Chesham Bois CE School DT Overview

DT Curriculum Progression Map							
Intent:							
Impact:							
Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Generating ideas - Designing	• To plan ideas out loud or to an adult • To draw simple plans of a design before making • To think about how to build a structure before making it and communicate these ideas. • Develop my own ideas and then	• Design appealing products for a particular user based on simple design criteria. • Generate initial ideas and design criteria through own experiences. • Develop and communicate these ideas through talk and drawings and mock ups where relevant.	• Generate ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their ideas through talking, mock-ups and drawings.	• Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. • Use annotated sketches, prototypes, final product sketches and pattern pieces; communication technology, such as web-based recipes, to develop and communicate ideas.	• Generate and clarify ideas through discussion with peers to develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. • Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. • Generate, develop, model and communicate	• Generate innovative ideas through research including surveys, interviews and questionnaires .and discussion with peers to develop a design brief and criteria for a design specification. • Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. • Develop and communicate ideas through	• Use research using surveys, interviews, questionnaires and web-based resources. to develop a design specification for a range of functional products. • Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. • Generate and develop innovative ideas and share and clarify these

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	decide which materials to use to express them.				realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.	discussion, annotated drawings, exploded drawings and drawings from different views. and, where appropriate, computer-aided design	through discussion. • Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.
Making	• To build a structure To safely use and explore a variety of building materials and tools needed.	Select and use simple utensils, tools and equipment to perform a job e.g. peel, cut, slice, squeeze, grate and chop	• Plan by suggesting what to do next. • Select and use tools, equipment, skills and techniques to perform	• Plan the main stages of making. • Select from and use a range of appropriate utensils, tools and equipment with some	• Order the main stages of making. • Select and use appropriate tools to measure, mark out, cut, score, shape and	• Produce detailed lists of equipment and fabrics relevant to their tasks .• Write a step-by-step plan, including a list of resources	• Write a step-by-step plan, including a list of resources required. • Select from and use, a range of appropriate utensils, tools

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	Experiment with colour, design, texture, form and function. • Select and use resources to carry out my plan, with support if needed. • Build imaginative and complex 'small world' structures with blocks and construction kits. • Creative collaboratively, sharing ideas, resources and skills. • Develop fine motor skills	safely; marking out, cutting, joining and finishing; cut, shape and join paper and card. • Select from a range of ingredients and materials according to their characteristics to create a chosen product.	practical tasks, explaining their choices. • Select new and materials, components, reclaimed materials and construction kits to build and create their products. • Use simple finishing techniques suitable for the products they are creating.	accuracy related to their product. • Select from and use finishing techniques suitable for the product they are creating.	combine with some accuracy related to their products. • Explain their choice of materials according to functional properties and aesthetic qualities. • Select from and use materials and components, including ingredients, construction and electrical components according to their function and properties.	required. • Select from and use, a range of appropriate utensils, tools and equipment accurately to measure and combine appropriate ingredients, materials and resources.	and equipment accurately to measure and combine appropriate ingredients, materials and resources. • Competently select from and use appropriate tools to accurately measure, mark, cut and assemble materials, and securely connect electrical components to produce reliable, functional products. • Use finishing and decorative techniques suitable for the product they are designing and making.

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	when using tools such as scissors, pens and pencils to build structures.						
Evaluating	• To talk about my creation • To return to and build upon previous learning and refine ideas for future structures. Talk about my work to a peer or an adult, sharing their creation and explaining	• Taste, explore and evaluate a range of products to determine the intended user's preferences for the product • Evaluate their ideas throughout and finished products against design criteria, including intended user and purpose.	• Explore a range of existing products related to their design criteria. • Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.	• Investigate a range of 3-D textile products, ingredients and lever and linkage products relevant to their project. • Test their product against the original design criteria and with the intended user. • Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.	• Investigate and evaluate a range of products including the ingredients, materials, components and techniques that are used. • Test and evaluate their own products against design criteria and the intended user and purpose. • Evaluate their ideas and products against their own design criteria and identify the strengths and	• Investigate and analyse products linked to their final product. • Compare the final product to the original design specification and record the evaluations. • Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Consider the views of others	• Continually evaluate and modify the working features of the product to match the initial design specification. • Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. • Test the

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	the process used.				areas for improvement in their work.	to improve their work	system to demonstrate its effectiveness for the intended user and purpose
Vocabulary	structure, small world, construction, mechanism, movement, fabric, healthy food, fruit, vegetables	planning, investigating design, evaluate, make, user, purpose, ideas, product,	investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function	user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing	evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations	design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype	function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype
Knowledge		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food	• Know what a fruit and vegetable is • Know how to prepare food safely	• Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic	Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients	• Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in	• Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in

