Khalsa
VA Primary School

DT Curriculum Map

	Autumn		Spring		Summer	
Year 1		Old fashioned toys		Fruit kebabs		Boats for Penguin
Year 2		Tudor Houses		Spring Rolls		Bunting
Year 3		Magnet Games		Making Paper		Stories with Moving Parts
Year 4		Bread		Iron Man Shadow Puppets		Decorations
Year 5		Viking Long ships		Moving bridges		Pizza
Year 6		Biscuits and packaging		Automaton		Burglar Alarms

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Key Skills and Knowledge

Key aims	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	• have own ideas • explain what they want to do • *explain what a product is for, and how it will work • use pictures and words to plan, begin to use models • design a product for someone following design criteria • *research similar existing products	• have own ideas and plan what to do next • explain what they want to do and describe how they may do it • explain purpose of product, how it will work and how it will be suitable for the user • describe design using pictures, words, models, diagrams, begin to use ICT • design products for myself and others following design criteria • choose best tools and materials, and explain choices • use knowledge of existing products to produce ideas	• *begin to research others' needs • show design meets a range of requirements • describe purpose of product • follow a given design criteria • have at least one idea about how to create product • create a plan which shows order, equipment and tools • *describe design using an accurately labelled sketch and words • make design decisions • *explain how product will work • make a prototype • begin to use computers to show design	• use research for design ideas • show design meets a range of requirements and is fit for purpose • *begin to create own design criteria • *have at least one idea about how to create product and suggest improvements for design. • produce a plan and explain it to others • *say how realistic plan is. • *include an annotated sketch • *make and explain design decisions considering availability of resources • *explain how product will work • make a prototype • *begin to use computers to show design.	• *use internet and questionnaires for research and design ideas • *take a user's view into account when designing • begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose • *create own design criteria • have a range of ideas • *produce a logical, realistic plan and explain it to others. • *use cross-sectional planning and annotated sketches • make design decisions considering time and resources. • *clearly explain how parts of product will work. • *model and refine design ideas by making prototypes and using pattern pieces. • *use computer-aided designs	• draw on market research to inform design • use research of user's individual needs, wants, requirements for design • identify features of design that will appeal to the intended user • create own design criteria and specification • come up with innovative design ideas • *follow and refine a logical plan. • *use annotated sketches, cross-sectional planning and exploded diagrams • make design decisions, considering, resources and cost • clearly explain how parts of design will work, and how they are fit for purpose • independently model and refine design ideas by making prototypes and using pattern pieces • use computer-aided designs
Make	• explain what I'm making and why • consider what I need to do next • select tools/equipment to cut, shape, join, finish and explain choices • measure, mark out, cut and shape, with support • choose suitable materials	• explain what I am making and why it fits the purpose • make suggestions as to what I need to do next. • join materials/components together in different ways • measure, mark out, cut	• select suitable tools/equipment, explain choices; begin to use them accurately • select appropriate materials, fit for purpose • work through plan in order • consider how good product will be	• select suitable tools and equipment, explain choices in relation to required techniques and use accurately • select appropriate materials, fit for purpose; explain choices • work through plan in order. • realise if product is going to	• use selected tools/equipment with good level of precision • produce suitable lists of tools, equipment/materials needed • select appropriate materials, fit for purpose; explain	• use selected tools and equipment precisely • produce suitable lists of tools, equipment, materials needed, considering constraints • select appropriate materials, fit for purpose; explain choices, considering

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	and explain choices • try to use finishing techniques to make product look good • work in a safe and hygienic manner	and shape materials and components, with support. • describe which tools I'm using and why • choose suitable materials and explain choices depending on characteristics. • use finishing techniques to make product look good • work safely and hygienically	• begin to measure, mark out, cut and shape materials/components with some accuracy • begin to assemble, join and combine materials and components with some accuracy • begin to apply a range of finishing techniques with some accuracy	be good quality • measure, mark out, cut and shape materials/components with some accuracy • assemble, join and combine materials and components with some accuracy • apply a range of finishing techniques with some accuracy	choices, considering functionality • create and follow detailed step-by-step plan • explain how product will appeal to an audience • mainly accurately measure, mark out, cut and shape materials/components • mainly accurately assemble, join and combine materials/components • mainly accurately apply a range of finishing techniques • use techniques that involve a small number of steps • begin to be resourceful with practical problems	functionality and aesthetics • create, follow, and adapt detailed step-by-step plans • explain how product will appeal to audience; make changes to improve quality • accurately measure, mark out, cut and shape materials/components • accurately assemble, join and combine materials/components • accurately apply a range of finishing techniques • use techniques that involve a number of steps • be resourceful with practical problems
Evaluate	• talk about my work, linking it to what I was asked to do • talk about existing products considering: use, materials, how they work, audience, where they might be used • talk about existing products, and say what is and isn't good • talk about things that other people have made • begin to talk about what could make product better	• describe what went well, thinking about design criteria • talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion • evaluate how good existing products are • talk about what I would do differently if I were to do it again and why	• look at design criteria while designing and making • use design criteria to evaluate finished product • say what I would change to make design better • begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose	• refer to design criteria while designing and making • use criteria to evaluate product • begin to explain how I could improve original design • evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose • discuss by whom, when and where products were designed • research whether products	• evaluate quality of design while designing and making • evaluate ideas and finished product against specification, considering purpose and appearance. • test and evaluate final product • evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have	• evaluate quality of design while designing and making; is it fit for purpose? • keep checking design is best it can be. • evaluate ideas and finished product against specification, stating if it's fit for purpose • test and evaluate final product; explain what would improve it and the effect different resources may have had • do thorough evaluations

