Curriculum Progression Pathway

DESIGN TECHNOLOGY

Design Technology

Why is the study of Design and Technology important?

Design and Technology is a practical and valuable subject. It enables you to actively contribute to the creativity, culture, wealth and well-being of yourself, your community and your nation. It teaches you how to take risks and so become more resourceful, innovative, enterprising and capable. You will develop a critical understanding of the impact of design and technology on daily life and the wider world. Additionally, it provides excellent opportunities for you to develop and apply value judgments of an aesthetic, economic, moral, social, and technical nature both in your own designing and when evaluating the work of others.

The subject at Outwood Academy Carlton is split up into the following categories:

- **Food technology:** Design recipes and create food products while learning about nutrition.
- **Graphics:** Learn how to use 2D and 3D modelling to plan and design products.
- **Resistant materials technology:** Work with materials like metals, plastics and woods, and use them to make interesting products.

What skills will the study of Design and Technology teach you?

Design and Technology applies knowledge, skills and understanding from within the subject itself, and also a wide range of other sources such as science and mathematics. Design and Technology will teach you to:

- Develop resilience by not being afraid of challenges when solving problems, but to break them down and keep trying.
- Be creative in developing solutions to real world problems.
- Use modelling and annotated sketches to develop and communicate ideas.
- How to act responsibly within a practical environment thinking of the safety of yourself and others.
- Identify how to competently use a range of practical techniques across a range of disciplines.
- Apply and use CAD/CAM equipment to design and manufacture a range of products /components considering scale of production and precision.
- Work independently and part of a team to solve complex problems.
- Construct reasoned arguments to ethical, social and moral problems that have arisen due to technology and communicate these effectively.

- Identify links between different materials and contextual references.
- Test, evaluate and refine ideas and products against a specification, taking into account the views of intended users and other interested groups.
- Understand and apply the principles of nutrition and health.
- Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet.
- Become competent in a range of cooking techniques e.g. selecting and preparing ingredients: using utensils and equipment, applying heat in different ways: awareness of taste, texture and smell to decide how to season dishes and combine ingredients, adapting and using their recipes.
- Understand the source, seasonality and characteristics of a broad range of ingredients

What will you know and understand from your study of Design and Technology?

- How to classify materials and discuss their physical properties.
- How to manufacture products with reference to their materials physical properties.
- How to use and adjust equipment and machinery dependent on task.
- Use learning from science and mathematics to help design and manufacture components and products.
- To consider the influence of a range of lifestyle factors and consumer choices when designing and analysing products.
- To know and understand additional factors to consider such as ergonomics, anthropometrics or dietary needs.
- To use a variety of approaches, for example biomimicry and user-centred design to generate creative ideas and avoid stereotypical responses.
- To evaluate their work against an increasing range of designers, engineers, chefs, technologists and manufacturers and be able to relate their product to their own designing and making.
- To evaluate products through disassembly to determine how they are constructed and function and consider the life cycle analysis.
- To competently use a range of cooking techniques for example, selecting and preparing ingredients; using utensils and electrical equipment.
- The principles of nutrition and health including energy, nutrients, water, fibre, diet and health and nutritional needs throughout life and the risks of an unbalanced diet.
- A repertoire of predominantly savoury dishes in line with the principles of the eatwell guide.
- To feed oneself taking into account personal preference, socio-economic aspects, nutritional and health needs.
- Healthy and varied diets as depicted in the eat-well plate and 8 tips for healthy eating.
- To explore the origin and product of food products and ingredients.
- To consider how seasons may affect the food available.
- To consider the function, nutrient profile and sensory attributes of ingredients.
- To study a range of food commodities eg. cereals, fruits, vegetables, meat, fish, eggs, fats/oils, milk dairy food products.
- To develop a range of preparation, cooking and presentation skills.

- To plan menus for a range of individual and nutritional needs.
- To prepare and cook safely to prevent food poisoning.
- To explore the effect of advertising, marketing and packaging on food choice.

How does your study of Design Technology support your study in other subjects?

Design Technology develops a number of skills that will support your study of other subjects, as so many of the skills you will acquire in Design Technology are transferable. Design Technology disciplines will develop your focus, resilience, self-expression, teamwork, mathematical skills and problem solving and communication skills, which will help you in **all** of your other subjects. It will give you an opportunity for creative expression and practical thinking and encourage you to think about how to improve and home designs and encourage healthy eating etc. Some students may take this even further and discover a subject that provides them with a life-long hobby or career that enhances their life for years to come. All students will gain an understanding of healthy diets etc. The ability to think creatively and problem solve are crucial in Engineering, Mathematics and Science. It will foster an interest and skill in cooking and may lead to study of subjects such as catering etc.

