



Design & Technology

Year 7-11 Subject Learning Scheme 2017-2018



Year 7 KS3	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
<p>Key Learning and Activities</p> <p>The students will rotate around the workshops</p>	<p><u>Electronics</u> Design and make a buzzer game</p> <ul style="list-style-type: none"> • Electronic components • Material properties • Health and safety • Evaluation • Soldering 		<p><u>Food</u> Students will apply and understand principles of nutrition and health. They will cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet</p> <ul style="list-style-type: none"> • savoury slice, • small pizzas • Fruit Crumble • Scones 		<p><u>Graphics</u></p> <p>Students design and make a series of promotional products to market a film.</p> <ul style="list-style-type: none"> • Poster • Popcorn holder • 3D glasses • Gift bag • Dvd Cover 	<p><u>Resistant Materials</u></p> <p>Students design and make a noughts/crosses hand held game.</p> <ul style="list-style-type: none"> • Tools and materials • Health and safety • Research and investigate • Planning and developing
<p>Key Activities promoting SMSC and British Values.</p>	<ul style="list-style-type: none"> • Personal safety in the workshop 		<p>Safety in a food technology environment. Social and environmental issue</p>		<ul style="list-style-type: none"> • Age appropriate films, understanding the different categories of films 	<ul style="list-style-type: none"> • British Standard Institute (BSI) safety in the workshop and how to keep yourself and others safe.
<p>Key Homework</p>	<p>Tools and equipment, electricity task, circuit boards, symbols, crossword</p>		<p>Key words word search, poster, facts research, timeline, symbols</p>		<p>Health/safety, measurements ,logos, scaling to size, drawing techniques</p>	<p>Research electronics, Step by step procedure, Components parts, Tools and equipment</p>
<p>Key Assessment incl. dates</p>	<p>Design Assessment</p>		<p>Practical Assessment</p>		<p>Design Assessment at halfway through 10wks</p>	<p>Making Assessment at halfway through 10wks</p>

Year 8 KS3	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Learning and Activities <ul style="list-style-type: none"> • knowledge • skills • experiences 	<u>Resistant Materials Birdhouse</u> <ul style="list-style-type: none"> • Material properties • Design • Existing products on the market • Joining • Exterior finishes for wood • Improvements and modifications • Environmental issues 		<u>Food</u> <p>Students will develop and apply their understand principles of nutrition and health. They will cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet;</p> <ul style="list-style-type: none"> • Curry dish • Pasta dish • Cheese cake 		<u>Graphics</u> <p>Students design and make a board game for teenagers</p> <ul style="list-style-type: none"> • Nets • Quality control methods • Production methods • CAD/CAM • Designing 	<u>Resistant Materials</u> <p>Money Box game</p> <ul style="list-style-type: none"> • Vacuum forming/Laser cutting • The properties of plastic • Designing • Planning • Evaluation • Research • Investigation • Smart materials
Key Activities promoting SMSC and British Values.	Being able to adjust to a range of social contexts by appropriate and sensitive behaviour;		Being able to evaluate the quality and worth of cultural achievements		Design influences based on current values and changes over time	Being able to take on the roles of team leader and team worker
Key Homework	Research DVDs, Research activity booklets, list computer software, Design packaging		Health and safety, pie charts, logos, drawing to scale, flow charts		Existing products research, crossword, packaging, mood board, evaluation	
Key Assessment incl. dates	Design Assessment		Practical assessment		Nets of box – halfway assessment during 10 wks	Designs of money box – halfway assessment during 10 wks

