

Subject overview D&T



Thurlaston CE (Aided) Primary School
Teaching and Living the Christian Way of Life
Building Our Lives on Jesus

Unit Key Skills and Knowledge

Class	Unit	Key Skills and Knowledge	Key Vocabulary
1	Design Technology Cycle	<p>Design</p> <ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> explore and evaluate a range of existing products evaluate their ideas and products against design criteria 	Diagram Plan Label tools
1	Cooking and Nutrition	<p>use the basic principles of a healthy and varied diet to prepare dishes</p> <ul style="list-style-type: none"> How to use a knife How to prepare fruit and vegetables <p>understand where food comes from.</p> <ul style="list-style-type: none"> How to buy fruit and vegetables at a market 	Vitamins , minerals, fruit, vegetable Farm, market, countryside Preparing Fruit & Vegetables: Fruit, vegetables, soft, juicy, crunchy, sticky, smooth, sharp, crisp, sour hard, flesh, skin, seed pip, core, slicing,

		<ul style="list-style-type: none"> Where different foods come from 	peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, tasting, arranging
	Puppets and Textiles	<p>Make</p> <ul style="list-style-type: none"> Cut material accurately using scissors safely Use running stitch to join material together Use appropriate glue to embellish a design 	Scissors, pattern, template, fabric Needle, cotton, thread Pin, glue PVA Pattern, join, mark out, decorate, running stitch, needle, fabric.
	Design and Make an Aeroplane	<p>Make</p> <ul style="list-style-type: none"> Explore and use wheels and axles Explore how structures can be made stiffer and stronger 	Cardboard, folding, supports, Wheel, axel, fixed, free, design, make, cutting, joining, hacksaw, vice, dowel, body, shaping
2	Design Technology Cycle	<p>Design</p> <ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> explore and evaluate a range of existing products evaluate their ideas and products against design criteria 	Diagram Mock-up Plan Label Tools Evaluate purpose
	Vehicles	Make	Stable, unstable

		<ul style="list-style-type: none"> ● Build structures that are more stable ● Explore and use wheels and axles ● Explore how structures can be made stiffer and stronger ● Use a saw to cut dowel ● Drill a hole in wood 	<p>Fixed axle, centre, off centre Chassis, props Supports Wheel, axel, fixed, free, design, make, cutting, joining, hacksaw, vice, dowel, body, cab, shaping</p>
	Christmas Sewing	<p>Make</p> <ul style="list-style-type: none"> ● Cut material accurately using scissors safely ● Use running stitch to join material together ● Sew on buttons ● Use appropriate glue to embellish a design 	<p>Scissors, pattern, template Needle, cotton, thread Pin, glue PVA Template, quality, suitable, features, dye, overstitch, design, fray, mock-up, seam.</p>
	Moving Pictures and Levers	<p>Make</p> <ul style="list-style-type: none"> ● Create mechanisms with sliders ● Create mechanisms to a lever ● Create mechanisms with 2 levers 	<p>Split pin, pivot Lever mechanism, lever, slider, slot, pivot, guide/bridge, masking tape, fastener, pull/push, down, straight, work, design, evalu Slider</p>
	Cooking- School Garden Ingredients	<p>use the basic principles of a healthy and varied diet to prepare dishes</p> <ul style="list-style-type: none"> ● How to use a knife ● How to prepare fruit and vegetables ● How to cook vegetable and fruit <p>understand where food comes from.</p> <ul style="list-style-type: none"> ● How to harvest various vegetables and fruit ● Where different foods come from 	<p>Vitamins , minerals, fruit, vegetable Farm, market, countryside Slice, peal Bake, stew, boil, Hob, oven Preparing Fruit & Vegetables: Fruit, vegetables, soft, juicy, crunchy, sticky, smooth, sharp, crisp, sour hard, flesh, skin, seed pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, tasting, arranging</p> <p>Pick, dig, snap, cut, wash</p>