How can you deepen your understanding of Design Technology?

To enhance your work in lessons, there will be times when we explore the professional workplace and wider design practices and materials. This will deepen your understanding of professional work and introduce you to new techniques and ideas.

You will also have the opportunity to deepen your understanding of Design Technology disciplines through extracurricular opportunities, where you can continue to develop your creative ideas, or work on specific design projects. During enrichment clubs, you will have the opportunity to meet food enthusiasts from other year groups, where you can share ideas, critique each other's work and continue to develop your technique.

There may also be an opportunity to participate in trips as well as exhibiting your own work within the Academy. Occasionally, there will be opportunities to enter national or Trust competitions to gain additional audiences and recognition for your work.

How are you assessed in Design Technology?

Throughout the 5 years in Design Technology you are assessed using the following assessment objectives which ensure that you can cumulatively build your subject understanding in preparation for future GCSE and A Level study. There are 6 assessment points each year that we term Praising Stars©. In the lower years before certificated

study we assess how students are performing against age related expectation and as students' progress on to Level 1 and 2 courses such as GCSE and BTEC we assess how their current stage of study reflects how they are on track to reach their end of KS4 targets which are formulated on aspirational expectation from their KS2 starting points. For both lower and upper years we make an informed judgement from our holistic assessments based on our subject mapping of expectation across the Design Technology curriculum.

Assessment Objectives Design and Technology

	Design	**Make**	**Evaluate**	**Technical Knowledge**
KS4	Understand that all design and technological practice takes place within contexts which inform outcomes Investigate and analyse the work of past and present professionals and companies in the area of design and technology in order to help inform their own ideas Use different design strategies, such as collaboration, user-centred design and systems thinking, to generate initial ideas and avoid design fixation.	Develop and apply in-depth knowledge by selecting and working with appropriate materials and components in order to produce a prototype Apply in depth knowledge using appropriate and accurate marking out methods including: measuring and use of reference points, lines and surfaces; use templates, jigs and/or patterns; work within tolerances; understand efficient cutting and how to minimise waste. Follow procedures for safety and write risk assessments.	Test, evaluate and refine their ideas and products against the specification taking into account the views of intended users and other interested groups. Critically evaluate new and emerging technologies to inform design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment. Evaluate an increasing range of designers, engineers, technologists and manufacturers and be able to	Understand the impact of new and emerging technologies on industry, enterprise, sustainability, people, culture, society and the environment, production techniques and systems. Know how energy is generated and stored in order to choose and use appropriate sources to make products and to power systems. Understand developments in modern and smart materials, composite materials and technical textiles. Understand how electronic systems provide functionality to products and

	Design and develop at least one prototype that responds to needs and/or wants and is fit for purpose, demonstrating functionality, aesthetics, marketability and consideration of innovation Consider additional factors such as ergonomics and anthropometrics.	Use specialist techniques and processes to shape, fabricate, construct and assemble a high quality prototype, including techniques such as wastage, addition, deforming and reforming, as appropriate to the materials and/or components being used Use appropriate surface treatments and finishes for functional and aesthetic purposes	relate their products to their own designing and making.	processes, including sensors and control devices to respond to a variety of inputs, and devices to produce a range of outputs Understand how the use of programmable components are used to embed functionality into products in order to enhance and customise their operation Understand the functions of mechanical devices, to produce different sorts of movement, changing the magnitude and direction of forces: Know how to make adjustments to the settings of equipment and machinery such as sewing machines and drilling machines. Use learning from science and maths to help design and make products that work.
KS4	Work confidently within a range of relevant domestic, local and industrial	Produce costings spreadsheets for products they design and make.	Evaluate the concept of circular economy approaches in relation to	How to construct and use simple and compound gear trains to drive

	contexts, such as the home, health, leisure, culture, engineering, manufacture etc. Consider the influence of a range of lifestyle and consumer choices when designing products. Take creative risks when making design decisions. Analyse where human values may conflict and compromise has to be achieved. Decide which design criteria clash and determine which should take priority. Consider additional factors such as ergonomics and anthropometrics.	Match and select suitable materials and their fitness for purpose. Adapt their method of manufacture to changing circumstances. Recognise when it is necessary to develop a new skill or technique. Follow procedures for safety and understand the process of risk assessments. Make independent choices when selecting and using a broad range of manufacturing techniques including hand craft skills and machinery to manufacture products precisely. Apply a range of finishing techniques to a broad range of materials.	product development and consumption. Test, evaluate and refine their ideas and products against the specification taking into account the views of intended users and other interested groups. Evaluate new and emerging technologies. Evaluate an increasing range of designers, engineers, technologists and manufacturers and be able to relate their products to their own designing and making.	mechanical systems from a high revving motor. How to make adjustments to the settings of equipment and machinery such as sewing machines and drilling machines. Use learning from science and maths to help design and make products that work. Understand the properties of materials, including smart materials, and how they can be used to advantage.

