

| Subject: | DT | Year Group: | | | | 9 |
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| | Food Tech | Design & Technology | Textiles | Food Tech | Design & Technology | Textiles |
| Scheme title | Fine dining afternoon tea | Illuminated 3D Electronic Display Project | Graffiti | Food and Health | Steady Hand Game | Alexander McQueen - Animal/Insect |
| Purpose of scheme | This project will be complete prior to students making their options. The aim of this project is to incite passionate and excitement about the GCSE course. The focus of this project is presentation and designing and producing food linked to a level/theme. Students will get to expand on the skills learnt in yr 8 and have more ownership of the products they produce and adapting the recipes given. | Using creativity and imagination, pupils are to design and make products that solve real and relevant problems. They acquire a broad range of subject knowledge and draw on cross curricular disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks within a supportive environment, becoming resilient, innovative, enterprising and capable adults. Through the evaluation of existing products (both past & present), they develop a critical understanding of its impact on daily life and the wider environment. | This scheme builds on students' initial textiles skills from Y7 as well as their introduction to art textiles in Y8. It aims to improve confidence and skills in art textiles preparing students for phase 2 (if they opt for the subject) An introduction to new and exciting techniques that will be undertaken in GCSE art textiles. Students will be expected to demonstrate good presentation techniques, use of distorting work and suitable flat titles. Students develop application of colour and tone through designing a product based on the patterns and textures created. | All students have now chosen their options and for many this will be their experience in a kitchen. The aim of this project is to equip students with the power of knowledge when making food choices in the future. Along with students understanding how to adapt recipes to their own needs as well as others. | Using creativity and imagination, pupils are to design and make products that solve real and relevant problems. They acquire a broad range of subject knowledge and draw on cross curricular disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks within a supportive environment, becoming resilient, innovative, enterprising and capable adults. Through the evaluation of existing products (both past & present), they develop a critical understanding of its impact on daily life and the wider environment. | This scheme is intended to explore the work of fashion designer Alexander McQueen and use his 2010 Plato's Atlantis animal/insect print collection as inspiration to develop into. |
| Knowledge in sequence | <p>Practical – Introduction to new techniques-</p> <ul style="list-style-type: none"> •Cake decorating •Bling pastry – shaping/glazing •Biscuit decoration •Manipulating/developing recipes <p>Afternoon tea – defining what involved.</p> | <p>Cambridge NATIONALS LEVEL 2/LEVEL 2: Skills/Coverage</p> <p>ENGINEERING MANUFACTURE</p> <p>Version 4: September 2019</p> <p>Unit R109: Engineering materials, processes and production</p> <p>Learning Outcome 1: Know about properties and uses of engineering materials</p> <p>Characteristics of engineering materials:</p> <ul style="list-style-type: none"> • ease of use • safety in use • forms of supply <p>Learning Outcome 2: Understand engineering processes and their application</p> <p>Basic engineering processes;</p> <ul style="list-style-type: none"> • material removal <p>•Bolt, equipment and processes</p> <ul style="list-style-type: none"> •Health and safety considerations •Quality control checks <p>Learning Outcome 2: Be able to use processes, tools and equipment safely to make a pre-production product</p> <ul style="list-style-type: none"> • appropriate processes for making pre-production products; • bench work and hand-held tools; • measuring equipment (e.g. rule) • hand held saws (e.g. hacksaw, junior hacksaw) • files (e.g. hand flat; half round, needle files) • how to use tools and equipment when making products; • bench work • fitting of machines/equipment; drilling machines • how to follow safe working procedures when using tools and equipment. • how to appropriate use Personal Protective Equipment (PPE) • use of appropriate quality control checks to review finished pre-production products; • finish | <p>Researching work of existing artists and create textiles samples that reflect the artist's work.</p> <p>Revising the correct way to set up and use the sewing machine.</p> <p>Exploring techniques that are used to create surface patterns.</p> <p>Presentation skills: - presenting all the work completed in the style of the scheme heading graffiti.</p> <p>Designing without making - designing and annotating a product in enough detail that another person could construct the design.