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	(washing fruit/veg) • Know how to use cutlery safely when eating and preparing food.	principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate. • Know and use technical and sensory vocabulary relevant to the project.	principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eat well plate. • Know and use technical and sensory vocabulary relevant to the project.	appropriate for their product, and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.	appropriate for their product, and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.	relation to food products and the source of different food products. • Know and use relevant technical and sensory vocabulary.	relation to food products and the source of different food products. • Know and use relevant technical and sensory vocabulary.
Topic links:	Making rocket kebabs Jam sandwiches	Make a fruit salad (snack for the seaside)	Meal fit for a Queen.	Global trade links and chocolate	Greek Salad/Greek dishes (Links to Greece geography topic)	Cultural food around the world (Africa topic)	World War II foods: Create a vegetable turnover
Vocabulary	Fruit Vegetables Healthy Unhealthy Cut Knife Spread Chop	Fruit and vegetable names names of equipment and utensils: knife, grater, chopping board, spoon, fork, peeler Sensory	Ingredients Recipe Sequence Preparing Party food Audience Cut Slice Peel Fold Squeeze Mix Stir	Microwave Chocolate Brownie Egg Flour Coco powder Caster sugar Whisk Sieve Pour Bake Test	Vegetarian Salad dressing Feta Cheese Flatbread Reared Tinned Bottled Greasy Seasoning Herbs Croutons Flip	yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, ounces,	Rationing Turnover Un-rationed Dig for Victory Ministry of food Lord Woolton Fill Seed Dice Heat Prick Brush

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		vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients,		Beat Kilograms Grams texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, fresh, savoury, hygienic, edible, processed, healthy/varied diet	Spatula Blender Frying pan Salad bowl Chopping board texture, taste, sweet, sour, hot, spicy, harvested healthy/varied diet	healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, knead, rubbing in, roll out, shape, sprinkle, crumble design	Sprinkle Sample Taste Texture Appearance Aroma Tasting graph 'Bridge' cutting 'Claw' cutting Glaze Y Peeler Fat
Structures		Year 2 • Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary relevant to the project.		Year 3/4 • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Know and use technical vocabulary relevant to the project. Year 4 • Develop and use knowledge of how to construct strong, stiff shell structures. • Know and use technical vocabulary relevant to the project.		Year 6 Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the project.	
Topic links:		Year 2 Spring 2: Create a green house structure.		Year 3 Autumn 2: Make a settlement (Links with History IA to SA and		Year 6 Autumn 1: CAMs and Mechanisms frame for	

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			Geography Settlements) Year 4 Spring 2: Shell structure packaging	moving animal
Vocabulary		Year 2 cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder	Year 3 capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, corrugating, ribbing, Year 4 shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, reduce, reuse, recycle, font, lettering, text, graphics, decision,	Year 6 frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent
Textiles		Year 2	Year 3	Year 5
		• Understand how simple 3-D textile products are made, using a template to create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch,	• Know how to strengthen, stiffen and reinforce existing fabrics. • Understand how to securely join two pieces of fabric together. • Understand the need for patterns and seam allowances. • Know and use technical	• Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Understand how fabrics can be strengthened, stiffened and reinforced where appropriate.

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		stapling. • Explore different finishing techniques • Know and use technical vocabulary relevant to the project.		vocabulary relevant to the project	• Know and use technical vocabulary relevant to the project.	
Topics:		Year 2 Create an under the sea creature using textiles (linked to Under the sea topic Geography).		Year 3 Create a Shakespearian puppet (English link Spring 2)	Year 5 Summer 2: African patterned bag (Links with Africa Summer term 2 Geography)	
Vocabulary		Year 2 joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish		Year 3 fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance	Year 5 seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings,	
Mechanisms/Mechanical Systems		Year 1 Moving Vehicle • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project. • Explore and use wheels, axles and axle holders. • Distinguish between fixed and freely moving axles.		Year 3 Pulley Systems	Year 5 Levers	

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		Year 1 Moving Toy • Explore and use sliders and levers. • Know and use technical vocabulary relevant to the project.		• Understand that mechanical and electrical systems have an input, process and an output. • the direction of movement. Know and use technical vocabulary relevant to the project.		Understand how gears and pulleys can be used to speed up, slow down or change Understand and use levers and linkage mechanisms. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to the project	
Topics:		Spring 1: Make a moving toy (Linked to toys in History)	Autumn 1: Make a moving vehicle (Linked to transport and travel Geography)	Autumn 2: Make a moving mountain pulley (Linked to Geography Mountains)		Autumn 1: Make a Roman catapult (links to History topic)	
Vocabulary		slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve,	vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed,	lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating		pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram,	

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		forwards, backwards	free, moving, mechanism names of tools, equipment and materials used			annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output	
Electrical systems					Year 4 Circuits • Understand and use electrical systems in their products linked to science coverage. • Apply their understanding of computing to program and control their products. • Know and use technical vocabulary relevant to the project		Year 6 Microbits • Understand and use electrical systems in their products linked to science coverage. • Apply their understanding of computing to program, monitor and control their products. • Know and use technical vocabulary relevant to the project.
Topics:					Year 4 Autumn 2: Circuits Science		Year 6 Spring 1: Microbit Tech –

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							Create your own invention (Circuits in Science Spring 2)
Vocabulary					series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device		reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch, light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device, output device, series circuit, parallel circuit