



Technology

CURRICULUM MAP

TRANSITION STAGE: DESIGN & TECHNOLOGY						
YEAR 7	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Desk Organiser			Prototype Fan		
SKILLS	• Understanding safe working practises using both hand and machine tools • Marking, measuring, cutting, drilling painting, joining, gluing and assembling • Knowledge and understanding of materials, processes and tools • Practical maths skills • Sketching both by hand and using computer software to produce realistic 3D drawings			• Marking, measuring, cutting, drilling, painting, joining, gluing and assembling • Practical maths skills • Understanding how electronic components can be combined together, thereby producing an effective circuit • Fault-finding circuits • Testing out ideas to improve the efficiency, safety and sustainability of the prototype product		
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TRANSITION STAGE: FOOD TECHNOLOGY							
YEAR 7	AUTUMN 1		AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	• Food hygiene and safety 1 - Food spoilage, Food poisoning: conditions for bacterial growth, how bacteria behave in the fridge, freezer and in the danger zone, Food hygiene and safety rules • Food Origin- Where does food come from? How are they processed? Grown,caught or reared -carrots and eggs • Healthy eating 1-What does the eatwell guide tell us? What are the five food groups? What is healthy eating? • Macro/macronutrients functions and sources • The importance of keeping hydrated, problems of dehydration • Food label: information on a food label			• Food hygiene and safety 1 - Food spoilage, Food poisoning: conditions for bacterial growth, how bacteria behave in the fridge, freezer and in the danger zone, Food hygiene and safety rules • Food Origin- Where does food come from? How are they processed? Grown,caught or reared -carrots and eggs • Healthy eating 1-What does the eatwell guide tell us? What are the five food groups? What is healthy eating? • Macro/macronutrients functions and sources • The importance of keeping hydrated, problems of dehydration • Food label: information on a food label			
SKILLS	• Knife skills - bridge and claw techniques: slice, dice • Cooking skills-rubbing in, mixing, combining, cutting,rolling out, coring,assembling • Cooking methods: Baking • Practical dishes: fruit/couscous salad, fruit crumble, scones, sandwiches, • Group task: Plan and make a chosen dish in 45 mins • Investigation - Sensory testing, • Food science: Enzymic browning,			• Knife skills - bridge and claw techniques: slice, dice • Cooking skills-rubbing in, mixing, combining, cutting,rolling out, coring,assembling • Cooking methods: Baking • Practical dishes: fruit/couscous salad, fruit crumble, scones, sandwiches, • Group task: Plan and make a chosen dish in 45 mins • Investigation - Sensory testing, • Food science: Enzymic browning,			
USEFUL RESOURCES / GUIDANCE: BBC Good Food Food labelling							



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FOUNDATION STAGE: DESIGN & TECHNOLOGY

YEAR 8	COURSEWORK DESIGN PROJECT						
	AUTUMN 1		AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Decorative Vase				Electronic Moisture Detector		
SKILLS	- Understanding how to assess and minimise risk when working independently with both hand and machine tools - Design analysis, modelling and presentation of ideas - Marking, measuring, cutting, drilling, painting joining, gluing and assembling - Freehand Drawing - Working Drawing (elevations) - Isometric drawing and graphical rendering skills to aid communication - Using 3D CAD				- Using software programs to test and develop electronic circuits that can detect real life changes in the environment - Developing skills of soldering - Testing and fault-finding a circuit to identify errors which might cause failure - Using formal orthographic drawing techniques - Using 3D CAD - Ethical consideration of technology		
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FOUNDATION STAGE: FOOD TECHNOLOGY

YEAR 8	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	● Food hygiene and safety - Recap food safety 1, know the 4Cs and how to use them to avoid food contamination. Know where to store each food in the kitchen , know about some food poisoning bacteria ● Food Origin: Where does food come from? How are they processed before they are sold in our shops Beef/mi ● Healthy Eating 2: macro and micronutrients their functions and sources, recipe modification/change			● Food hygiene and safety - Recap food safety 1, know the 4Cs and how to use them to avoid food contamination. Know where to store each food in the kitchen , know about some food poisoning bacteria ● Food Origin: Where does food come from? How are they processed before they are sold in our shops Beef/mi ● Healthy Eating 2: macro and micronutrients their functions and sources, recipe modification/change		
SKILLS	● Cooking skills - sauce making/tomato sauce, boiling, baking ● Practical dishes: tomato sauce with pasta, muffins,shortcrust pastry, potato bake ● Group task: Plan and make a healthy dish that will be suitable for school dinner ● Food science: Aeration ● Investigation- explore different types of raising agents			● Cooking skills - sauce making/tomato sauce, boiling, baking ● Practical dishes: tomato sauce with pasta, muffins,shortcrust pastry, potato bake ● Group task: Plan and make a healthy dish that will be suitable for school dinner ● Food science: Aeration ● Investigation- explore different types of raising agents		
USEFUL RESOURCES / GUIDANCE: BBC Good Food Food labelling						