</p> | <p>Practical</p> <p>Creating your own noodle stir fry with your own sauce</p> <p>creating a high protein tomato sauce dish</p> <p>creating a Fruity, highly decorated cheesecake</p> <p>creating your own fish/chicken and chips</p> <p>creating your own vegan chilli with over baked tortilla chips/cones</p> <p>food and health- making the link and ensuring all food made is healthy</p> | <p>GCSE Skills / Knowledge Coverage:</p> <p>ACA – GCSE DESIGN AND TECHNOLOGY 8552</p> <p>3.1.3 Developments in new materials</p> <p>Students should be aware of developments in new materials. Developments made through the invention of new materials – polymer</p> <p>2.1.6 Materials and their working properties</p> <p>Students should have an overview of the main categories and types of metals and alloys:</p> <p>Ferrous metals including: • low carbon steel • cast iron • high carbon/ tool steel</p> <p>Non-ferrous metals including: • aluminium • copper • tin • zinc</p> <p>Alloys including: • brass • stainless steel • high speed steel.</p> <p>Students should have an overview of the main categories and types of polymers:</p> <p>Thermoplastic including: • acrylic (PMMA) • high impact polystyrene (HIPS) • high density polythene (HDPE) • polypropylene (PP) • polyvinyl chloride (PVC) • polyethylene terephthalate (PET)</p> <p>Thermosetting including: • epoxy resin (EP) • melamine-formaldehyde (MF) • phenol formaldehyde (PF) • polyester resin (PR) • urea-formaldehyde (UF).</p> <p>2.2.8 Specialist techniques and processes</p> <p>Students should know and understand the use of production aids, templates, jigs and moulds where suitable. Tools, equipment and processes</p> <p>Students should use a range of tools, equipment and processes that can be used to shape, fabricate, construct and assemble high quality prototypes:-</p> <ul style="list-style-type: none"> • Use of die for threading metal rod. • Deforming and reforming processes such as vacuum forming • Soldering electronic components. | <p>Researching a specific fashion designer and a specific collection as inspiration</p> <p>Research skills</p> <p>•Collage</p> <p>•Observational drawing skills – zooming in on details of animal/insects</p> <p>•Ino cutting</p> <p>•Ino printing technique</p> <p>•Producing a functional product using videos and help sheets to follow the correct processes</p> <p>•Creating a product inspired and linked to a fashion designer and theme</p> <p>•Evaluation – The ability to reflect and identify successes and areas for improvement</p> |
| Skills | <p>Ability to:</p> <ul style="list-style-type: none"> • Design recipes and plan a method. • Develop a basic recipe to fit certain consumer needs. • Presentation techniques of food and plating up dishes. • Learning about seasonal foods and different customer needs will help support knowledge needed for completing Unit 2. <p>Material categories</p> <p>Students should have an overview of the main categories and types of manufactured boards including: • medium density fibreboard (MDF) • plywood • chipboard.</p> <p>Using and working with materials</p> <p>Students must know and understand how different properties of materials and components are used in commercial products, how properties influence use and how properties affect performance.</p> <p>Students must know and understand the physical and mechanical properties relevant to commercial products • Timber based materials (traditional timber children's toys and flat pack furniture).</p> <p>Specialist techniques and processes</p> <p>A range of tools, equipment and processes that can be used to shape, fabricate, construct and assemble high quality prototypes, as appropriate to the materials and/or components being used including:</p> <ul style="list-style-type: none"> • wastage, such as: • sawing • drilling • cutting and shearing <p>Design strategies</p> <p>Generate imaginative and creative design ideas using a range of different design strategies</p> <p>Evaluate and develop their own ideas • modelling • evaluation of their work to improve outcomes</p> | <p>Unit R111: Computer aided manufacturing</p> <p>Learning Outcome 2: Be able to interpret information from Computer Aided Design (CAD) to manufacture components on CNC equipment</p> <p>Learners must be taught:</p> <ul style="list-style-type: none"> • use of Computer Aided Design (CAD) packages; • 3D-screen simulation <p>Material categories</p> <p>Students should have an overview of the main categories and types of manufactured boards including: • medium density fibreboard (MDF) • plywood • chipboard.</p> <p>Using and working with materials</p> <p>Students must know and understand how different properties of materials and components are used in commercial products, how properties influence use and how properties affect performance.</p> <p>Students must know and understand the physical and mechanical properties relevant to commercial products • Timber based materials (traditional timber children's toys and flat pack furniture).