3	Design Technology Cycle	<p>Design</p> <ul style="list-style-type: none"> ● use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups ● generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> ● select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ● select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> ● investigate and analyse a range of existing products ● evaluate their ideas and products against their own design criteria and consider the views of others to improve their work ● understand how key events and individuals in design and technology have helped shape the world 	<p>Research</p> <p>Criteria</p> <p>audience</p> <p>Diagram</p> <p>Cross-section</p> <p>Exploded diagram</p> <p>Mock-up</p> <p>Plan</p> <p>Label</p> <p>Investigate</p> <p>Tools</p> <p>Evaluate</p> <p>purpose</p>
	Moving Monsters	<p>Make</p> <p>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	<p>Pneumatic, hydraulic</p> <p>Cylinder, Master, Slave, syringe</p> <p>Tubing, pressure , force</p>
	Mini-Greenhouses	<p>Make</p> <ul style="list-style-type: none"> ● Build structures that are more stable ● Consider the light properties of materials 	<p>Glass, plastic sheeting, rigid plastic, Perspex, cling film bottles, tubing, shape</p> <p>Stable, structure, strong, glue, hacksaw, vice, sand</p>

		<ul style="list-style-type: none"> ● Use a hacksaw to cut wood ● Use a hot glue gun to join materials 	Clear, transparent, translucent, opaque Shell, structure, net, marking out, material, joining, three dimensional, stiff
	Sandwich Snacks	<ul style="list-style-type: none"> ● understand and apply the principles of a healthy and varied diet ● <i>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</i> ● understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	Bread, pitta, tortilla, wrap, white bread, brown bread, wholemeal, seeded bread, baguette, roll, bap, cob Margarine, butter, spread, olive oil Filling, mayonnaise, ketchup Healthy & Varied Diet: Texture, taste, appearance, preference, greasy, moist, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested
	Torches/light boxes	understand and use electrical systems in their products [for example, series circuits incorporating switches and bulbs]	Structure, strength, reinforce, attach Series circuit, connection, push-to-make switch, pushto-break switch, innovative, appealing, control box, input device, output device
4	Design Technology Cycle	<p>Design</p> <ul style="list-style-type: none"> ● use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups ● generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> ● select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 	<p>Research</p> <p>Criteria</p> <p>audience</p> <p>Diagram</p> <p>Cross-section</p> <p>Exploded diagram</p> <p>Mock-up</p> <p>Prototype</p> <p>Plan</p> <p>Label</p> <p>Investigate</p> <p>Analyse</p> <p>Tools</p> <p>Evaluate</p>

		<ul style="list-style-type: none"> ● select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> ● investigate and analyse a range of existing products ● evaluate their ideas and products against their own design criteria and consider the views of others to improve their work ● understand how key events and individuals in design and technology have helped shape the world 	purpose
	Cams	<ul style="list-style-type: none"> ● Investigate different shapes for cams and select and use in a design. ● explain how mechanical systems, such as cams, create movement and use mechanical systems in their products; 	Cam, offset, Follower, rotary motion, linear motion, Pulley, gear, driver, follower, rotation, motor, belt, spindle, motor, circuit, switch, ratio, transmit, annotated drawings, exploded diagrams, functionality
	South American Cooking	<ul style="list-style-type: none"> ● know, explain and give examples of food that is grown in the UK, Europe and the wider world. ● demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source; ● explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes; ● adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma; 	Celebrating Culture & Seasonality: Ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality, pour, mix, knead, whisk, beat, combine, fold, rubbing in
	Mother's Day cooking	<ul style="list-style-type: none"> ● complete detailed competitor analysis of other products ● adapt and refine recipes by adding or substituting one or more 	Ingredients, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance,