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FOUNDATION STAGE: DESIGN & TECHNOLOGY						
YEAR 9	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Product evaluation	Product modelling	Computer Aided Design (CAD) & Computer Aided Manufacture (CAM)		Environmental clock	
SKILLS	- Research skills, collecting data, analysis 2D and 3D drawing, rendering - Isometric drawings, orthographic drawings, presenting data by hand and CAD - Presentational skills, layout, style and organisation	- Developing ideas focusing on a design style - Using data to inform design CAD/CAM - Developing fluidity of design thinking - Shaping, modelling using cardboard and modification to work, evaluation	- Research skills, working with a context, writing a brief - Hand rendering 2D and 3D shapes - Isometric drawing by hand and using CAD - Presenting ideas graphically to maximise impact	- Researching design styles - Developing design - Construction and building skills - Production of idea, using appropriate techniques	- Group work, collaboration of ideas and research, eco-friendly design, sustainable design - Material research - Formulation of ideas - Peer assessment and continuous evaluation	- Exploded drawings, 3rd angle orthographic projection - Planning manufacture - Using photography as a medium to communicate thoughts and processes - CAD - CAM - Sustainability
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FOUNDATION STAGE: FOOD TECHNOLOGY

YEAR 9	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	• Food hygiene and safety - pathogens, key food safety temperatures, Hazard Analysis and Critical Control Point (HACCP) • Bread - ingredients, making process, functions of ingredients • Macro and macro nutrients – specific function, sources and deficiency • Seasonal Food: the benefits of using seasonal foods in cooking • Life stages and nutrition/teenagers/nutritional needs at different stages.			• Food hygiene and safety - pathogens, key food safety temperatures, Hazard Analysis and Critical Control Point (HACCP) • Bread - ingredients, making process, functions of ingredients • Macro and macro nutrients – specific function, sources and deficiency • Seasonal Food: the benefits of using seasonal foods in cooking • Life stages and nutrition/teenagers/nutritional needs at different stages.		
SKILLS	• Cooking skills : rolling out, combining, mixing, kneading, shaping, whisking, • Cooking methods- baking, boiling, sauce making • Food science- Fermentation, dextrinization, gelatinisation, aeration • Practical dishes: Bread, pizza, macaroni cheese, fruit flan/swiss roll • Group task: Plan and make a healthy dish from your chosen culture/country • Investigation - Exploring ingredients used in thickening sauces, effects of preparation /cooking methods			• Cooking skills : rolling out, combining, mixing, kneading, shaping, whisking, • Cooking methods- baking, boiling, sauce making • Food science- Fermentation, dextrinization, gelatinisation, aeration • Practical dishes: Bread, pizza, macaroni cheese, fruit flan/swiss roll • Group task: Plan and make a healthy dish from your chosen culture/country • Investigation - Exploring ingredients used in thickening sauces, effects of preparation /cooking methods		
USEFUL RESOURCES / GUIDANCE: BBC Good Food Food labelling						



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EXAMINATION STAGE						
YEAR 10	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Industrial design	Theory module	IKEA storage project		Disaster relief	Major project - Component 1
SKILLS	- Identifying design opportunities from an open contextual scenario - Consideration of client and target markets - Exploring ideas using a wide variety of graphical techniques including CAD - Consideration of working properties of materials.	- Production planning - Scales of production - Products in society - Forms of energy and generation - renewable energy - Systems, levers and motion - Automation in industry - Modern, smart and composite materials - Sustainability and the environment - Obsolescence and design for maintenance - Material properties - Quality control and assurance.	- Contextual design brief, offering both stretch and challenge - Working in teams - Using collaboration in a real world environment - Intensive / focused on using CAD and CAM - Precision measurement / tolerance to .001mm - Sustainability, 6R's - Consideration of appropriate materials - Joint drawing - Making of jigs - Commercial use of machines in applying finishes	- CAD and CAM to manufacture products - Group work in completing the making of the products - Testing and evaluation	- Packing and distribution - Understand that designing and making reflect and influence cultures and societies - Understand the commercial implications of manufacturing in quantity and the effects of introducing new technologies	- Design Context - Design Brief - Task Analysis - Preliminary Research. - Product Analysis - Questionnaire - Client Profile and Target - Market - Design - Criteria/Specification - Further Research: Materials / NET / Collecting and Analysing Data
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EXAMINATION STAGE						
YEAR 11	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Major project - Component 1	Component 3		Component 4	Written Exam	
SKILLS	• Work of others - 3-point reference (architect, designer and design movement) • Design ideas x 8 per reference category • Design ideas analysis against specification • Modelling (2D modelling only) • Clear annotation of ideas • Linked to specification points • Developed Ideas – 3D modelled using cardboard or other soft materials • Clear stages of development becoming more sophisticated towards completion • Sustainability, 6 R's.	• Size, construction and material properties identified • Plan of making manufacturing specification or diary • Working drawing with dimensions/exploded or sectional drawings • Cutting List • Design Realisation and manufacturing	• Photographs of each part being developed / made • Design realisation and manufacturing • Ongoing modification • Review	• Quality control / assurance • Testing against the specification • Photographs of the final product in use • Design • Modification / improvements	• Theory knowledge, skills, processes and techniques, materials and properties covered • Design based questions considered	
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