</p> <p>Specialist techniques and processes</p> <p>A range of tools, equipment and processes that can be used to shape, fabricate, construct and assemble high quality prototypes, as appropriate to the materials and/or components being used including:</p> <ul style="list-style-type: none"> • wastage, such as: • sawing • drilling • cutting and shearing <p>Design strategies</p> <p>Generate imaginative and creative design ideas using a range of different design strategies</p> <p>Evaluate and develop their own ideas • modelling • evaluation of their work to improve outcomes</p> | <p>All the techniques that students develop skills in could be used and refined in GCSE coursework if the students opt for the subject.</p> <ul style="list-style-type: none"> •Free machine embroidery: how to use the sewing machine correctly to create a free machine sample. •Die dye: how to create an interesting die dye piece. •Bond 'u' web- using bond 'u' web to create a trapped material sample •Using the heat press safely following the correct procedure to protect the machine and the materials being pressed. •Using CAD to create an interesting pattern. •Lamination- trapping materials and paints between laminating pouches to create an interesting sample. <p>All samples are to be based on the work of graffiti artists, the artist are to be chosen by the students. Understand how to insert and use a range of sewing machine feet such as a bobbin and insert it in the sewing machine correctly</p> | <p>Ability to:</p> <ul style="list-style-type: none"> • Design recipes and plan a method. • Develop a basic recipe to fit certain consumer needs. • Presentation techniques of food and plating up dishes. <p>When making, pupils should be taught to:</p> <ul style="list-style-type: none"> • Make • Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture. • Select from and use a wider, more complex range of materials, and components taking into account their properties. <p>Technical knowledge</p> <ul style="list-style-type: none"> • Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions. • Understand how more advanced electrical and electronic systems can be powered and used in their products (for example, circuits with light, heat, sound and movement as inputs and outputs) • Apply computing and use electronics to embed intelligence in products that respond to inputs. | <p>National Curriculum – Design & Technology (September 2013)</p> <p>Key stage 3</p> <p>Pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.</p> <p>When making, pupils should be taught to:</p> <ul style="list-style-type: none"> • Make • Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture. • Select from and use a wider, more complex range of materials, and components taking into account their properties. <p>Technical knowledge</p> <ul style="list-style-type: none"> • Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions. • Understand how more advanced electrical and electronic systems can be powered and used in their products (for example, circuits with light, heat, sound and movement as inputs and outputs) • Apply computing and use electronics to embed intelligence in products that respond to inputs. | <p>Many of the skills and techniques used</p> <ul style="list-style-type: none"> • Ino cutting and ino-printing techniques • Skills (art) and also further study in textiles/GCSE textiles • Research – sourcing and presenting relevant biographical information and descriptive detail • Annotation • Ability to present justified opinion • Collage • Observational drawing • Ino cutting and ino-printing technique • Measuring to ensure a product is fit for purpose • Colour blending • Finishing and tacking • Setting Up/Using the sewing machine • Accuracy and security • Sewing accurately • Sewing accurately • Analysis of their own work and that of other designers/artists • Ability to identify successes and areas which require improvement |
| Key Words | <p>upscale clientele and provides the highest quality of food. A fine dining restaurant has a formal atmosphere, is almost always a sit-down restaurant, and has a farder menu than most restaurants.</p> <p>Afternoon tea: Afternoon Tea is a tea-related ritual, introduced in Britain in the early 1840s. It evolved as a mini meal to stem the hunger and anticipation of an evening meal at 8pm.</p> <p>Presentation techniques: techniques used to make food look more attractive and appetizing.</p> <p>Plating up: to put food on a plate ready for serving.</p> <p>Seasonal foods: Seasonal foods that foods that are grown naturally in the in each season e.g asparagus in spring, pumpkin in autumn.</p> <p>Customers: Different customers will have different needs and requirements from a product. Customers are people who purchase and/or consume the product.</p> <p>Piping: Using piping bags and different nozzles to create different patterns using buttercream/ fresh cream or meringue by squeezing the filled bag.</p> <p>Glazing: coating of food such as bread or pastry before baking used egg, milk or another liquid to create an attractive finish.</p> <p>Feathering: Where you cover your baked item with one colour of icing and then pipe thin parallel lines using a different coloured icing. Then you drag a skewer through the lines to create a wavy effect.</p> <p>Modelling: Use fondant icing to create shapes for decoration.</p> <p>Egg wash: A beaten egg is used to brush the top of bread/pastry prior to baking.</p> <p>All-in-one method: Cake making method where all the ingredients are whisked together.