Y9	Consistently research and explore different cultures, to identify and design for user needs. To identify and solve challenging issues within a design development task. Develop detailed and justified specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of uses. Use a variety of influences, to generate clear and creative ideas and avoid stereotypical responses. Consider additional factors such as ergonomics and anthropometrics.	Select from a wider, more complex range of materials and components, carefully considering their properties. Conduct detailed risk assessments and coach others to work safely. Independently select and use a broad range of manufacturing techniques including hand craft skills and machinery to manufacture products precisely. Apply a range of finishing techniques with a degree of precision and skill to a broad range of materials.	Evaluate their products in detail and improve performance based on user feedback. Evaluate products that they are less familiar with using themselves, with justification. Analyse a products life cycle analysis and suggest alternatives.	How to apply computing and use electronics to embed intelligence in products that respond to inputs. How to control outputs such as actuators and motors. How to use software and hardware to develop programmes and transfer these programmable components for example, microcontrollers. How to make use of microcontrollers in products they design and manufacture themselves. How to make adjustments to the settings of equipment and machinery such as sewing machines and drilling machines.

				Use learning from science and maths to help design and make products that work. Understand the properties of materials, including smart materials, and how they can be used to advantage.
Y8	Use research and begin exploration, such as the study of different cultures, to identify and begin to understand user needs. To identify and solve issues within a design development task. Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of uses.	Select from a wider, more complex range of materials and components, taking into account their properties. Make simple use of planning tools for instance Gantt charts, communicate their plans clearly so that others can implement them. Use a broad range of material joining techniques including stitching, mechanical fastenings, heat processes and adhesives.	Select appropriate methods to evaluate their products in use and modify them to improve performance. Produce shorts reports making suggestions for improvements. Evaluate products that they are less familiar with using themselves. Evaluate products considering life cycle analysis.	How to apply computing and use electronics to embed intelligence in products that respond to inputs. How to control outputs such as actuators and motors. How to use software and hardware to develop programmes and transfer these programmable components for example, microcontrollers. How to make use of microcontrollers in products they design and manufacture themselves.

	Use a variety of influences, to generate creative ideas and avoid stereotypical responses. Use 2D and 3D to model and develop their ideas. Use CAD software to validate their designs in advance of manufacture. Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools. Consider additional factors such as ergonomics and anthropometrics.	Make independent choices when selecting and using CAD/CAM to manufacture products/components and apply surface finishing techniques to increase the standard of quality. Follow procedures for safety and understand the process of risk assessments. Make independent choices when selecting and using a broad range of manufacturing techniques including hand craft skills and machinery to manufacture products precisely. Apply a range of finishing techniques to a broad range of materials.	Evaluate how products can be developed considering the concept of cradle to grave. Test, evaluate and refine their ideas and products against the specification taking into account the views of intended users and other interested groups. Evaluate new and emerging technologies. Evaluate an increasing range of designers, engineers, technologists and manufacturers and be able to relate their products to their own designing and making.	How to make adjustments to the settings of equipment and machinery such as sewing machines and drilling machines. Use learning from science and maths to help design and make products that work. Understand the properties of materials, including smart materials, and how they can be used to advantage.

