



Whole School Medium Plan- DESIGN and TECHNOLOGY

Key Vocabulary

State if it is not a lead subject: but standalone/ongoing	Sessions: teachers to date Some sessions may be blocked	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
EYFS	<p>Design activities: continuous provision/ small group work</p> <p>In all; share their creations, explaining the process they have used.</p>	<p><u>All about me</u></p> <ul style="list-style-type: none"> Use a range of small tools, including scissors, paint brushes, Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. 	<p><u>Traditional tales</u></p> <ul style="list-style-type: none"> Exploring how things work such as pop up books. Make imaginative and complex small worlds with blocks and construction kits. 	<p><u>Past and present</u></p> <ul style="list-style-type: none"> Explore different materials. Develop their own ideas and then decide which materials to use to express them. 	<p><u>It's Alive</u></p> <ul style="list-style-type: none"> Develop their small motor skills so that they can use a range of tools competently, safely and confidently. 	<p><u>Fantasy</u></p> <ul style="list-style-type: none"> Create closed shapes with continuous lines and begin to use these shapes to represent objects Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. 	<p><u>Under the sea</u></p> <ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them.
<p>Y1</p> <p>Key vocab: planning, investigating design, evaluate, make, user,</p>	<p><u>1</u></p>		<p><u>Fire fire: Mechanisms-</u> pop ups and simple card levers</p> <p>Research existing products: record ideas of levers</p>	<p><u>Growth and Green Fingers</u> fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard</p>		<p><u>The Great outdoors-</u> Structures- stability and strength</p> <p>Explore and talk about existing products: playground equipment for small world figures/ a chair for a storybook</p>	

purpose, ideas, product				flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, Food- preparing and combining foods Evaluation of existing foods: record and annotate: fruit kebabs/ fruit salad.		character/ a bridge for a character.	
	<u>2</u>		Teaching skills: marking out/ cutting/ joining and using a hole punch	Focused tasks Develop a food vocab Group foods Cut, peel, grate food		Focused tasks: explore how to make structures stronger. Investigate how to stiffen products. Simple card/ art straw structures.	
	<u>3</u>		Design/ plan a product with a lever/ pop ups	Design- use pictures and words to convey what they want to make. Propose more than 1 idea. Plan who are they making it for.		Design and draw their structure: make labels.	
	<u>4</u>		Make a product from their design with the lever/ pop up.	Make their product		Make structure and test it out.	
	<u>5</u>		Evaluation of product	Evaluate		evaluate	
	<u>6</u>						
Y2 Key vocab investigating, planning, design, make, evaluate, user,	<u>1</u>			Explorers: mechanisms wheels and axles Linked to the space topic evaluate and look at vehicles linked to space	The Farm shop fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth,	Wind in the Willows Textiles Evaluation of existing products.	

purpose, ideas, design criteria, product, function				exploration- lego can be used.	sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients Food- eatwell plate Seasonal salad linked to locally grown and items begun to be grown in school gardens. Investigate different pictures samples of salads- visit to local supermarket? Draw/ sketch products	Puppet/ coat/ item for a toy.	
	<u>2</u>			Focused task: joining and making activities- use lego/ construction kits. Create models with wheels and axles: explore this and show how to cut dowel.	Taste test and evaluations of different salads on the market.	Focused task: joining textiles. Cutting fabrics- joining using glue, sewing techniques. Decorating and colouri	
	<u>3</u>			Think and plan- develop a design for a space vehicle with the pupils.	Think, plan and design: Design a class criteria- colour design: how does it meet the eatwell plate? Design product.	Focused tasks: decorating and colouring fabrics.	
	<u>4</u>			Select tools and make the vehicle	Select ingredients and make the product	Design product	
	<u>5</u>			Evaluation of the product	Evaluation of the product; taste tests.	Make product	
	<u>6</u>					Evaluate	
Y3	<u>1</u>		<u>Healthy Humans</u>		<u>The Iron Man</u>		<u>How Does your garden grow</u>

user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing			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 Food Simple dish-eatwell plate Evaluate existing products: investigate food products on the market and record.		Mechanical systems- levers and linkages Evaluate existing products: pop up books: moving posters/ storyboards with moving parts.		Structures- shell/ frame Evaluation of existing products: planters for growing products- esp for elderly users- window sillboxes. Containers for known products.
	<u>2</u>		Taste samples of cooked picnic foods: draw/ sketch products.		Focused tasks: Look at levers and linkages: learn how to make levers and linkages using card and lolly sticks.		Focused tasks: structures Create shell and frame structures Learn how to strengthen frames with diagonal struts.
	<u>3</u>		Draw up a design criteria: plan and develop an idea for a picnic food.		Design: plan a sequence of actions to make the product.		Design and plan a sequence of actions to make a product.
	<u>4</u>		Design: test cooking small portions		Make the product		Make prototypes.
	<u>5</u>		Plan and make the product		Evaluate the product made.		Make product
	<u>6</u>		Evaluate				Evaluate
Y4 evaluating, design brief design criteria, innovative,	<u>1</u>	Sparks Might Fly! Ict and electrical systems Evaluation of existing products: quiz board/ buzzer systems			Passport to Europe Textiles Investigate similar products to the one to be made to give starting points for a design.		Hunted name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot,

