Design Technology

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Our Curriculum Statement:

"Within the disciplines of Design and Technology we aim to provide an underpinning of all curriculum areas encouraging independence leading to successful Global Citizens"

Graphic Communication Textiles Food and Nutrition

Analytical writing, evaluative writing, descriptive writing, instructive language. Measuring and weighing, proportion and graphs, analysis of data, volume, materials analysis, the work of other designers (historical context). Science of food, material properties.

IT development of ideas, presenting work, research and analysis, CAD CAM.

Self-directed learning, independent outcomes, individual outcomes, teacher self and peer evaluation.

Designing and the environment, ethical decisions, food providence, finite and non-finite resources, cultural respect, food and packaging legislation and sustainability.

Design and Technology 5 Year Curriculum Plan 2023

Design and Technology Curriculum Plan				
Year	Textiles	Graphic Products	Product Design	Food Tech
7	• Key terminology • Recording ideas • Initial ideas • Developing ideas • Presenting ideas	• Key terminology • Recording ideas • Initial ideas • Developing ideas • Presenting ideas	• Key terminology • Existing Products • Material properties • Initial ideas • Developing ideas Presenting ideas	• Key terminology • Food Science • Food Provenance • Developing ideas • Modelling and processing food
	About this project The 9-week project is a design and make project. Students will develop skills of fabric construction. **Knowledge gained – fabric construction and application of materials. Working with a range of textile materials and techniques.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers key words and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others. Tasks; • Analysis of the work of others	**About this project** The 9-week project is a design and make project. Students are challenged to design and make a promotional standee advertising a new chocolate bar. **Knowledge gained – card construction and application of materials. Working with simple card construction analytical skills – form and function of key materials.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers key words and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others.	**About this project** The 9-week project is a design and make project. Students are challenged to design and make a powered boat out of pine. **Knowledge gained – knowledge of resistant materials. Working with pine– form and function of key materials.** **Sustainability.** **Material origins.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers key words and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others.	**About this project** The 9-week project is a design and make project. Students are challenged to design and make a range of snacks using a range of skills and equipment. **Knowledge gained – developing skills in food preparation and cooking methods. Working with a range of ingredients to make a range of outcomes.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a range of practical and theory based tasks. Knowledge covers key words, investigation of ingredients and cooking methods supporting the GCSE design and make criteria. Students develop their understanding of ingredients to make a range of snacks. Students assess the quality of their own work and the work of others through organoleptic testing and star diagrams.

	• Annotation of design ideas • Evaluation of design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas. Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria. **LEARNING OVERVIEW** **Materials covered** • Calico **Designing principles** • Generating design ideas • Developing design ideas • Recording observations • The work of other designers **Practical skills covered** • Use of dyes • Batik • Machine sewing • Embroidery • Pattern cutting • Applique • Health and safety	Tasks; • Analysis of the work of others • Annotation of design ideas • Evaluation of design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas. Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria. **LEARNING OVERVIEW** **Materials covered** • Carton card • PVA glue • Acetate **Designing principles** • Generating design ideas • Developing design ideas • Recording observations • The work of other designers **Practical skills covered** • Cutting and shaping card • Working with surface developments (Nets) • Card joining techniques	Tasks; • Analysis of the work of others • Annotation of design ideas • Evaluation of design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development and making at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas including modelling of ideas. Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria delivered at the start of each project. **LEARNING OVERVIEW** **Materials covered** • Pine • Woodglue • Dowel **Designing principles** • Generating design ideas • Developing design ideas • Recording observations • The work of other designers **Practical skills covered**	Tasks • Use food hygiene, health and safety rules • Investigate ingredients, materials and cooking methods • Design and annotate food packaging • Evaluate food products Students begin to develop an understanding of food hygiene, personal hygiene and working safely when preparing and handling food. Students are asked to create a selection of hand held snacks which demonstrate and develop a range of skills and understanding of food commodities. Students are expected to make a range of high quality outcomes. The outcomes are assessed against the design criteria. **LEARNING OVERVIEW** **Materials covered** • A wide range of food products and ingredients • A range of hand tools and cooking appliances. **Design principles** • Investigating making and food preparation skills. • Generating designs • Developing ideas • Recording evaluations **Practical skills covered** • Bridge and claw grip (knife skills)

