 - What can you recall from year 7 10 tips for Health and safety in the food room? Potential hazards, solutions, risk assessments, HACCAP. PPE, hygiene.</p> <p>KQ2 – How can you develop your Knife skills? Working independently to achieve safe working practice.</p> <p>KQ3 – List the different types of equipment used in the food room. Food room layout, hand held and electrical equipment. Use and location of equipment.</p> <p>KQ4 – How does the Eat well guide help to promote good health? NHS requirements, dietary requirements, prolonging life.</p> <p>KQ5 – Name 4 special diets. In-depth research into 4 diets – lactose intolerance, coeliac diseases, osteoporosis, food allergies and intolerances, colon cancer, anaemic.</p> <p>KQ 6 -What are the correct food storage requirements to keep food safe? Cooking, cleaning, cross contamination and chilling. Correct temperatures, bacteria growth and causes of ill health through poor food storage.</p> <p>KQ7 – What is food seasonality? Food season calendar – food miles – c02 emissions, fossil fuel usage, transportation of food, shopping locally. Understand the source, seasonality and characteristics of a broad range of ingredients</p> <p>KQ8 – How can producing Bread develop your knowledge and understanding of carbohydrates? Percentage share of the eat well guide 2016. Why and how carbohydrates are important to the diet.</p> <p>KQ9 – How can completing a Practical in Lasagne making develop your understanding of using standard components and fresh ingredients? Standard components versa fresh ingredients – advantages and disadvantages.</p> <p>KQ 8 – How can completing a Practical in Risotto making develop your knowledge and understanding in producing quality outcomes with minimal costs? Costing ingredients, bulk ingredients, eat well plate, carbohydrates.</p> <p>KQ10 – How can planning, preparing and developing a Practical lemon cheesecake develop your understanding of producing a low-cost sweet dish for the family? Health and safety using hand held equipment, demonstrations, temperature control.</p>		<p>Guided reading–Hygiene</p>
		<p>Students are to write a report on the 'responsibilities of food handlers and how to prevent cross contamination of bacteria.</p>
		<p>Student to use the end of practical sessions to discuss the positives and areas of development of the groups practical outcomes. Verbal peer/self assessment – WWW/EBI.</p>
		<p>Science – Nutrition and Diet Mathematics – Weighing and calculation of ingredients.</p>
<p>HALF TERM 2: Textiles – Educational Toys</p> <p>KQ 1 - Why are the 6'rs important to Textile technology and my designing of textile products? Textiles and the Environment.</p> <p>KQ2 - How can I write a successful specification to achieve a quality outcome for my textile product?</p>		<p>Guided reading - 'Developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologies'.</p>
		<p>To write a report on how market trends such as, as fashion, styling, economic considerations, technological trends, lifestyles and</p>











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<p>ACCESSFM, understanding the needs of the customer and the product, intended use, fit for purpose. Test, evaluate and refine their ideas and products against a specification, considering the views of intended users and other interested groups</p> <p>KQ3 - How will generating a theme, using a mood board help inspire my creativity? Visual representation of inspiration, theme selection, presentation ideas. Use research and exploration, such as the study of different cultures, to identify and understand user needs.</p> <p>KQ4 - How can sketching new ideas, help the development of innovative textile products? Composition, layout, colour, typography, logos and trademarks, imagery.</p> <p>KQ5 - What is transfer printing, decorative techniques and embellishment? Practical, demonstrations</p> <p>KQ6 - How can I finish my textile practical outcome to a high standard? Success criteria.</p> <p>KQ7 - Why is evaluation important? Remodelling ideas to develop skills and techniques, record modifications for future use. Understand the design process in textiles.</p>		<p>environmental or 'eco' trends will have an impact of the sale of a product.</p>
		<p>Students to develop market research for their educational toy to find out what the market want. Students to feedback their research to the rest of the class using different methods such as questionnaire response, first hand data from the target audiences.</p>
		<p>Science - environment</p>
<p>HALF TERM 3: Graphics Concept car design</p> <p>KQ1 - What is car Design? Various OEM, concept cars, retrospective design. Innovations. Pioneers in design.</p> <p>KQ 2 - What is marketing and branding? Identification, recognition, advertising and reputation.</p> <p>KQ3 -How does Sustainability and environmental impacts of car design and engineering? 6 r's, eco design, biodegradable, ecological footprint, energy renewable resources.</p> <p>KQ4 -What influences car design? Cost, materials, manufacturing processes.</p> <p>KQ5 - How has car innovations been iconic to design over time? 60's mini, Land rover, concept cars. – timeline. Then and now! First car. Ford Model T. Analyse the work of past and present professionals and others to develop and broaden their understanding</p> <p>KQ6 - What does a specification look like and what will your specification look like? ACCESSFM, understanding the needs of the customer and the product, intended use, fit for purpose.</p> <p>KQ7 - How can I present my ideas in an orthographic and isometric representation? Detailed drawing using graphic specific terminology. Identify and solve their own design problems and understand how to reformulate problems given to them.</p>		<p>Guided reading - How designers have designed products with the consideration for green issues.</p>
		<p>Students to response to the article above and give examples of green design such as electronic and hybrid cars.</p>
		<p>Student to use the practical sessions to discuss the positives and areas of development of the groups practical outcomes. Verbal peer/self assessment – WWW/EBI.</p>
		<p>History – evolution of products</p>