</p> <p>Crumb method: Cake making method where the butter and sugar is mixed together first, then the egg added and then the flour folded in gently.</p> <p>Batter: criss-crossing pattern of strips. Weaving lines of pastry over and under other strips of pastry. B10</p> | <p>Template - A shaped piece of rigid material used as a pattern for repeated processes such as cutting out or shaping</p> <p>Model- A particular design or version of a product</p> <p>Prototype - A first version of a device from which other forms are developed.</p> <p>CAD- Computer aided design. Using a computer to create or alter an image that will later be transferred on to material using CAM- Computer aided manufacture.</p> <p>Die dye- A resist method of dying material.</p> <p>Bond'U' web - A material/product that is used to stick fabric together. The glue on the bond'U' web reacts to heat and becomes sticky when hot. In this project it is used to create a new piece of material by sticking materials to each other as well as combining paints.</p> <p>Free Machine foot: The foot that has to be used when doing the technique of free machine embroidery.</p> <p>Heat press- A very large iron that reaches high temperatures and is used to transfer the image from the sublimation paper onto synthetic material.</p> <p>CAD- Computer aided design. Using a computer to create or alter an image that will later be transferred on to material using CAM- Computer aided manufacture.</p> <p>Annotation- Informing others through writing how something will be created and why you plan to create it in this way</p> | <p>Pattern's: Half drop repeat, reflection, rotation and repeat: different ways that a pattern can be created.</p> <p>CAD- Computer aided design. Using a computer to create or alter an image that will later be transferred on to material using CAM- Computer aided manufacture.</p> <p>Die dye- A resist method of dying material.</p> <p>Bond'U' web - A material/product that is used to stick fabric together. The glue on the bond'U' web reacts to heat and becomes sticky when hot. In this project it is used to create a new piece of material by sticking materials to each other as well as combining paints.</p> <p>Free Machine foot: The foot that has to be used when doing the technique of free machine embroidery.</p> <p>Heat press- A very large iron that reaches high temperatures and is used to transfer the image from the sublimation paper onto synthetic material.</p> <p>CAD- Computer aided design. Using a computer to create or alter an image that will later be transferred on to material using CAM- Computer aided manufacture.</p> <p>Annotation- Informing others through writing how something will be created and why you plan to create it in this way</p> | <p>Deficiency - A lack/shortage of a nutrient in the body.</p> <p>Excess - Too much of a nutrient in the body</p> <p>Macronutrient - A nutrient required in large amounts in the diet. E.g. carbohydrates, fats, proteins.</p> <p>Micro-nutrient - A nutrient required in small amounts in the diet. E.g. vitamins, minerals and NSP.</p> <p>Anaemia - A condition that can be caused by lack of iron in the diet where you lack enough healthy red blood cells to carry enough oxygen around the body.</p> <p>Diverticulitis - A condition that can be caused by lack of NSP/fibre in the diet. It is where small pouches develop in your digestive system and they get infected or inflamed.</p> <p>Osteoporosis - A condition that can be caused by lack of calcium/vitamin D in the diet. It weakens bones making them fragile and more likely to break.</p> <p>Well-being - Well-being is feeling well, feeling positive. Includes having good mental health and high life satisfaction.</p> <p>SMILE issues - Social, moral, ethical and environmental issues e.g. Organic, halal, Fair trade, farm assured, veganism</p> <p>Symptoms - A physical or mental feature that points to a condition or disease.</p> | <p>Ferrous metals - Metals that contain iron. Non Ferrous metals - Metals that do not contain iron. Alloys - A combination of two or more metals used to enhance properties. Thermoplastics - Plastics that can be heated and reheated many times over.</p> <p>Thermosets - Plastics that cannot be reheated any more.</p> <p>Micro-nutrient - A nutrient required in small amounts in the diet. E.g. vitamins, minerals and NSP.</p> <p>Anaemia - A condition that can be caused by lack of iron in the diet where you lack enough healthy red blood cells to carry enough oxygen around the body.</p> <p>Diverticulitis - A condition that can be caused by lack of NSP/fibre in the diet. It is where small pouches develop in your digestive system and they get infected or inflamed.</p> <p>Osteoporosis - A condition that can be caused by lack of calcium/vitamin D in the diet. It weakens bones making them fragile and more likely to break.</p> <p>Well-being - Well-being is feeling well, feeling positive. Includes having good mental health and high life satisfaction.</p> <p>SMILE issues - Social, moral, ethical and environmental issues e.g. Organic, halal, Fair trade, farm assured, veganism</p> <p>Symptoms - A physical or mental feature that points to a condition or disease.