	Assessment Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.	• Using a craft knife • Health and safety **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.	• Cutting and shaping materials • Working tools • Wood joining techniques • Using machinery • Health and safety • Working with pine **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.	• Baking (oven use) • The melting method (hob use) • The rubbing in method (pastry) • Bread making (kneading, proving and knocking back.) **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.
8	• **Key terminology** • **Recording ideas** • **Initial ideas** • **Developing ideas** • **Presenting ideas**	• **Key terminology** • **Recording ideas** • **Initial ideas** • **Developing ideas** • **Presenting ideas**	• **Key terminology** • **Existing Products** • **Material properties** • **Initial ideas** • **Developing ideas** **Presenting ideas**	• **Key terminology** • **Food Science** • **Food Provenance** • **Developing ideas** • **Modelling and processing food**
	About this project The 9-week project is a design and make project. Students will create a range of surface pattern ideas. This will produce a decorative outcome showing a range of 9 textile based skills. **Knowledge gained – fabric construction and application of materials. Working with a range of textile materials and techniques including print and pattern design.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers	**About this project** The 9-week project is a design and make project. Students are challenged to design and make a popcorn box will be used to promote a soon to be released film. **Knowledge gained – card construction and application of materials. Working with simple card construction. Working with surface developments. Developing ideas using ICT. Analytical skills – form and function of key materials.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks.	**About this project** The 9-week project is a design and make project. Students are challenged to design and make a kit racing car. **Knowledge gained – knowledge of resistant materials. Knowledge od tools and their uses. Working with pine and plywood– form and function of key materials. Measuring and proportion** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers key words	**About this project** The 9-week project is a design and make project. Students are challenged to design and make a range of meals designed to improve ingredients knowledge. **Knowledge gained – developing skills in food preparation and cooking methods. Working with a range of ingredients to make a range of meals. Knowledge of food processes. Knowledge of equipment used in Food Technology.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a range of practical and theory based tasks.

	key words and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others. Tasks; • Analysis of the work of others • Annotation of design ideas • Evaluation of design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas. Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria. **LEARNING OVERVIEW** **Materials covered** • Calico • Stuffing • Rice **Designing principles** • Generating design ideas • Developing design ideas	Knowledge covers key words and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others. Tasks; • Annotation of design ideas • Evaluation of design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas. Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria. **LEARNING OVERVIEW** **Materials covered** • Carton card • PVA glue **Designing principles** • Understanding the wants of the customer • Producing a promotional item	and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others. Tasks; • Analysis of the work of others • Annotation of design ideas • Evaluation of design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development and making at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas including modelling of ideas. Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria delivered at the start of each project. **LEARNING OVERVIEW** **Materials covered** • Plywood • Pine	Knowledge covers key words, investigation of ingredients and cooking methods supporting the GCSE design and make criteria. - Students develop their understanding of ingredients to make a range of meals. Students assess the quality of their own work and the work of others through organoleptic testing and star diagrams. Tasks; • Practice food hygiene, health and safety • Investigate ingredients, materials and cooking methods • Investigate the cultural identity of foods • Design and annotate food packaging • Evaluate food products Students continue to develop an understanding of food hygiene, personal hygiene and working safely when preparing and handling food. Students are asked to create a selection of meals which demonstrate and develop a range of skills and understanding of food commodities, food provenance and nutritional improvements. Students are expected to make a range of high quality meals asses against a design criteria. **LEARNING OVERVIEW** **Materials covered** • A wide range of food products and ingredients