<p>prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations</p>					<p>Research needs of user. Draw/sketch products to help analyse and understand how products are made.</p>		<p>spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet</p> <p>Food Investigate similar products to be made Research needs of users: food grown in different climates: food to sustain life- eatwell plate.</p>
	<p><u>2</u></p>	<p>Focused tasks: electrical tasks: bulbs, switches, buzzers</p>			<p><u>Focused tasks</u></p> <ul style="list-style-type: none"> ▪ Develop vocabulary for tools, materials and their properties. ▪ Understand seam allowance. ▪ Join fabrics using running stitch, over sewing, blanket stitch. ▪ Prototype a product using J cloths. ▪ Use prototype to make pattern. ▪ Explore strengthening and stiffening of fabrics. ▪ 		<p><u>Focused tasks</u> Taste tests: Join and combine a range of foods. Farm visit- understand how animals are reared.</p>
	<p><u>3</u></p>	<p>Design and plan a sequence of actions</p>			<p><u>Focused Tasks</u></p> <ul style="list-style-type: none"> ▪ Explore fastenings (inventors?) and recreate some. ▪ Sew on buttons and make loops. ▪ Use appropriate decoration techniques. 		<p>Design the dish they want to make.</p>

	<u>4</u>	Make: select from techniques/ materials to make the electrical product.			Design <ul style="list-style-type: none"> Develop more than one design or adaptation of an initial design. Decide which design idea to develop. Plan a sequence of actions to make a product. Record the plan by drawing using annotated sketches. 		<u>Make and evaluate</u> Plan a sequence of actions to make a dish. Record the plan.
	<u>5</u>	Evaluation of their finished product			Make the product <ul style="list-style-type: none"> Prepare pattern pieces as templates for their design. Use tools with accuracy. Select from techniques/ materials for different parts of the process. 		
	<u>6</u>				Evaluation of the product		
Y5 design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research,	<u>1</u>		Food Glorious Food 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,		Inventors and Inventions Mechanical systems- cams, pulleys and gears Evaluation of Existing Products <ul style="list-style-type: none"> Research and evaluate existing products (including book and web based research). 	Amazon Adventure 3d Textiles Evaluation of Existing Products <ul style="list-style-type: none"> Research and evaluate existing products (including book and web based research). Consider user and purpose. 	

<p>evaluate, design criteria, annotate, evaluate, mock-up, prototype</p>			<p>knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble</p> <p>Food from other countries/ cultures for a festival. Evaluate and record about existing products.</p>		<ul style="list-style-type: none"> ▪ Consider user and purpose. ▪ Identify the strengths and weaknesses of their design ideas. 	<ul style="list-style-type: none"> ▪ Understand how key people have influenced design. ▪ Identify the strengths and weaknesses of their design ideas. 	
	<p><u>2</u></p>		<p>Focused tasks Prepare food tasks taking accounts of ingredients and sensory characteristics. Taste tests</p>		<p><u>Focused tasks</u> Focused Tasks: Mechanical and Electrical Systems and ICT</p> <ul style="list-style-type: none"> ▪ Develop a technical vocabulary appropriate to the project. ▪ Use mechanical systems such as cams, pulleys and gears. <p>Use electrical systems such as motors.</p>	<p><u>Focused Tasks</u></p> <ul style="list-style-type: none"> ▪ Use the correct vocabulary appropriate to the project. ▪ Create 3-D products using patterns pieces and seam allowance. ▪ Understand pattern layout. ▪ Decorate textiles appropriately (often before joining components). ▪ Pin and tack fabric pieces together. ▪ Join fabrics using over sewing, back stitch, blanket stitch or machine stitching (closer supervision). 	