Y7	Use research, such as the study of different cultures, to identify user needs. Be able to outline a simple specification to inform design ideas and guide their thinking. Use 2D packages to model their ideas. Produce models of their ideas using CAM to test ideas. Be able to independently generate creative ideas inform by stimulus using annotations to explain key features relating to brief/specification. Consider additional factors such as ergonomics and anthropometrics.	Produce ordered sequences and schedules for manufacturing products they design detailing resources required. Make use of specialist equipment to mark out materials. Use a broad range of material joining techniques including stitching, mechanical fastenings, heat processes and adhesives. Select and use CAD/CAM to manufacture products/components and apply surface finishing techniques to increase the standard of quality. Investigate and develop skills in modifying the appearance of materials including textiles and other manufactured materials.	Evaluate their products against their original specification and identify ways to improve them. Actively involve others in the testing of their products. Evaluate products through disassembly to determine how they are constructed and function. Evaluate the positive and negative impact that products can have in the wider world. Test, evaluate and refine their ideas and products against the specification taking into account the views of intended users and other interested groups. Evaluate new and emerging technologies.	How to classify materials by structure e.g hard words, soft wood, ferrous and non-ferrous, thermoplastics and thermosetting plastics. Consider the physical properties of materials. E.g brittleness malleability. How to use simple electronic circuits incorporating inputs and outputs. Consider textile fibre sources eg. natural and synthetic. How materials can be cast in moulds. Make use of sensors to detect heat, light etc such as thermistors and light dependent resistors. How to make adjustments to the settings of equipment and machinery

		Follow procedures for safety and understand the process of risk assessments. Select and use a broad range of manufacturing techniques including hand craft skills and machinery to manufacture products precisely. Apply a range of finishing techniques to a broad range of materials.	Evaluate an increasing range of designers, engineers, technologists and manufacturers and be able to relate their products to their own designing and making.	such as sewing machines and drilling machines. Use learning from science and maths to help design and make products that work. Understand the properties of materials, including smart materials, and how they can be used to advantage.

Assessment Objectives Cooking and Nutrition

Programmes of Study for cooking and nutrition Key messages, advice and explanatory notes (1-8) for schools	**AO1: Understand health and safety relating to food and cookery** (Explanatory note 2)	**AO2: Understand and apply the principles of nutrition and health** (Explanatory notes 1 &4)	**AO3: Understand the source, seasonality and characteristics of a broad range of ingredients** (Explanatory notes 5,7&8)	**AO4: Understand factors relating to food choice (so that they are able to feed themselves and others a healthy and varied diet).** (Explanatory note 3 &6)	**AO5: Develop practical cooking skills (so that they become competent in a range of cooking techniques and able to cook a repertoire of predominantly savoury dishes)** (Explanatory note 2)

Year 11	Be able to explain food safety legislation and the role of the Environmental Health Officer. Know and understand the HACCP system and the purpose for food businesses.	Be able to analyse and evaluate diets and make recommendations for improving nutritional profile. Be able to calculate energy and nutritional content of recipes Be able to explain health risks of an unbalanced diet and give sound nutritional advice on how to improve it	Know and understand how cooking methods affect the nutritional content of dishes Know and understand why and how food is cooked and the chemical and physical changes that occur.	Know and understand how medical conditions determine food choices: Cardiovascular, obesity, bone health, dental health, type 2 diabetes, iron deficiency anaemia bowel disorders, allergies and intolerances.	Learners are able to organise their time, dovetailing planning to produce more than one complex dish in the time available. They are able to use equipment, including electrical equipment, with confidence. They are able to use presentation and food styling techniques independently. Be able to accurately portion foods.
Year 10	Know and understand the factors that affect bacterial growth and their control (including temperatures)	Know and understand the causes and effects of an unbalanced diet Know and understand how to amend and develop a recipe to suit nutritional needs of individuals.	Know and understand how processing affects the physical, sensory and nutritional properties of foods.	Know and understand how economic factors determine food choices and nutritional health: High and low budgets effects of food poverty Know how to make informed choices about	Learners continue to develop their food preparation and cooking skills making complex dishes that meet the needs of users They are able to follow recipes independently.

				food from packaging and labelling.	They are developing presentation and styling techniques.
Year 9	Know and understand the main causes of food contamination and the steps that need to be taken to prevent food poisoning.	Know and understand how the eat well guide should aid our food choices Know and understand the causes and effects of an unbalanced diet Know and understand how to amend and develop a recipe to suit nutritional requirements for specific groups of people (Life stages, allergies and intolerances)	Know how to substitute ingredients in a recipe based on sensory, nutritional and physical functions of ingredients in recipes.	Know and understand the effects of food poverty Know and understand the effects of sugar on our diet and lifestyle Know and understand how religious dietary needs can affect food choice.	Learners continue to develop their food preparation and cooking skills making complex dishes that meet the needs of users They are able to follow recipes independently.
Year 8	Know and understand how to identify risks (food poisoning, cross contamination) and minimise hazards in the cooking environment.	Know and understand how nutritional requirements differ for specific groups of people (Life stages, allergies and intolerances) To understand how nutritional information and	Know and understand how ingredients have different effects in a recipe and be able to describe the sensory, nutritional and physical functions of ingredients in recipes.	Know and understand the range of cultural and ethical factors that determine food choices: Religion Vegetarian/vegan	Learners will make dishes of increasing complexity that further develop their food preparation and cooking skills and use a range of commodities. -Making/shaping doughs