	• Recording observations • The work of other designers **Practical skills covered;** • Pattern cutting • Pattern design • Block printing • Transfer printing • Health and safety **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.	• Generating design ideas • Developing design ideas • Recording observations • The work of other designers **Practical skills covered** • Cutting and shaping card • Working with complex surface developments (Nets) • Laser cutting final outcomes • Card joining techniques • Developing ideas using ICT (Illustrator) • Using a craft knife • Health and safety **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.	**Designing principles** • Generating design ideas • Developing design ideas • Recording observations • Quality control **Practical skills covered** • Cutting and shaping materials • Working with surface developments (CAD) • The use of CAD • Health and safety • Working with pine and plywood • Measuring **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.	• A range of hand tools and cooking appliances. **Design principles** • Investigating making and food preparation skills. • Understanding the function of ingredients • Generating design processes • Developing modelled ideas • Recording evaluations **Practical skills covered** • Mashing and grating (cheesy mash) • Gelatinization (macaroni cheese) • Stir fry (hob use) • The rubbing in method (crumble) • The all in one method (muffins) • Sensory analysis **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.
		Product design project 2	**Product design Project 1**	**Food Technology**
9	**Students will opt to continue with Food Technology or product design in Year 9**	• Key terminology • Recording ideas • Initial ideas • Developing ideas • Presenting ideas	• Key terminology • Recording ideas • Initial ideas • Developing ideas Presenting ideas	• Key terminology • Food Science • Food Provenance • Developing ideas • Modelling and processing
	Rationale for 2 option disciplines in Year 9 Uptake of textiles in at KS4 has declined over the last 3 years.	**About this project** The 9-week project is a design and make project. Students are expected to design a contemporary acrylic clock.	**About this project** The 9-week project is a design and make project. Students are expected to and make a functional LED lamp using recycled materials.	**About this project** The 19-week project is a design and make project investigating the function of ingredients. Students will go onto

	The aim is to teach key textile skills at KS3 which will be useful for students wishing to continue Design Technology. **Long term goal is to reintroduce textiles at KS4 after a strong KS3 foundation has been built.**	**Knowledge gained – designing for a specific design brief with strict material limitations. Material properties and investigation. Form and function of key materials.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers key words and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others. Tasks; • Analysis of the work of others • Annotation of design ideas • Evaluation of design ideas • Developing design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas. Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria.	**Knowledge gained – complex and demanding card construction and application of a variety of materials. Working with a variety of materials as well as developing designing and making skills. Construction analytical skills – form and function of key materials.** Key terminology is covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers key words and key design concepts all linking to GCSE design criteria. Recording ideas is covered throughout the design and make process where students are asked to record their findings, observations and insights based on their own work and the work of others. Tasks; • Analysis of the work of others • Annotation of design ideas • Evaluation of design ideas • Developing design ideas Initial ideas are recorded as the first response to the design challenge. Students are asked to create a range of design ideas which will be taken into design development at a later stage. Developing ideas is carried out through the refinement and development of initial design ideas.	research and make a self-directed meal following the GCSE criteria. **Knowledge gained – specific understanding of the scientific processes of a range of food products. Application of a variety of food materials to make a range of food products.** Key terminology and processes covered through the use of knowledge books which are designed to track and support students through a logical design and make tasks. Knowledge covers key words and key design concepts all linking to GCSE design criteria. Students develop their understanding of ingredients to make a range of dishes which investigate the function of food ingredients. Students assess the quality of their own work and the work of others through organoleptic testing and star diagrams. Tasks; • Practice food hygiene, health and safety • Analysis of ingredients, materials and cooking methods • Investigating the provenance of food • Evaluate food products • Planning food dishes Students understand aspects relating to food hygiene, personal hygiene and working safely when preparing and handling food. Students are asked to create a selection of dishes which demonstrate and develop a