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			• begin to understand by whom, when and where products were designed • learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products	can be recycled or reused • know about some inventors/designers/ engineers/chefs/manufactur ers of ground-breaking products	been made, fit for purpose • begin to evaluate how much products cost to make and how innovative they are • research how sustainable materials are • talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products	of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose • evaluate how much products cost to make and how innovative they are • research and discuss how sustainable materials are • consider the impact of products beyond their intended purpose • discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products
Materials and structures	• begin to measure and join materials, with some support • describe differences in materials • suggest ways to make material/product stronger	• measure materials • describe some different characteristics of materials • join materials in different ways • use joining, rolling or folding to make it stronger • use own ideas to try to make product stronger	• use appropriate materials • work accurately to make cuts and holes • join materials • begin to make strong structures	• measure carefully to avoid mistakes • attempt to make product strong • continue working on product even if original didn't work • make a strong, stiff structure	• select materials carefully, considering intended use of product and appearance • explain how product meets design criteria • measure accurately enough to ensure precision • ensure product is strong and fit for purpose • begin to reinforce and strengthen a 3D frame	• select materials carefully, considering intended use of the product, the aesthetics and functionality. • explain how product meets design criteria • reinforce and strengthen a 3D frame
Mechanisms	• begin to use levers or slides	• use levers or slides • begin to understand how to use wheels and	• select appropriate tools / techniques • alter product after	• select most appropriate tools / techniques • explain alterations to	• refine product after testing • grow in confidence	• refine product after testing, considering aesthetics, functionality

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		axles	- checking, to make it better - begin to try new/different ideas - use simple lever and linkages to create movement	- product after checking it - grow in confidence about trying new / different ideas. - use levers and linkages to create movement - use pneumatics to create movement	- about trying new / different ideas - begin to use cams, pulleys or gears to create movement	- and purpose - incorporate hydraulics and pneumatics - be confident to try new / different ideas - use cams, pulleys and gears to create movement
Textiles	- measure, cut and join textiles to make a product, with some support - choose suitable textiles	- measure textiles - join textiles together to make a product, and explain how I did it - carefully cut textiles to produce accurate pieces - explain choices of textile - understand that a 3D textile structure can be made from two identical fabric shapes.	- join different textiles in different ways - choose textiles considering appearance and functionality - begin to understand that a simple fabric shape can be used to make a 3D textiles project	- think about user when choosing textiles - think about how to make product strong - begin to devise a template - explain how to join things in a different way - understand that a simple fabric shape can be used to make a 3D textiles project	- think about user and aesthetics when choosing textiles - use own template - think about how to make product strong and look better - think of a range of ways to join things - begin to understand that a single 3D textiles project can be made from a combination of fabric shapes.	- think about user's wants/needs and aesthetics when choosing textiles - make product attractive and strong - make a prototype - use a range of joining techniques - think about how product might be sold - think carefully about what would improve product - understand that a single 3D textiles project can be made from a combination of fabric shapes.
Food and nutrition	- describe textures - wash hands & clean surfaces - think of interesting ways to decorate food - say where some foods come from, (i.e. plant or animal) - describe differences between some food groups (i.e. sweet, vegetable etc.) - discuss how fruit and	- explain hygiene and keep a hygienic kitchen - describe properties of ingredients and importance of varied diet - say where food comes from (animal, underground etc.) - describe how food is farmed, home-grown, caught - draw eat well plate;	- carefully select ingredients - use equipment safely - make product look attractive - think about how to grow plants to use in cooking - begin to understand food comes from UK and wider world - describe how healthy diet= variety/balance	- explain how to be safe/hygienic - think about presenting product in interesting/ attractive ways - understand ingredients can be fresh, pre-cooked or processed - begin to understand about food being grown, reared or caught in the UK or wider world - describe eat well plate and	- explain how to be safe / hygienic and follow own guidelines - present product well - interesting, attractive, fit for purpose - begin to understand seasonality of foods - understand food can be grown, reared or caught in the UK and the wider world - describe how recipes can	- understand a recipe can be adapted by adding / substituting ingredients - explain seasonality of foods - learn about food processing methods - name some types of food that are grown, reared or caught in the UK or wider world - adapt recipes to change appearance, taste,

	vegetables are healthy • cut, peel and grate safely, with support	explain there are groups of food • describe "five a day" • cut, peel and grate with increasing confidence	of food/drinks • explain how food and drink are needed for active/healthy bodies. • prepare and cook some dishes safely and hygienically • grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	how a healthy diet=variety / balance of food and drinks • explain importance of food and drink for active, healthy bodies • prepare and cook some dishes safely and hygienically • use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	be adapted to change appearance, taste, texture, aroma • explain how there are different substances in food / drink needed for health • prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source • use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	texture or aroma. • describe some of the different substances in food and drink, and how they can affect health • prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. • use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.

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Key Vocabulary

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design/Make Evaluate	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
Structures	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		shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision,		frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent	
Mechanisms	slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating	mechanism, 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, annotated drawings, exploded diagrams, mechanical system, electrical	pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical

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		materials used			system, input, process, output	system, input, process, output
Textiles	joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish		fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance		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,	
Food + Nutrition	fruit and vegetable names, names of equipment and utensils sensory 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,	fruit and vegetable names, names of equipment and utensils sensory 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	name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet	name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet	ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble	ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble

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