		<p>ingredients to change the appearance, taste, texture and aroma;</p> <ul style="list-style-type: none"> ● alter methods, cooking times and/or temperatures; ● i measure accurately and calculate ratios of ingredients to scale up or down from a recipe; ● j independently follow a recipe. 	<p>savoury, seasonality, pour, mix, knead, whisk, beat, combine, fold, rubbing in, recipe, ratio,</p>
	Motors and computer control	<ul style="list-style-type: none"> ● understand and use electrical systems in their products [for example, series circuits incorporating switches and motors] ● apply their understanding of computing to program, monitor and control their products. understand and demonstrate that mechanical and electrical systems have an input, process and output; <p>a</p>	<p>Parallel circuit, light emitting diode, monitor, flowchart, design specification, reed switch, tilt switch</p>
	<i>Christmas Crafts Cork trees</i>	<ul style="list-style-type: none"> ● refine the finish using techniques to improve the appearance of their product ● assemble, join and combine materials and components with accuracy; 	<p>Join, adhesives</p>
	<i>Cooking to live- Bread and Pizza</i>	<ul style="list-style-type: none"> ● understand and apply the principles of a healthy and varied diet ● prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques ● understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	<p>Dough, yeast, prove, rise, seasonality: Ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, pour, mix, knead, whisk, beat, combine, fold, rubbing in</p>
	Structures	<ul style="list-style-type: none"> ● a apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; ● apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; ● 	<p>Strengthen, stiffen, reinforce, width, base, footings, weight, flat, circular, materials Reinforce, triangulation, stability, temporary, permanent, prototype, innovation, functional, design brief</p>

	Tudor Textiles (See Art skills)	<ul style="list-style-type: none"> ● demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product; ● join textiles using a greater variety of stitches, such as backstitch, whip stitch, chain stitch 	Specification, tacking, working drawing, clasp, pinking shears, design criteria, hem, reinforce, stem stitch, satin stitch, applique, functionality, renewable, authentic
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Cooking Days. One cooking session each term to take place OUTSIDE of any cooking done as part of topics. Timed at the discretion of the teacher. Must be made from scratch as appropriate to the age of the class to show a many different cooking skills as possible and added life skills.

	Autumn	Spring	Summer	Knowledge and Skills
Class 1	Sweet, decorated biscuits	Sausage rolls	Leek and potato Soup	Children use the basic principles of a healthy and varied diet to prepare dishes. <ul style="list-style-type: none"> ● with support, follow a simple plan or recipe; ● begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; ● learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures; ● use a range of materials and components, including textiles and food ingredients; ● with help, measure and mark out; ● assemble, join and combine materials, components or ingredients; ● cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups; ●
	Fruit salad	Cheese twists	Leek and potato Soup	

Class 2	Vegetable Soup	Fairy Cakes	Pizza	<p>Children use the basic principles of a healthy and varied diet to prepare dishes.</p> <ul style="list-style-type: none"> ● with support, follow a simple plan or recipe; ● begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; ● learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures; ● use a range of materials and components, including food ingredients; ● with help, measure and mark out; assemble, join and combine materials, components or ingredients; ● cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups; <p>a b</p>
Class 3	Fruit Crumble and custard	Simple vegetarian pasta sauce	Bacon and cheese/cheese and onion puffs	<p>Children understand and apply the principles of a healthy and varied diet.</p> <p>They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</p> <ul style="list-style-type: none"> ● with growing confidence, carefully select from a range of tools and equipment, explaining their choices; ● Solearn to use a range of tools and
	Macaroni cheese	Fruit salad. More choice of fruit than in R/Y1.	Pea and ham Soup	

		Presentation and chopping skills.		<p>equipment safely, appropriately and accurately and learn to follow hygiene procedures;</p> <ul style="list-style-type: none"> with growing independence, measure and mark out to the nearest gram and millilitre
Class 4	Chicken pasta in a creamy sauce	Rocky Road/Millionaire's Shortbread	Vegetable soup (not the same as in other classes)	<p>Children understand and apply the principles of a healthy and varied diet.</p> <ol style="list-style-type: none"> They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed
	Pastry fruit tarts	Vegetarian soup (not the same as in other classes)	Meat Chilli and rice	