		LEARNING OVERVIEW **Materials covered** • Acrylic • Pine **Designing principles** • Generating design ideas • Presenting ideas to a client • Developing design ideas • Recording observations • The work of other designers **Practical skills covered** • Cutting and shaping card • Working with surface developments (Nets) • Card joining techniques • Using a craft knife • CAD/CAM • Health and safety **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.	Developments are recorded using detailed annotation. Present – students are expected to make a high quality outcome. The outcome is assessed against design criteria. **LEARNING OVERVIEW** **Materials covered** • Plywood • Pine • PVA glue • Tin • Pine **Designing principles** • Generating design ideas • Presenting ideas to a client • Developing design ideas • Recording observations • The work of other designers **Practical skills covered** • Cutting and shaping materials • Working with surface developments (Nets) • Wood joining techniques • Using a craft knife • CAD/CAM • Health and safety **Assessment** Assessment will be summative assessment based on a combination of an end of project	range of skills and understanding of food commodities, food provenance and nutritional improvements. Create a self-directed product. Students are expected to make a range of high quality, high skill dishes assed against a design criteria. **LEARNING OVERVIEW** **Materials covered** • A wide range of food products and ingredients • A range of hand tools and cooking appliances. **Design principles** • Investigating making and food preparation skills. • Generating time and production plans • Developing modelled ideas • Recording evaluations with star diagrams **Practical skills covered** • The whisking method and mechanical raising agent (Swiss roll) • The rubbing in method and chemical raising agents (scones) • Biological raising agent (bread / Chelsea bun) • The function of eggs- coagulation enrobing and aeration (choux pastry and quiche) • The function of fats- pastry investigation rough puff and short crust pastry.

			assessment and theory and practical work completed in lessons.	• Dairy products, gels and modified starches. (cheesecake) • Protein and vegetable preparation (vegetarian alternative or meat based lasagne) • Sensory analysis **Assessment** Assessment will be summative assessment based on a combination of an end of project assessment and theory and practical work completed in lessons.
10			**AQA Design Technology** **Subject content** • 1. Core technical principles • 2. Specialist technical principles • 3. Designing and making principles Design and make portfolio.	**WJEC** **Level 1/2 Hospitality and Catering** **The Hospitality and Catering Industry – Paper based assessment** **Hospitality and Catering in Action**
11			**Assessments** **What's assessed.** • Core technical principles • Specialist technical principles • Designing and making principles	**Year 11** **Year 11 will begin to study Unit 1 for the written exam paper. Investigating and demonstrating an understanding of the catering and hospitality trade.** Students will ensure they have covered the industrial practices and operations of a catering establishment.

			Section A – Core technical principles (20 marks) A mixture of multiple choice and short answer questions assessing a breadth of technical knowledge and understanding. **Section B – Specialist technical principles (30 marks)** Several short answer questions (2–5 marks) and one extended response to assess a more in-depth knowledge of technical principles. **Section C – Designing and making principles (50 marks)** **Non-exam assessment (NEA): 30–35 hours approx….** • 100 marks • 50% of GCSE **Task(s)** • **Substantial design and make task** • Assessment criteria: o Identifying and investigating design possibilities o Producing a design brief and specification o Generating design ideas o Developing design ideas	Project content will be taught through a project set by the exam board entitled “wow restaurant” **Unit 1 Investigating aspects of the vocational sector.** Modules; 1. Health and safety 2. Nutrition 3. Environmental factors 4. Hospitality trade 5. The workforce **Unit 2 To investigates the coursework contents and design and create a three course meal suitable for a professional restaurant,**

			- Realising design ideas - Analysing & evaluating - In the spirit of the iterative design process, the above should be awarded holistically where they take place and not in a linear manner - Contextual challenges to be released annually by AQA on 1 June in the year prior to the submission of the NEA - Students will produce a prototype and a portfolio of evidence - Work will be marked by teachers and moderated by AQA	