Year 9 KS3	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Product Design Key Learning	Product Design:- Design & Make assignment focussing on “ In the style of “ Simple product based around the controlled task “ Designer influences”, Change this task if planning to offer this topic for the controlled assessment task. This short assignment should indicate the standard but not the quantity required for GCSE. As such resources might be provided via mood board or display on classroom wall. Ideas might be restricted in numbers	Product Design:- Design & Make assignment focussing on “ In the style of “ Simple product and packaging based around the controlled task “ Designer influences”, Change this task if planning to offer this topic for the controlled assessment task. This short assignment should indicate the standard but not the quantity required for GCSE. As such resources might be provided via mood board or display on classroom wall. Ideas might be restricted in numbers.	Product Design:- Design and Make assignment focussing on manufacturing in quantity based around the controlled task “Fundraisers”. Students to be restricted manufacturing processes, e.g. pewter casting. Work should include manufacturing aids and/or CAM and cover issues such as sequencing tasks, safety, QA	Product Design:- Design and Make assignment focussing on manufacturing in quantity based around the controlled task “Fundraisers”. Students to be restricted manufacturing processes, e.g. pewter casting. Work should include manufacturing aids and/or CAM and cover issues such as sequencing tasks, safety, QA	Product Design: Toy Truck. Manufacturing a product with design work. Can work as part of team. Consider organisation of equipment and labour and relate to industrial production examples. Possibly combine with factory visit. Different drawing techniques to be learned, CAD work throughout. Independent learning of the final outcome. Understanding of mechanisms. Joining methods etc.	Product Design: Storage box. Manufacturing product with design. Researching different design influences. Expectations of greater independence. Consider organisation of equipment and labour and relate to industrial production examples. Greater understanding of joining methods and assembling techniques. Understanding quality checks throughout and where they occur.
Food Key Learning	Food:- Design and make assignment which focuses on the Eat well Plate. Pupils will investigate nutrition and produce a complete meal which covers all areas on the Eat well plate with the correct proportions. Pupils will work out costing per meal/ family of 4. Pupils will evaluate and modify if necessary to make sure it meets all criteria. Pupils will use a broad range of	Food:- Design and make assignment which focuses on the Eat well Plate. Pupils will investigate nutrition and produce a complete meal which covers all areas on the Eat well plate with the correct proportions. Pupils will work out costing per meal/ family of 4. Pupils will evaluate and modify if necessary to make sure it meets all criteria.	Food:- Design and make assignment which focuses on seasonal foods- looking at where they are grown. Pupils will investigate fruits/vegetables which are in season at that time and produce 5-8 dish using those fruits/vegetables. Pupils will then select one and develop the idea to produce a final product which will then be evaluated and modified if necessary. Pupils will use a broad range of equipment and will cover several cooking methods. Sensory analysis will	Food:- Design and make assignment which focuses on seasonal foods- looking at where they are grown. Pupils will investigate fruits/vegetables which are in season at that time and produce 5-8 dish using those fruits/vegetables. Pupils will then select one and develop the idea to produce a final product which will then be evaluated and modified	Food:- Design and make assignment which focuses on baking using both sweet and savoury recipes. 3 sweet recipes and 3 savoury recipes. Consider finishing techniques for their products. Look at existing products on the market and compare. Pupils will use a broad range of equipment. Sensory analysis will take place throughout this unit of work. Health and safety	Food:- Design and make assignment which focuses on food for festivals or sporting events. Plan and make a range of savoury dishes suitable for selling at a large sporting event. Consider the type of cuisine, range of suitable ideas. Promoting environment and ethical awareness. Dishes to showcase technical skills. Work individually or in small teams.

	equipment and will cover several cooking methods. Sensory analysis will take place throughout this unit of work. Health and safety rules to be followed at all times.	Pupils will use a broad range of equipment and will cover several cooking methods. Sensory analysis will take place throughout this unit of work. Health and safety rules to be followed at all times.	take place throughout this unit of work. Health and safety rules to be followed at all times.	if necessary. Pupils will use a broad range of equipment and will cover several cooking methods. Sensory analysis will take place throughout this unit of work. Health and safety rules to be followed at all times.	rules to be followed at all times.	
Key Activities promoting SMSC and British Values.	That which moves people; The relationship between belief and behaviour; Being able to articulate attitudes and values; Behaving consistently in accordance with principles; Being able to adjust to a range of social contexts by appropriate and sensitive behaviour; The capacity to relate what is learnt to an appreciation of wider cultural aspects of society;	Feelings, experiences, emotion; A sense of being part of a greater whole; Recognising the moral dimensions to situations; Understanding the consequence of actions for self and others; The ability to exercise responsibility and initiative; Being able to participate cooperatively and productively in society; Understanding of beliefs, customs, values, knowledge and skills which form the basis for identity and cohesion in society; Developing and strengthening the cultural interests of pupils;	A sense of purpose; A search for meaning and purpose; Developing a socially acceptable set of values and principles; Recognising the greater needs, which extend beyond self-interest. Knowing how societies function and are organised; Recognition of and respect for the rights of others to exercise a cultural influence; Exposing pupils to a breadth of stimuli in order to allow them to develop new interests;	A sense of awe, wonder and mystery; The attribution of meaning to experience. Recognising that values and attitudes change over time; The progressive acquisition of the competencies and qualities needed to play a full part in society; Understanding how what is learnt in the curriculum relates to life in society; Knowledge of the nature and roots of cultural traditions; Extending horizons beyond the immediate to the highest artistic, musical and literary achievements;	Insights into personal existence which are of enduring worth; Making judgements on issues by applying moral principles, insights and reasoning; Understanding of the institutions, structures and processes of society; Personal response and accomplishment;	Having the will to behave morally as a point of principle; Taking responsibility for ones' own actions; Understanding of how individuals relate to each other; Being able to take on the roles of team leader and team worker. The key features of major cultural groups within society;
Key Homework	1. Product evolution. Technology push/market pull. 2. Drawing/	1. Purposes and variety of packaging, cartons, blister, 2. Printing,	1. Consumer issues, fair testing, quality, standards, consumer groups, etc.	1. Materials, classification, properties, sources,	1. Sustainability, 6Rs, green design, product miles, carbon footprint,	1. Research and designing 2. Making and evaluating 3. Selecting Materials