						<ul style="list-style-type: none"> Combine fabrics to create more useful properties. Make quality products. 	
	<u>3</u>		Design and plan- record ideas using annotated designs: plan the sequence		Design <ul style="list-style-type: none"> List tools needed before starting the activity. Record ideas using annotated diagrams. Use models, kits and drawings to help formulate design ideas. Devise step by step plans which can be read / followed by someone else. Use exploded diagrams to communicate ideas. Sketch and model alternative ideas. 	Design <ul style="list-style-type: none"> Plan the sequence of work e.g. using a storyboard. Record ideas using annotated diagrams. Combine modelling and drawing to refine ideas. Devise step by step plans which can be read / followed by someone else. Use exploded diagrams and cross-sectional diagrams to communicate ideas. Sketch and model alternative ideas. Decide which design idea to develop. 	
	<u>4</u>		Make prototypes			<ul style="list-style-type: none"> Use a computer to model ideas. Make prototypes. Develop one idea in depth 	
	<u>5</u>		Develop one idea in depth			Make	
	<u>6</u>		Refine and evaluate products.			Refine and evaluate products	
Y6	<u>1</u>			Heroes and Villains ingredients, yeast, dough, bran, flour, wholemeal,		Oh I do Like to be beside the Seaside	

<p>function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype</p>				<p>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 Evaluation of existing products</p> <ul style="list-style-type: none"> ▪ Start by researching the work of chefs such as Jamie Oliver and his influence on school meals. ▪ Use research techniques such as questionnaires to evaluate existing school meals. Children could question other classes, children from other schools and could discuss meals with children from FS/KS1. They could also find out about meals at high school. ▪ Consider what appeals to the pupils and where this possibly conflicts with the ethos of the eatwell plate. 		
	<p><u>2</u></p>			<p><u>Focused Tasks</u></p> <ul style="list-style-type: none"> ▪ Prepare food products taking into account the properties of 		<p><u>Evaluation of existing products</u></p> <ul style="list-style-type: none"> ▪ Explore existing products; if possible, consider a visit to the illuminations storage depot in Blackpool.

				<p>ingredients and sensory characteristics.</p> <ul style="list-style-type: none"> ▪ Weigh and measure using scales. ▪ Select and prepare foods for a particular purpose. ▪ Work safely and hygienically. ▪ Show awareness of a healthy diet (using the eatwell plate). 		<ul style="list-style-type: none"> ▪ Use web-based research for other examples around the world. ▪ Focus in this part of the project on the mechanism and lights. ▪ Draw and annotate. <p style="text-align: center;"><u>Focused Tasks: session 2/3</u></p> <p>Teach any skills not already in place including:</p> <ul style="list-style-type: none"> ▪ Develop a technical vocabulary appropriate to the project. ▪ Use mechanical systems such as cams, pulleys and gears (<i>learned in Year Five</i>). ▪ Use electrical systems such as motors (<i>learned in Year Four</i>). <p>Program, monitor and control using ICT (from programming and control elements taught in computing lessons).</p> <p style="text-align: center;">Session 4: Design</p> <p style="text-align: center;">Session 5: Make: develop 1 idea from prototypes: test at each stage.</p> <p style="text-align: center;">Session 6: make and evaluate</p>
	<u>3</u>			<p style="text-align: center;"><u>Focused Tasks</u></p> <ul style="list-style-type: none"> ▪ Use a range of cooking techniques. ▪ Know where and how ingredients are grown and processed. ▪ Prepare food products taking into account the properties of ingredients and sensory characteristics. ▪ Weigh and measure using scales. ▪ Select and prepare foods for a particular purpose. ▪ Work safely and hygienically. ▪ Use a range of cooking techniques. 		

				Know where and how ingredients are grown and processed.		
	<u>4</u>			<p><u>Design</u></p> <ul style="list-style-type: none"> From initial evaluations, draw up design criteria for their meal – what is essential and what is desirable? Use the eatwell plate to ensure a balance of food groups. Trial each element of the meal – make sure that it tastes right, looks appetising and meets nutritional requirements, e.g. not too much salt/fat/sugar etc. Adapt their recipe as they test the different items, possibly taste testing with user groups. Record their recipe, including notes on where ingredients are sourced from. Ensure their recipe could be followed by another member of the class. 		
	<u>5</u>			<p><u>Make and evaluate</u></p> <ul style="list-style-type: none"> Make the complete dish, following their final recipe. Use and apply 		

				<p>skills developed during focused tasks.</p> <p>Evaluate the finished product as a group or with consumer groups. Children should record how well the dish meets the design criteria, including both the requirements of the eatwell plate and the preferences of the consumer. Record the findings of the evaluation as a report for a 'Healthy Diet' magazine or as a 'restaurant review', using and applying skills from English.</p>			
	<u>6</u>			<u>Make and evaluate</u>			
	<u>7</u>						