	Know and understand the difference between use by and best before dates) Know and understand the principles of safe storage, cooking and reheating foods.	allergy advice on food packaging can be used to help make healthy choices (traffic lights).		Fair trade Animal welfare Advertising/marketing.	-Sauce making - Blending - Frying -Whisking -Seasoning -Test for readiness

Year 7	Know and understand safe and hygienic working practices and the practical steps they can take to remain safe and hygienic. Know and understand safe preparation, usage, cleaning and storage of utensils and equipment	Know and understand what is meant by a balanced diet using the current UK dietary recommendations (Eatwell guide and 8 Tips) Know the sources and understand the functions of the nutrients that make up a balanced diet Know and understand the importance of exercise and energy balance in maintaining a healthy weight.	Know and understand the main food groups and examples of foods for each group (cereals, fruit, vegetables, meat, fish, eggs, fats/oils, milk/dairy food products) Know and understand that foods come from a range of sources (caught, reared, grown). Know and understand that raw ingredients are processed to create food products (primary, secondary processing)	Know and understand the range of social and environmental factors that determine food choices: Personal/family preference Availability (seasonal/locality) Food miles Organics Food waste Packaging and recycling	Learners will be able to demonstrate a range of basic food preparation and cooking skills using a variety of food commodities -Weighing/measuring -Knife skills (bridge/ claw) -Peeling - Segmenting -Boiling/ simmering -Rubbing in -Creaming/ all-in-one - Melting - Folding - Baking

How can Design Technology support your future?

The study of Design Technology and it's various disciplines teaches you to think differently and deeply. We offer the chance to extend this thinking through the study of Level 1/2 Vocational courses and we encourage your continued study in this fantastic subject.

Design courses are offered at most prestigious universities and there are many technical and vocational qualifications that can be studied in engineering, product design, graphics, electronics, catering, nutrition etc as well as routes into apprenticeships etc. The very fact that you have been able to study creative thinking, problem solving, planning and design principles will help your future application be they for colleges, universities, apprenticeships or employment.

Careers linked to Design Technology:

- Product Designer
- Civil engineer
- Quantity Surveyor
- Graphic Designer
- Fashion Designer
- Branding designer
- Software Engineer
- Catering
- Nutritionist
- Food technologist
- Manufacturing Engineer / manager
- Architect
- Construction
- Aerospace engineer

The list is endless, as study of Design Technology opens up a world of opportunities

DESIGN TECHNOLOGY CURRICULUM PROGRESSION OVERVIEW OUTWOOD ACADEMY CARLTON			
	YEAR 7	**YEAR 8**	**Year 9**
	Year 7 D&T Students will have two hours of D&T a week which will be split over the different elements of D&T to ensure a broad curriculum is achieved where the key focus is learning about core materials. Students operate on a carousel system throughout the academic year.	**Year 8 D&T** Students will have two hours of D&T a week which will be split over the different elements of D&T to ensure a broad curriculum is achieved where the key focus is developing design and manufacturing proficiency whilst building on their technical knowledge. Students operate on a carousel system throughout the academic year.	**Year 9 D&T** Students will have one hour of D&T a week which will be split over the different elements of D&T to ensure a broad curriculum is achieved where the key focus is developing design and manufacturing proficiency whilst building on their technical knowledge. Students operate on a carousel system throughout the academic year
Resistant Materials	**‘Let’s Play’ Puzzle Project** ● Health and Safety in a workshop - Knowledge and practical. ● Polymers and their properties ● Working with polymers to produce skateboard keychain ● Timbers and their properties ● Working with timbers to produce wooden knot puzzle ● Sustainability ● Packaging methods and vacuum moulding ● Evaluating designs Demonstrating the following skills; ● Designing and design techniques ● Accurate Marking out	**‘Light It Up’ Sustainable Animal Lamp project** ● Health and Safety in a workshop - Knowledge and practical. ● Product Analysis ● CAD/CAM through use of TinkerCAD ● Working with timbers to produce wooden base ● Surface finishes for timbers ● Working with polymers to produce phone holder ● Isometric and Orthographic drawing ● Joining techniques to manufacture movable arm ● Morticing ● Electrical components and simple electronic circuits	**‘Wooden Amplifier’ Joinery Project** ● Health and Safety in a workshop - Knowledge and practical. ● Customer profiling ● Design specifications ● Effective designing and modelling including CAD ● Timbers and their working properties ● Joining techniques - wide range ● Surface finishes Demonstrating the following skills; ● Designing and design techniques ● Accurate Marking out ● Technical drawing techniques ● Safe use of Coping Saws