	modelling and preparation techniques appropriate to support the D&M assignment. 3. Drawing/ modelling and preparation techniques appropriate to support the D&M assignment.	Litho, flexo, screen, gravure 3. Die-cutting	2. Branding, brand loyalty 3. Safety, own and users, risk assessment	stock, sizes, combinations. 2. Smart and new materials, applications and influence on new products 3. Human factors, anthropometrics, ergonomics, special groups, adjustments etc	life cycle, responsibilities etc. 2. Marketing 3. Quality and Accuracy	
Key Assessment incl. dates	1 hr written test, review	1 hr written test, Review, End of design and make assessment	1 hr written test, review	1 hr written test, Review, End of design and make assessment	1 hr written test, review	1 hr written test, Review, End of design and make assessment

Year 10 KS4	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Product Design Key Learning	Product Design:- Design Content which consist of timeline, mind mapping, design brief, scenario and research plan 3wks. Image board (1wk), relevant products (2wks), Interviews/survey (2wks)	Product Design:- Target market (1wk), design criteria (1wk), analysis of research (1wk), design ideas (3wks), individual designs (4wks)	Product Design:- Individual designs (4wks), final design (2wks), modelling, development and CAD (6wks).	Product Design:- Modelling, development and CAD (6wks), materials and components (1wk),	Product Design:- Environment issues, social etc. (1wk), specifications (2wks), Making (12-14wks)	Product Design:- Making (12-14wks)
Food Key Learning	Food:- Design ideas, range of design ideas, annotation, sensory descriptors, ingredients, techniques, finishing, justification chart, research, making of design star diagrams, target market.	Food:- Prototypes, evaluation of prototypes, chart/table, new/ modified/ existing, range of skills, development of prototypes, product specification, results from taste panel. Conclusion of development.	Food:- Conclusion of development. Annotate each process clearly, evidence- photographic and written. Photographic evidence for the final design -produce the final product. - think about layout following the practical.	Food:- Students to use revision guides- AQA food technology. Students will be given revision notes to read, past exam papers as a guide as to what to expect in their exam. Students will be expected to work independently, at home using all the information given out during the lessons. Re-cap on all techniques, practical elements,	Food:- As term 2b until exam..... Students to use revision guides- AQA food technology. Students will be given revision notes to read, past exam papers as a guide as to what to expect in their exam. Students will be expected to work independently, at home using all the information given out during the lessons. Re-cap on all techniques, practical elements,	
Key Activities promoting SMSC and British Values	Valuing a non-material dimension to life; Having the will to behave morally as a point of principle; Taking responsibility for ones' own actions; Understanding of how individuals relate to each other;	Insights into personal existence which are of enduring worth; Knowledge of the codes and conventions of conduct agreed by society; Making judgements on issues by applying moral principles, insights and reasoning;	A sense of awe, wonder and mystery; The attribution of meaning to experience. Recognising that values and attitudes change over time; The progressive acquisition of the competencies and qualities needed to play a full part in society;	A sense of purpose; A search for meaning and purpose; Developing a socially acceptable set of values and principles; Recognising the greater needs, which extend beyond self-interest.	Feelings, experiences, emotion; A sense of being part of a greater whole; Recognising the moral dimensions to situations; Understanding the consequence of actions for self and others;	That which moves people; The relationship between belief and behaviour; Being able to articulate attitudes and values; Behaving consistently in accordance with principles; Being able to adjust to a range of social contexts by appropriate and sensitive behaviour;