</p> | <p>High resolution images/images with a high pixel resolution – clear/well defined quality images</p> <p>Annotations/ accompanying images/practical work which explains, describes and justifies</p> <p>Mixed Media/ Mixed media refers to a visual art that combines a variety of media in a single artwork. For example, pencil, paint, ink, fine line, fabrics/found items and images etc.</p> <p>Natural world/ All of the animals and plants that exist in nature (something that is not made or caused by humans)</p> <p>Animal or insect print/ Designs which resemble the colours, patterns and textures of the skin/scales etc. of animals or insects that exist in nature</p> <p>Repeat pattern/ An image which is used multiple times to create interesting patterns</p> <p>Carving or gouging/ Using tools to make an indentation/ remove parts of a surface usually to create a pattern or design</p> <p>Colour blending/ mix/ overlap similar colours to produce a gradual transition</p> <p>Justification/ Presenting a reason, fact or opinion for your choices or actions</p> <p>Inspiration/ The process of being influenced or stimulated to do something creative</p> |
| End Point | End of rotation | End of rotation | End of rotation | End of rotation | End of rotation | End of rotation |
| Assessment method | <p>Recipe research / plating up homework (Week 1-2)</p> <p>Research presentation techniques and demonstrate what you have learnt by plating up a dish in a fine dining way.</p> <p>Practical assessment (Week 2-4)</p> <p>Student or teacher selects which practical they choose to be assessed on (sandwich/cake/pastry). They are required to create a dish based on their chosen theme worthy to be part of a fine-dining afternoon tea selection. Showcasing presentation techniques of the Food and of the plating up.</p> <p>Practical assessment (Week 5-6)</p> <p>Student or teacher selects which practical they choose to be assessed on (biscuit/scene). They are required to create a dish based on their chosen theme worthy to be part of a fine-dining afternoon tea selection. Showcasing presentation Mini theory test (week 6)</p> <p>Students to complete a short answer exam style questions requiring them to recall the information they have learnt in the theory lessons over the past 6 weeks. Scores are out of 16.</p> | <p>Woodboard</p> <p>Complete research into electronic components</p> <p>Annotated VR image of 3D jig saw</p> <p>Marking of final practical piece</p> | <p>End of rotation</p> <p>A01 – students select images and research own graffiti artists. Work in the style of the artist or using inspiration from the artist.</p> <p>A02 - Experimentation through creating samples of a range of new techniques – mark making, repeat patterns / sublimation printing, lamination, free machine embroidery all in the graffiti style.</p> <p>A03 – Collecting secondary images for theme and artist research, presenting samples with careful consideration of layout and font in the theme style.</p> <p>A04- Designing a product or collection of products based on the theme and samples created throughout the project.</p> | <p>End of rotation</p> <p>EV1 Fast (week 1)</p> <p>Create a piece of research for a classroom display based on one of the project topics. Use the internet to further research one chosen topic of interest and display it in an attractive and eye-catching way.</p> <p>Food and physical health (Week 2)</p> <p>List the symptoms of a variety of diet related illnesses. Name the nutrient that is linked to each illness. Identify the target group at risk of these illnesses.</p> <p>Food and performance (Week 3)</p> <p>Students to compare the nutritional needs of two specific groups giving reasons for similarities and differences.</p> <p>Mini theory test (week 6)</p> <p>Students to complete a short answer exam style questions requiring them to recall the information they have learnt in the theory lessons over the past 6 weeks. Scores are out of 16.</p> | <p>End of rotation</p> <p>Practical outcome (dependent on their process for that lesson)</p> <p>Some pupils will have a vacuum formed case & base. Some pupils will have created a working electronic circuit. Some pupils will have manufactured a handle for their steady hand game.</p> <p>Practical circus of processes is carried out by pupils to avoid waiting / queuing for equipment. Pupils will cascade knowledge between each other as they move from one process to the next.</p> <p>Complete research material properties included in associated booklet.</p> <p>Continue with practical processes enabling pupils to experience metal working, plastics & electronic processes.</p> <p>Marking of final practical piece</p> <p>Assessment of knowledge to be carried out through either in lesson assessment or on-line.</p> | <p>End of rotation</p> <p>Artist Research – Students are assessed on quality of images with annotation, the ability to select relevant information about the designer/this work including justified opinion and presentation skills</p> <p>Final Practical and Evaluation of chosen product – Students are assessed on the use of tools/equipment to create a professional looking product that is fit for purpose and the ability to reflect on their work</p> |