	• Safe use of Coping Saws • Safe use of Pillar Drills • Safe use of Line Benders • Identification of Man-Made, Hardwood and Softwood timber • Safe use of Tenon Saw • Safe use of Fret Saw • Safe use of Vacuum Former • Wasting techniques • Finishing techniques	• Evaluating designs Demonstrating the following skills; • Designing and design techniques • Accurate Marking out • Critical thinking of existing products • Technical drawing techniques • Safe use of Coping Saws • Safe use of Pillar Drills • Safe use of Line Benders • Safe use of Tenon Saw • Safe use of Fret Saw • Safe use of Vacuum Former • Wasting techniques • Finishing techniques • Safe use of Morticer • Safe use of Belt Sander • Electronic components and circuits	• Safe use of Pillar Drills • Safe use of Line Benders • Safe use of Tenon Saw • Safe use of Fret Saw • Safe use of Vacuum Former • Wasting techniques • Finishing techniques
Food Technology	• Health, Safety and Hygiene in Food - Knowledge and practical. • Balanced Diets - The Eatwell Guide. • Understanding the main food groups. • Know where our food comes from. • Social and Environmental factors in food choices - Seasonality, Food Miles, Organic products and Food waste. • Vegan, Vegetarian and Pescetarian diets.	• Energy Balance - Nutrition and Exercise. • Understanding how nutritional requirements differ for different people. • Allergies and intolerances. • Religious dietary needs. • Packaging and recycling. • Advertising and Marketing. • Traffic light labelling. • Understanding the sensory, nutritional and physical functions of ingredients.	• Nutrients - Why we need them and what happens if we don't have enough (Carbohydrates, Protein, Fat, Vitamins, Iron, Sodium, Calcium, Fibre). • Dietary needs of different types of people. • Allergies and Intolerances. • Cooking methods and the impact they have on nutrients in food.

	• Know how raw ingredients are processed to create food products. • Use by and best before dates. • Safe Storage, cooking and reheating foods. Demonstrating the following skills; • Weighing/ Measuring • Knife Skills • Oven/ Grill management • Coating • Peeling • Boiling • Frying • Shaping • Simmering • Rubbing in • Baking • Blending • Segmenting • Test for readiness	• Food poisoning. • Fair trade and Animal welfare. Demonstrating the following skills; • Creaming • All in One • Melting • Folding • Baking • Making/ Shaping dough • Sauce making • Whisking • Seasoning	• Environmental issues in Food and how the hospitality sector can help combat global warming. • Costing of ingredients. • Learning a range of practical skills in cooking to allow them to work independently and confidently in the kitchen. Demonstrating the following skills- • Knife Skills • Pastry making • Working with raw meat • Cake • Fresh pasta • Grilling, Baking, Frying
Graphic Products	**Festival Project** • Interpretation of the brief to lead research • Researching cultures and festivals and the relationship between both • Existing product analysis of logos • Typography and Logo Designs • Use of research to influence design ideas • Client appropriate design	**Perfume bottle project** • Interpretation of a brief • Research and analyse existing products • Research appropriate themes linked to the brief • Thumbnail sketching • Design development with rendering techniques	**'This is me' Graphics project** • Interpretation of a brief • Critical Studies. Exploring the work of designers and typographers. • Experimenting with different mediums to create various outcomes • Use of photoshop to manipulate images in the style of artist

	• Digital and hand drawn Typography designs • Use of CAD to enhance designs • Surface pattern design • Colour theory in reference to emotions and feelings Demonstrating the following skills; • Creativity • Drawing • Tonal Shading • Composition • Reflection and annotation skills • Pattern design	• Crating with use of isometric • Use of 3d modelling to enhance ideas • Research and design packaging with suitability of internal product considered • Creating packaging nets in 2D and 3D form • Creating packaging symbols Demonstrating the following skills; • Creativity • Resilience • Researching • Composition • Rendering • Modelling • Photography • Illustration	• Design and develop typography • Produce a personal outcome using research and experimentation to guide Demonstrating the following skills; • Creativity • Resilience • Researching • Composition • Critically analysing designers work • Photography • Illustration