Year 11 KS4	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Product Design Key Learning	Product Design:- Students learn: Target Market, Analysis of research, 6 small designs 3 larger designs, Final design Materials/Components Modelling, Environment issues	Product Design:- Students to work independently whilst designing, modelling and making. They will gain photo evidence, verbal feedbacks recorded, quality control issues need to be recorded and commercial viable needs to be discussed	Product Design:- Section 4 of the criteria, testing of product, testing against the specification, evaluation and modifications. Pupils to adjust their work with all feedback completed and work improved.	Product Design:- Preparation for design question based on pre-release material, practice questions based on specimen papers	Product Design:- Packaging, design practice and revision. Exam summary of what to expect, strategies such as mark a minute, resources which are in the room.	Product Design:- EXAM
Food Key Learning	Food:- Design ideas, range of design ideas, annotation, sensory descriptors, ingredients, techniques, finishing, justification chart, research, making of design star diagrams, target market.	Food:- Prototypes, evaluation of prototypes, chart/table, new/ modified/ existing, range of skills, development of prototypes, product specification, results from taste panel. Conclusion of development.	Food:- Conclusion of development. Annotate each process clearly, evidence- photographic and written. Photographic evidence for the final design -produce the final product. - think about layout following the practical.	Food:- Students to use revision guides- AQA food technology. Students will be given revision notes to read, past exam papers as a guide as to what to expect in their exam. Students will be expected to work independently, at home using all the information given out during the lessons. Re-cap on all techniques, practical elements,	Food:- As term 2b until exam..... Students to use revision guides- AQA food technology. Students will be given revision notes to read, past exam papers as a guide as to what to expect in their exam. Students will be expected to work independently, at home using all the information given out during the lessons. Re-cap on all techniques, practical elements,	Food:- EXAM
Key Activities to promote SMSC and British Values.	Valuing a non-material dimension to life; Knowledge of the codes and conventions of conduct agreed by society;	Being able to evaluate the quality and worth of cultural achievements Personal response and accomplishment;	Being able to take on the roles of team leader and team worker.			

	Understanding how what is learnt in the curriculum relates to life in society; Understanding the consequence of actions for self and others Being able to adjust to a range of social contexts by appropriate and sensitive behaviour;	Extending horizons beyond the immediate to the highest artistic, musical and literary achievements; Recognising the greater needs, which extend beyond self-interest. Developing and strengthening the cultural interests of pupils The capacity to relate what is learnt to an appreciation of wider cultural aspects of society;	Insights into personal existence which are of enduring worth; The attribution of meaning to experience. A search for meaning and purpose; A sense of being part of a greater whole; The relationship between belief and behaviour;			
Key Homework:	AQA Examination Questions-Section B	AQA Examination Questions-Section A	To complete Primary research & questionnaire style testing	Past paper questions and mark criteria	Past paper questions and mark criteria	Past paper questions and mark criteria
Key Assessments Inc Dates	<ul style="list-style-type: none"> Marking and grading of students work. Assessment according to criterion of the G.C.S.E specification. Product folder work Questioning and answering students. Throughout lessons, to check learning is taking place. Verbal feedback sheets given throughout the making task of this term, 3 wk hwks. Assessment homework given based on the exam questions 	<ul style="list-style-type: none"> Marking and grading of students work. Assessment according to criterion of the G.C.S.E specification. Product folder work. Questioning and answering students. Throughout lessons, to check learning is taking place. Verbal feedback sheets given throughout the making task of this term, 	<ul style="list-style-type: none"> Marking and grading of students work. Assessment according to criterion of the G.C.S.E specification. Product folder work Questioning and answering students. throughout lessons ,to check learning is taking place Verbal feedback sheets given throughout the making task of this term, 3 wk hwks. Assessment homework given based on the exam questions 	Examination 40% of the overall grade. 40% section A-Design section 60% section B- Exam questions 3 wk hwks. Assessment homework given based on the exam questions	Examination 40% of the overall grade. 40% section A-Design section 60% section B- Exam questions 3 wk hwks. Assessment homework given based on the exam questions	Examination 40% of the overall grade. 40% section A-Design section 60% section B- Exam questions 3 wk hwks. Assessment homework given based on the exam questions

		<ul style="list-style-type: none">• 3 wk hwks. Assessment homework given based on the exam questions				
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