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<p>KQ8 - Why is it important to evaluate my work for strengths, weaknesses and further modifications? Remodelling ideas to develop skills and techniques, record modifications for future use. Understand the design process in graphics.</p>		
<p>HALF TERM 4: Food and Nutrition – Empowering our bodies</p> <p>KQ1 - Why is hydration and fuelling the body important to health? Hydration facts, balance, maintaining health.</p> <p>KQ2 - How do the Dietary guidelines ensure good health? Tips and advice, NHS, Eat well guide 2016.</p> <p>KQ 3 - Why do nutrients in food help the body to function at its full potential? Vitamins and minerals, nutrients from our daily food intake.</p> <p>KQ4 - What is your knowledge and understanding of Planning healthy sustainable meals for the family? Aesthetics, cost, consumer, taste, colour, portion size, function of the ingredients, environmental influences, wastage, sustainability, availability of ingredients, shopping locally, buying fresh produce, producing batches of food.</p> <p>KQ5 - Why is Food provenance important to understand? Grown, caught or raised, location of produce, transportation.</p> <p>KQ6 - What skills can be learnt by planning, preparing and cooking a variety of recipes based from different food commodities? Students can cook a repertoire of predominately savoury dishes so that they can feed themselves and others a healthy and varied diet.</p> <p>KQ7 - What is the Science behind food? Physical, biological and chemical make-up of food. Food processes, selection, preservation, processing, packaging, distribution, use of safe food.</p>		<p>Guided reading ‘What has food got to with science?’</p>
		<p>Students to write a report on the science of cooking.</p>
		<p>Student to use the practical sessions to discuss the positives and areas of development of the groups practical outcomes. Verbal peer/self assessment – WWW/EBI.</p>
		<p>Science – food and nutrition/environment Geography – Food provenance/environment.</p>
<p>HALF TERM 5: Product Design – Circuit Lantern project</p> <p>KQ1 - What principles are needed to make a good design? Aesthetical consideration, cost, customer, function, environment, manufacturing.</p> <p>KQ2 - What is the design process? Brief, initial idea development, specification, ideas, prototyping, manufacturing, evaluation.</p> <p>KQ3 - How does the design process relate to the lantern product you will be manufacturing? Ideas/modelling concepts into real products.</p> <p>KQ4 - What is the difference between manufacturing in industry and manufacturing in the Academy? Manufacturing methods – one off/bulk/mass/24-7.</p> <p>KQ5 - How will the product analysis of existing lamps and lanterns help with the design and creation of my own lantern? Critiquing original products – strength and weaknesses</p>		<p>Guided reading ‘Evolution of products’</p>
		<p>Students to write a report on ‘Why products develop and change over time using examples.</p>
		<p>Student to use the practical sessions to discuss the positives and areas of development of the groups practical outcomes. Verbal peer/self assessment – WWW/EBI.</p>
		<p>Business - manufacturing</p>



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<p>KQ6 - How will producing mood board, develop my skills of selecting designs that retrospectively help with my own designing? Inspiration – gaining first-hand knowledge of products.</p> <p>KQ7 - What design techniques can I use to present my work to the highest of standards? Selecting materials, annotation, relating to a specification, use of media, colour, typography, imagery, 2/3 D design, perspective drawing, exploded drawings, proportion, accuracy and drawing to scale, isometric/orthographic.</p> <p>KQ8 -How are materials joined together in Product design? Wood, metal and plastic joining methods – advantages and disadvantages.</p> <p>KQ9 -What materials will I be using and why? Material properties and uses.</p> <p>KQ10 - How can using the Laser cutter develop the accuracy of my final product? Laser cutter demonstration lined to 2 D design – in house.</p> <p>KQ11-What is my knowledge and understanding of Electrical systems, control outputs and Circuit boards? Advanced electrical and electronic system like circuits with heat, light, sound and movement as inputs and outputs. Computing and use electronics to embed intelligence in products that respond to inputs (sensors), and control outputs, (actuators), using programmable components (micro controllers). Advanced mechanical systems used in their products enable changes in movement and force.</p> <p>KQ12 - Why is final evaluation of my lantern product important? Remodelling ideas to develop skills and techniques, record modifications for future use. Understand the design process in product design.</p>		
<p>HALF TERM 6: Graphics – Mechanical Pop up card/book</p> <p>KQ1 – How does a pop up book work and who is the target audience? Reputation, branding, business, identity, customer, demographics, designing for purpose.</p> <p>KQ2 – What needs to be considered to achieve a good design for a pop up book? Design, size, shape, colour, presentation, fonts, styling techniques.</p> <p>KQ3 – How can looking at existing products help me to design my own logo? What works! inspiration, identification, design skills, formats, computer software packages. Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools.</p> <p>KQ 4 -How can I use CAD/CAM to develop my design ideas for a pop up book mechanism? 2D design, 360, design and manufacturing at the academy. Select from and use specialist tools, techniques, processes,</p>		<p>Guided reading - intellectual property. Design rights Registered trademarks Copyright Patents</p>
		<p>Student to use the article to demonstrate how they would gain protection from others copying their design ideas by law.</p>
		<p>Student to use the end of practical sessions to discuss the positives and areas of development of the groups practical outcomes. Verbal peer/self assessment – WWW/EBI.</p>
		<p>Business/Law – trademarks/patents Science – materials/social/moral/economic considerations</p>



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equipment and machinery precisely, including computer - aided manufacture.

KQ5 -How can I use my design thinking and knowledge to communicate my ideas?

Selecting materials, annotation, specification, use of media, colour, typography, imagery, 2/3 D design, perspective drawing, exploded drawings, proportion, accuracy and drawing to scale.

KQ6 -How can new and emerging technologies help with your design creations?

Re-thinking smart and modern materials. Investigate new and emerging technologies

KQ8 -Who could be the potential Stakeholders for my new design concept?

Working for others and exploring different design needs.

Target audiences

KQ9 -What Social, moral and economic considerations should be examined?

Human factors, target audiences, careful designing, responsibility, disability, visual impairment, sensory impairment, access, working triangle.

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